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THIRTY VOLUMES

VOLUME SIX

VALUE OF FIRST IMPRESSIONS AS THE FOUNDATION OF SUCCESS.  
HOW TO FORM HABITS AND HOW TO CHANGE HABITS. SELF-  
TRAINING AND TRAINING OF OTHERS IN THE LAWS  
UNDER-LYING SUCCESS



*"To learn new habits is everything, for it is to reach the  
substance of Life. Life is but a tissue of habits."*

AMIEL: Journal, Dec. 30, 1850

*"The true beginning of our end."*

SHAKESPEARE: A Midsummer Night's Dream

*"Here is everything advantageous to life."*

IBID: The Tempest

*"Unless above himself he can  
Erect himself, how poor a thing is man!"*

SAMUEL DANIEL

NEW YORK  
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At least once a month a meeting should be planned for the evening, when the fathers should be invited to be present and *take part in the discussion*, they having been previously notified as to the subject.

Organized motherhood is making ready to demand that our legislators shall see that all laws which concern the welfare of the child, the boy and girl, the young and the inexperienced man and woman, shall be enforced, and new ones enacted if new conditions require them. They stand firm for a single standard of morality, and they endeavor to make an opportunity somewhere in this broad land of ours for the illegitimate child, and its oftentimes unfortunate and ignorant young mother, where they may find a place of refuge free from the finger of scorn and the baneful comment which kills all hope and drives down to greater misery.

Organization to my mind is but an instrument, effective or otherwise, as those who use it are imbued with nobler aims and purposes, with a true love of humanity and a desire to be of service, as well as possessed of the practical knowledge and judgment which carries well-formed plans on to fruition. With either of these essentials lacking, organization must be a failure.

As far as possible wherever the development, care, and good of childhood is at stake, there has organized motherhood rallied. Mothers have used their influence in behalf of free kindergartens in connection with the public schools; in having school buildings properly constructed, lighted, heated, and ventilated; shorter hours in school; less study outside of school; have manifested an interest in the teacher which in time shall cause her to be universally regarded as a friend and helper, rather than as a machine, and which will demand that her salary shall be adequate to the faithful service she renders, and that it cover the months of vacation in order that she may be able to have the rest and recreation she needs if she is to give the best to the children.

They have lent their efforts to the uplifting and purifying of the drama, since, rightly used, it can be made a powerful educational factor. As almost every city child who can read may be seen at some hour in the day poring over the columns of one of the great dailies, organized motherhood has worked for a pure press, clearly recognizing that it is the greatest material power in the world to-day.

They have not left the vicious and vulgar to enlighten their children in the sacred mysteries of sex, but lovingly and wisely have they transmitted knowledge concerning it and the sacred responsibilities it entails. They have tried to develop and foster the maternal and paternal instinct which I believe exists in every human being, but which is often destroyed or subverted through false education. They have regarded their children *first of all as future mothers and fathers*, next as citizens,

and they are demanding that public educational systems adopt their standards of values in the adjustment of curricula. From the kindergartens up through the college they believe these two fundamental principles of education should have precedence. The fact that some of these young men or women may never marry has no bearing upon the case; the probability is that many *will*, and the issues at stake are so vital that the good of the *race* demands that they shall be fully prepared for such high calling, whether or not they assume its obligations. Such training they believe will give all a love of humanity, for they who can clearly realize their duty to the unborn will not neglect their duty to the living, and the boys and girls who have imbibed such teachings in the schools, as well as at home, will be powers for good wherever destiny places them.

We have established mothers' clubs in many communities; have interested clergy and press; have formed clubs among the women whose opportunities for training of any kind have been meager; have seen to it that crèches and free kindergartens were provided for the children of the poor; that reading rooms, with suitable superintendents in charge, are open for the use of boys and girls, young men and women; have urged the presence of women upon all school boards and in all prisons and reformatory institutions; have taken the city fathers to task whenever sanitary and other laws pertaining to the cleanliness and health of a community are not enforced; have called mass meetings once a month to discuss questions pertaining to the welfare of the child; by precept and example have set forth the advantages of simplicity of dress and entertainment; have interested ourselves in humane work; have refused to wear plumage in our hats which has caused either suffering or loss of life among birds; under all circumstances protesting against the cruel curb or checkrein and the docking of tails of horses, and against cruelty in *any form* toward dumb animals.

We believe that the child should be given the opportunity to develop into a happy and useful man or woman; that he should early be taught self-restraint, consideration for the rights of others, obedience to such moral and physical laws as shall result in harmonious conditions of mind and body; and those who disregard this right fail in their highest responsibility.

We do *not* believe "rights of children" is to be construed into the right to be impertinent, disobedient, rude, careless of what is due to others, but that the very reverse is intended by all intelligent students of child-culture.

If this movement is to retain its vigor it must be sapped by neither fads nor theories; it must bring to its aid in the various sections and communities where it takes hold, the best knowledge it can command;



it must not antagonize those who most need its aid, nor must it fear or resent criticism. It must, if it would prosper, avoid all strife for office, all useless dissension and discussion, and endeavor always to preserve the dignity of its high calling.

The education of public opinion in all works of reform is of primary importance. Public opinion once thoroughly enlisted in any cause, the success of that cause is established with an ease which makes men wonder how it could ever have been otherwise. It is hoped that public opinion may be so aroused to a sense of the possibilities involved in this movement that press and pulpit alike may make it one of the topics of the hour.

The parents who truly love their children are they who can recognize through the needs of their dear ones, the needs of all other children, and who feel in their inmost being the claim of childhood to happiness. Our appeal, then, is to all mankind and to all womankind, regardless of color, creed, or condition, to recognize that in the child lies the hope of the race, and that the "republic's greatest work is to save the children." It is not possible to limit such principles to either sex, to any set of individuals, to married or single. Such an appeal is to all humanity on behalf of humanity; and as fast as adults cast aside their indifference and enter more fully into the study, life, and needs of infancy and childhood, just so fast will the regeneration of the race be effected. Ah, the misery entailed upon helplessness through ignorance! If all the unnecessary heartaches and cruel sense of injustice which little children suffer could be expressed in a single sob, the earth would tremble with its force and our hearts stand still in awe of our selfishness.

The study of childhood purifies our consciousness, freshens our ideals, increases our aspirations, and brings us in touch with the eternal verities as nothing else can. It rouses us to a recognition of that which should be the great fundamental truth of daily life and education—that the formation of noble character is the thing of most consequence.

The children are crying to us, and when mothers will place, in imagination, their own babies and little ones in the haunts whence issue those most piteous cries, the world will see an uprising against the powers of darkness, the like of which was never seen before. The savage mother will fight for her offspring and sacrifice her life, if need be, in their defense. The civilized mother will do as much, and more, for with the glimmering in her soul of that dawn which is coming with the brotherhood of man, her heart will yearn with maternal affection over each child of God's because it is God's, because it shares with her own little ones the common heritage of youth and helplessness, and because only through its highest development can the world be redeemed

from its bondage to sin and poverty. O mothers, and all ye who hear the cry, cease not calling upon the world to heed it until the world recognizes that all its splendor is but as Dead Sea ashes, compared to the joy which would come from the existence of a universally happy, wholesome childhood with its rare promise to the future.

The mental attitude of the world to-day is one of receptivity; never before were people so willing to accept new thought from all sources. It has been truly said, "To cure was the voice of the past; to prevent, the divine whisper of to-day." May the whisper grow into a mighty shout throughout the land until all mankind takes it up as the battle cry for the opening years of the century. Let mothers, fathers, nurses, educators, clergymen, legislators, and, mightiest of all in its swift, far-reaching influence, the press, make the child the watchword and ward of the day and hour; let all else be secondary, and coming generations will behold a new world and a new people.

Untiring, universal, individual effort, with such organizations as may prove helpful, will build a bridge upon which struggling humanity may safely cross into a new land, leaving forever the old, with its unending reformatory movements, its shattered lives; and the keystone of that bridge will be parental love, while in that fair domain the splendid edifice of the new civilization will bear the corner stone of home.

## THE PROFESSION OF MOTHERHOOD

*By MAY WRIGHT SEWALL*

CONFIDENCE in maternal instinct is apparently on the wane. Surely only in a growing skepticism of such instinct has the phrase, "the profession of motherhood," originated. It would be matter of curious interest to know who coined the phrase, and under what circumstance it was first used. Our ears have only recently become accustomed to it. Even now in conservative circles it excites a smile, and subjects discussed at mothers' congresses seem hardly less amusing to the Philistines than does the preponderating presence, in such assemblies, of fathers and bachelor maids.

Although throughout the ages maternity has been very generally regarded as the ultimate function of woman,—the relation in which woman herself finds her completion and justifies her existence,—yet, practically, maternity has ordinarily arrived as an only half-anticipated occurrence. When men have flattered women they have eulogized their instincts and their intuitions. Much poetry and an equal amount of philosophy have regarded woman as a sort of intermediate creation

between man and the lower animals; allied to the former by the possession of speech and by organic structure, but separated from him by the absence of reason and judgment; allied, on the other hand, to the animal kingdom by the possession of instincts and intuitions, even more certain and unerring than their own. Maternal instinct has been credited by the poets with great constancy, and by the philosophers with unerring judgment. Maternal affection is doubtless characterized by a constancy which differentiates it from most other emotions of the human heart; but that this instinct is itself endowed with judgment or coupled with it, or that it manifests itself through judgment, cannot be maintained. The race still groans under evils imposed upon it by instinctive nurture. Instinct may impel a mother to yearn to care for her child, to feed, to fondle, and to ornament it; but this instinct to feed and fondle, and to protect, is endowed with no intelligence to guide her in the choice and preparation of its food, in the time and character of her caress, or the quality of the protection. It is a growing recognition of the fact that between instinct and intelligence there seems, to-day, to be, instead of an alliance, a great gulf fixed, that humanity here and there in its most cultured and advanced circles has been moved to lift the expression of maternal affection from the plane of instinct to the plane of reason. When the manifestation of maternal affection has been thus lifted, motherhood has, in a sense, ceased to be instinctive and becomes professional. Looking upon the world, one may, indeed, say that a major part of the evils which oppress humanity are the legitimate consequences of instinctive nurture.

Humanity may charge its habitual headaches, its indigestions, its dyspepsias, its lost or aching teeth, its general physical dilapidation to its confidence in instinctive care. So it may charge its waywardness, its fickleness, its lack of self-control to instinctive tuition. The resentment of some human beings to the almost universal conviction that the ills enumerated are inevitable, was the first step toward the discovery that they are not so. This discovery led to a discussion of the cause of the ills. The discussion has resulted in an increasing disinclination to accept Eve's first transgression as the cause, and in an increasing conviction that the ignorance of her daughters is, in each generation, the active and immediate cause of the major part of the distress of both her sons and daughters.

In this era of enthusiasm for education, especially for psychological study, the rebellion of the few against limitations which seem not natural and necessary, but abnormal and needless, have compelled the many to suspect, if not to admit, that the cause of these limitations is both discoverable and curable.



The questions which must be answered are: First—May blunders wrought by following maternal instinct be overcome by superseding the pleadings of instinct by the decisions of reason? Second—Inasmuch as the mother holds the child infolded within her own nature during its prenatal life, to what extent does she, during this period, mold its body and determine its mind? Third—Will a study of physiology answer the first question and a study of psychology reply to the second? All of these questions imply the fourth, *viz.*, Does the maternal relation mark the only point in human experience which is independent of the law of evolution and, consequently, incapable of improvement? That is, is this a relation not to be improved by determined effort, by culture, by experiment, by speculation, and by the direction of the aspirations toward improvement? The existence of the mothers' congress, and the programs that are rendered before such congresses furnish proof that there are people who believe that maternity is as capable of improvement as is any other human function.

That the popular mind is amused rather than instructed by the phrase "professional motherhood" is no discredit to the phrase. Professional motherhood is by no means so inharmonious with popular thought as wireless telegraphy was a decade ago. What does the acceptance of the phrase imply? A profession is an office or vocation for which one not only may be trained, but to fulfill which one must be trained. So long as the race continues, motherhood, if a profession at all, must be a profession very generally followed by women. Among the questions that have arisen as a result of their higher education is this: What effect does such education have upon them as mothers? The answer to the question must be found by studying the effect of higher education upon the women who pursue it. Its first effect is a tendency to appeal to reason, and to submit to reason, instead of resting upon feeling and giving way to feeling. Whatever may be said of the strength of the maternal instinct, infanticide and prenatal infanticide are too common in all countries to permit a truthful observer to say that the instinct of motherhood is so strong as to transcend all other instincts.

There is no doubt that a second result of the higher education is to increase the possible pecuniary independence of women, and hence to increase their possible independence of marriage as a means of livelihood. The diminution of this necessity diminishes the number of women who will experience maternity, and, at the same time, it tends to retard the maternal experience of those who marry, and to diminish the number of children born. That the higher education diminishes woman's capacity for affection, or that the development of her intellectual nature dwarfs her emotional nature, is as ridiculous, to-day, as at the date of Sidney Smith's humorous rebuke of the same fear. There

are many intelligent people at the present time who, regarding maternity with a seriousness that instinctive motherhood never felt, with a sense of responsibility, with an appreciation of the contrast between what is and what might be, are eagerly considering how the higher education may be so modified as in itself to become a training for the profession of maternity, or how the education of the college may be supplemented by post-graduate courses directly calculated to fit for this profession. The practical advocates of such professional training say that young women must study anatomy, physiology, hygiene, household science, home nursing, house sanitation, nursery foods, psychology, and kindergarten games, in order to fit themselves for the exacting and many-sided profession of the mother. Personally, I believe that the health, comfort, and happiness of the race would be increased if every young woman, prior to marriage and consequent probable maternity, should take one comprehensive course of training in a school of household science and another in a good kindergarten normal. In spite of this belief in the wisdom of special preparation for particular duties, I see a danger in over-emphasizing a single function or relationship.

To speak of woman too constantly as a mother, real or possible, is to forget the full nature of woman and her final cause. To dwell upon the responsibilities of maternity too exclusively is to ignore the still greater responsibilities of womanhood *per se*. Moreover, to speak of professional motherhood and to make no reference to professional fatherhood is to exaggerate the relative importance and responsibility of the mother's relation to her child. Nature imposes an obligation upon mothers from which fathers are free; but nurture, which is the conscious effort to develop and supplement nature, dare not emphasize this partiality of nature. It were well, indeed, if society inculcated, by precept and by example, in both young men and young maidens, the importance of considering their fitness for parenthood before they enter into the relationship of marriage through which, in all probability, the parental relation will be incurred. But, greatly as society has erred by negligence, there is danger that it will now commit an opposite error by exaggeration. It is only on the lowest planes of life that reproduction is the highest act of a creature, and that in reproduction life goes out.

There is no doubt that, by too great emphasis of the maternal relation, society condones in women indifference to other relations. It seems almost to go without saying that the best woman would necessarily be the best mother, that the most intelligent woman would inevitably be the most intelligent mother. Wherever the goodness and the intelligence of the individual are rendered inoperative in the maternal relation, they are rendered so by a weak yielding to instinct. This almost universal yielding of reason and judgment to instinct in the

maternal relation is the natural, unconscious response of women to the eulogies and encomiums that have been poured forth upon instinctive maternity. Let instinctive maternity be remanded to the lower animals and let human maternity become intentional, conscious, responsible, and hence, professional.

## MOTHERHOOD AS A CAREER

*By MRS. EDNAH CHENEY*

**M**OTHERHOOD and fatherhood are central, eternal, constant factors in all life and creation. They are found in all phases of evolution, running through all the conditions of animal and vegetable life.

As such they have been recognized in the oldest mythologies. The Brahmin religion accepts the Motherhood in the Divine Nature as fully as the Fatherhood, and the human mother is honored as the best representative of the divine power.

Theodore Parker renewed this expression from his own deep heart, when he broadened the first invocation in the Lord's prayer into "Our Father and our Mother, too."

The relation of sex, which we find throughout animate nature, is too broad and deep a question for us to enter upon now. No one has solved its whole meaning, but we must always keep in mind its most important characteristics. Many believe it to be only a thing of time and space and the present body, but Coleridge most emphatically declared it to be a distinction as eternal as the soul itself.

The dual character of reproduction more and more distinctly evolved, as we approach the highest types, helps to make the world what it is. The vegetable world reproduces after its kind, but even here we find variation and cross-fertilization, elements that secure persistence and progress. In the animal world the same law holds against a rigid adherence to one type.

Father and mother produce a child who is like, and unlike, either, and so the race is constantly renewed and regenerated, and possibilities of new talent and worth and power are brought to light.

Therefore the functions of both parents are essential to the well-being of the children. If the sins of the father are visited upon the children, the shortcomings of the mother are equally responsible. Both are apparent in the offspring, and the whole life of either parent is likely to affect the child.

Heredity is the great law by which all the gain of humanity is secured, but if we receive good at its hands, shall we not also receive evil, the negation of good? By this great dual fact of generation, the



defects of one parent are often so balanced by the powers of the other that an equilibrium is produced with happy results.

Here begins the first practical duty of motherhood (in which I include fatherhood). It is not by a sudden act of virtue or care that happy results may be secured. The physical well-being of the child depends upon the life of active work and rational recreation of its progenitors; its intellectual powers demand the development of the parental mind in thought; its affectional temperament craves sustenance from the joy and altruism of a loving nature; and its moral quality is founded on the integrity of its progenitors. Do we not recognize all of this in our recognition of the value of a long and noble descent, not from kings and bloody warriors, but from ancestors of worth and honor? Thus the whole of life makes its mark for all future time on the product which is to perpetuate the race. The artist's work will represent the artist's whole nature; so will the child bear witness to the life of the parent for generations. Yet we must be careful not to lay too much stress upon heredity or consider it as bringing an inevitable doom. Nature has always powerful correctives against evil, and the influences of surroundings and of education are often sufficient to overcome the strongest native propensities. There is always an individual soul which asserts its God-given worth against the worst conditions.

Motherhood does not seem to me a career, but an important fact of life. The poet, artist, warrior, business man, seeks a special career in life in which he may accomplish a definite purpose both for himself and the world. The mother, as mother, does not work for herself, but for the children, and in so doing greatly for herself; yet if she confines herself to her own relation to them, she wrongs them cruelly. At times she must put them off from her to save them, and force them to preserve their individual right of being.

Fatherhood and motherhood are most important conditions in life, but there must be a life of broader relations, of wider activity, to feed the springs of this relation and make it harmonious with the higher and fuller life of humanity.

As Lord Bacon says, there are many passions which can overcome even the love of life, so the father or the mother may at times be called upon to acknowledge some duty superior to the filial claim. One or the other may demand a sacrifice and the duty must be carefully chosen and nobly met. The fondest and seemingly most important cares of the mother must be given up to the commanding duties of the wife, the daughter, the citizen, the advocate of truth, the devotee of religion. No human life must be absorbed in one function alone. Even the supreme function of parentage must be ministered to, and in return must play its part in all of the processes and possibilities of life.

The function of motherhood is to help not only in the perpetuation of the race, but in its development. The stream will rise as high as its source, and the source should be filled with life from the highest and richest springs of good. The very duality necessary for production secures this. Even extremes of evil may be so tempered by good influences on the other side, especially by an abounding vitality, that we may not distinguish the heredity in the result. For often it is not the more salient and obvious qualities that reproduce themselves in the offspring, but up from the depths of a nature not known even to itself, come hidden forces of good which overpower the evil by the help of new surroundings and influences.

The mother's duty is to perfect her own being by learning and following all the laws of life, as revealed to her by the instincts of her own nature, or as gained from knowledge and experience, by taking her share in the work and enjoyment of society and acting out her part in the world that lies about her. Her great duty to her child is to acknowledge and respect its individuality, and so train it as to bear nobly its own part, not hers, in the world of thought and suffering and action. The mother is to educate the child, but even more will the child educate the mother by revealing to her the meaning of her own life, and of all life.

The father must not regard his son as a second self, to keep up an old family name, or to carry out the favorite but selfish purposes of his own life; the mother must not regard her daughter as a plaything to dress and to be proud of. In the noble renunciation of selfish purposes to the supreme good of their children, each will find the sure reward of a genuine devotion to others in the greater joy and richness of their own lives, and all will work together in that variety in unity which makes life harmonious and progressive.

## EDUCATION OF THE SEXES

*By R. NORMAN FOSTER, A.M., M.D.*

THE capacity of man to educate and to be educated in almost everything, is such a commonplace of experience that its significance is apt to be overlooked. We know the fact, believe in it, act upon it, and rear the whole fabric of our complex civilization upon it, and yet do not always reflect upon its deepest import. We can assign no limit to the possible reach of education. There is no nook or cranny of our nature so small or obscure, that educational influence of some kind cannot penetrate it, bring it into clearer light, and modify its content. In this

man differs by a cosmic space from the lower animals. They are but slightly modifiable by education, not at all by self-education. They and their world are the same now that they were ten thousand years ago, or more. Man is not the same as he was, nor is his world. It is true, indeed, that animals, plants, and minerals undergo progressive change; and this is effected by growth, not by that voluntary and intellectual effort known as education.

It is clear that educational effort applies most readily to the higher faculties in man as to the higher orders of the animal kingdom. It is more effective in the development of thought than of digestion. Yet by indirect approaches digestion is susceptible of educational improvement, just as surely as it is liable to destructive perversions. Even these latter are also acquired by a kind of perverting education. By an obvious analogy we may infer that man's sexual nature is capable of education both right and wrong, both constructive and destructive.

That the sexual life is capable of dire perversions is well known. That it is also capable of a development that is full of a profound goodness is equally well known. It is not so certain that the true ground of its worth and importance is fully appreciated. We shall presently endeavor to make it so. Meanwhile we assume, on the basis of what has just been said, that the sexual life need not be excluded from educational effort and influence.

Why educate at all? This question opens up another cosmic gap between the purely animal and the human world. The animal lives his life perfectly without education. He will not go wrong if left to his own natural inclinations. On the contrary, he will go exactly right. He may not be equally noble in all species, but he will live the life that is lawfully his own, whether noble or ignoble, high or low. He will not ruin himself and others by gluttony, drunkenness, or any form of riotous living. With the human combination the case is almost reversed. Without direction, restraint, experience, and conflict, man will choose the road to ruin.

Certainly he often does so; and were it not for the countless influences that watch and guide, we know not what depths of degradation he would finally reach. If this is not true, then all our toil and trouble about education is mere foolishness. The sole reason for education in home and school and church is, that without it man lapses ruinously toward the lowest; and not that only, but tends also toward unutterable perversions. Nowhere is this fact so impressively exhibited as in the sexual life.

And yet, although this reveals an appalling possibility in man's nature, it argues no hopeless imperfection. That he *can* go wrong is his freedom. If he could not err, he could not be individual or free. He



can also go right. What is gross in him can be refined; whatsoever is crooked can be made straight. This is achieved by education of many kinds. The work of education is therefore serious; and it is imperative because it redeems from great peril, and prevents irreparable disaster, just as industrial education saves from want and suffering. All of which supposes the education to be correct in method and principle, and thorough in application.

The education of the intellect has long been recognized as an essential work in human development. But its limitations have also been recognized. The purification of the passions does not necessarily follow intellectual acquisition. Intelligence and vice are too frequently found in the same person to permit us to make such an error; therefore the demand for education of the will also. And this is found to be a different and more difficult matter. The meaning of the word "will" in this connection is, however, somewhat obscure. If we say the affections, the emotions, and the passions, the desires, the appetites, and the inclinations, the subject becomes clearer.

Among these the sexual passion occupies a vital relation. Can we educate that? If man is what he may become by education in the home, in the school, in society, in the state, in the world, and in the church (and by "education" in the widest sense we mean all these forces working together), then what important element of his being can be excluded from the process? What special function, organ, or faculty is it that we may safely leave to "nature," while we diligently cultivate all the rest? If there is any part of the field which the hand of the cultivator may not touch, there must be a reason for the exception. Either the neglected spot is better than the rest, so that it cannot be improved by culture of any kind, or it is so bad as to be beyond the possibility of improvement.

Now it so happens that the one passion which alone modern education is reluctant to attack, is the sexual. Every other appetite, desire, or faculty is cheerfully undertaken. Is this right?

There is certainly no element in human life which means more to the individual, the family, society, and so on even to the race itself, than the sexual element means. It continues the race. It forms the family. It creates human society. It is the romance of the individual experience. It is capable of ecstatic exaltation, purity, and devotion such as no other power can equal, the love of God alone excepted. Parental love is the offspring of sex. There is a charm, a grace, and a tenderness in sex which can sometimes make the homeliest person beautiful. It is not necessary to enumerate the array of lovely qualities that shine forth from the souls of lovers in their springtime. Everybody knows them and rejoices in them.

And the abuse of sex, on the other hand, exhibits individual, domestic, and social destruction in the most malignant forms. The effect of perversion or excess in the sexual sphere is felt throughout the whole organism, and indeed through all the spirit, and is always weakening and degrading. Sexual depravity is of a peculiarly intense and persistent quality. Nothing so obliterates the moral consciousness. Glancing thus briefly at the terrible category of destructive evils that spring from sexual aberration, we cannot say that education is here unnecessary because things are well enough as they are; and seeing how much may be done by education for the blind and deaf, and even for the weak-minded, we are not prepared to say that sexual conditions are so bad that nothing can be done to improve them.

Yet there are good if not sufficient reasons here for a prudent reserve in announcing anything like a public treatment of the subject. Many think that ignorance is the only safe condition. Their argument runs somewhat as follows:

The sexual life is private by its true nature, not public. Nature herself has so marked it. There is a modesty pertaining to it which is one of its greatest charms; and this modesty is intimately allied with the purity of thought and feeling which characterizes true sexual consciousness. Therefore while the anatomy and physiology of the brain may be discussed openly without injury, the same is not true of the subject now in question. Too much or too early exposure takes from a flower its bloom and its beauty, the preservation of which is what makes the flower lovely and admirable. To say that the exposure must be carefully effected, is not enough. It must be absolutely avoided. It is not knowledge of the subject that is needed by the young, but a natural, healthy and modest ignorance. Up to a certain period of life young creatures are naturally unconscious of much that they may rightly and profitably know in riper years. In unperverted states the young of both sexes mingle in happiest ways, knowing nothing of the mysteries that lie undeveloped within them. It is most unwise to lift the veil too soon. The harm we thereby do, far exceeds the possible good to be derived. We provoke a dangerous precocity. We are going too fast. We are striving to pass nature and social order, by developing what they are holding in abeyance, by making pronounced what they hold latent. We awaken curiosity, implant disturbing imaginations, and help to form in young minds ideas that may be easily mischievous.

There is a method in all growth — an order of development proper to every faculty and power. This order must be faithfully followed, or disaster awaits us. Milk is for babes, and strong meat for adults. It is criminal to try to teach a child to walk too soon, because it entails phys-

ical injury which may be serious. Knowledge is not *always* better than ignorance.

Now there is undoubted force in this view of the subject. Within certain limits it is the truth. We must look not once but often before we leap into this special branch of education. But on the other hand we must not forget that while we sleep the enemy may be sowing tares. There may be a right way of imparting knowledge even in this case, which, if followed thoughtfully, would lead to greater safety—would fortify the young mind against the insidious lodgment of depraving thoughts.

If the ignorance, which we feel to be the safest condition, could be trusted to continue until the time is ripe for knowledge, undoubtedly it would most fully meet the emergency. But under existing social conditions we know that such ignorance will not continue, at least in the great majority of cases. And we are hardly justified in standing idly by while the seeds of evil are being secretly implanted in the minds of our sons and daughters. There may be a method of educating the sexes in this special matter, which will yet be fully conservative of all that it is desirable to protect.

#### HOME EDUCATION

THE education of the child in literature need not begin at home. Its education in the branch now under consideration must begin there and nowhere else. It must commence not merely by the family fireside but in the heart and soul of the parents, wherein dwells the whole spirit and meaning of the family. The domestic atmosphere is the first influence to which the young life is subjected. The woman, wife, and mother radiates that atmosphere. As her spirit is, so will all else be. Woman may or may not be the head of the family; but she is its heart, soul, and life. As such she sheds upon all the members, from the least to the greatest, a penetrative influence, which pervades subtly the whole domestic realm. The spirit with which she takes her newborn to her arms, and presses it to her bosom, the joyfulness of her kisses, and the tenderness of her caressing touch, are felt by the infant with an obscure sense of comfort and of being at home. This is the first teaching respecting sex which is imparted to the dawning consciousness of the young. We cannot dispense with it. In this teaching, the ultimate lesson is apparently very remote; it is really all present and near at hand. But it is present in the form and in the spirit of the family. This spirit sanctifies all details, gives them their proper setting in relation to the dearest good of the individual and the race. This spirit makes beautiful things that would otherwise be repellent. Of course the root



element in the situation is the love which drew together the man and woman and made them husband and wife. This love makes delightful the commonest services that parents are called upon to perform for their offspring. This love makes the springtime of domestic life, when the home is alive with the warbling of birds, and fragrant with innumerable flowers. These are all in the hearts of true parents. There ought never to be any other parentage than that so founded and so alive in spirit.

How full of sweetness and tenderness is this little domestic school. It is not a small thing that the babe is so received and welcomed on its first introduction to the world and its fellows. The very foundation of its independent being is here laid down in warmth and tender devotion and joy. This first dawn of consciousness may in after years be hidden by many a cloud; but it is always there. To have every want satisfied; to be pitied, helped, cherished, succored; to be guided, pleased, comforted; to be caressed, embraced, loved in every deed and word; to be appreciated, admired, enjoyed; to be directed and taught by endless kindness and gentleness; to be led from one little happiness to another from hour to hour, and from month to month; how touching and beautiful is this primary education of the family! Substitute for this in the life of any infant a consciousness of suffering, want, cold, neglect, physical and mental hardship, such as too many have had to endure, and how different must be the after development! A consciousness of a prolonged bitterness of being is the deep-rooted first experience in one case, and of the essential goodness and sweetness of life in the other.

The exact memory of all this may not be vivid in either case, but the primal bent and set of the whole nature is different, amounting in one case to a vague feeling that life is a blessed event, and in the other that it is very cruel. The difference arises from the fact that the true life of sex in all its fulness is present in one education, and absent from the other.

The mother has not only first possession of the child, but it is a close and intimate possession surpassing any other known. The naked babe in her arms and in her bosom is a symbol. The Madonna and Child is the great art-type of the relationship. This is the child's first lesson in the education of the sexes. Here is sex unveiled yet modest; naked but not ashamed; common but not profane. Soon the infant distinguishes between the mother and the father. It is very sensitive to the atmosphere



created between these two. If it is an atmosphere of happiness the infant revels in it. It certainly does not understand domestic discord, but it feels it nevertheless. It does not bud and blossom in such an air, as a flower will not in winter. A happy marriage and a cheerful home is one of the rights of infants.

As the child develops, it daily learns more and more of its peculiar lesson from the other members of the family circle. The gentle words spoken and the kindly deeds done and the consideration shown between the father and mother, are hourly fixing in the budding mind, the first true idea of sex. It is the spiritual element that appears to the child first. No other is permissible or communicable. Thus the sanctities are guarded.

The customary deference of the parents, each to the other, is a delicate demonstration to the child of the relation of the sexes. This lesson is reënforced by the presence of brothers and sisters in the same household. The duties requiring strength will be given to the boys; those requiring delicacy of handling, to the girls. The natural distribution of duties in this way is another object lesson, which cannot fail to bear fruit in future development. Differences in dress, manners, and occupation emphasize the same idea of difference in sex, which is yet a difference that has charms.

Thus the boy's first feelings toward his mother, then his feelings toward sisters, and the difference between these feelings and those regarding the father and brothers, mark a real stage of special sex education.

To destroy this distinction by making the dress and the plays and the work of boys and girls as nearly the same as possible, as some have aimed to do, is a most questionable procedure. Girls and boys are different in infancy as well as in adult age. The nature of the girl is to grow not more a man or like a man, but more perfectly a woman. The nature of the boy is to grow not more womanly but more manly. Very early in life the different tendencies are shown, and surely when one becomes a father and the other a mother, the distinction is not less marked. The distinction of sex, in short, shows itself from the first as a difference in soul, mind, body, and development, all at once—a difference, innate, radical, unalterable, which no education can deeply change, and which none ought to desire or endeavor to change. Education means the development of the true nature of a human being, not the development of it into a different kind of being. The latter we are utterly unable to effect, although we may mar the nature by the effort to educate it wrong. We must educate the girl and boy into a woman and a man—the little woman and little man into the greater. Strictly speaking, we are unable to do otherwise. We can never convert one sex into the other.

## SEX AS THE FAMILY

Much of the foregoing may seem but remotely related to our special subject. But on the contrary it is so intimately related and so inwoven with it, that sex cannot be understood at all apart from the family, and least of all can it be rationally directed in its development except as so understood. This must be our excuse for what might otherwise appear as a digression. All of the significance, the worth, the dignity, and the use of sex is involved in its relation to the family. Every departure from the norm of sexual life is an injury to the welfare of the family. Otherwise such departures would have serious bearing upon the individual only, whereas in reality it deeply concerns the race.

That the sensual element in sex, unmodified and uncontrolled by the spiritual, is the destroyer of every form of good in sexual life, is writ so large in the social history of all the world, that scarcely more than a reference to the fact is necessary. What is the power that seduces the innocent clean-minded boy from the domestic paradise to the abodes of only half-concealed vice, but his own sensuous nature? The love of the spirit on the contrary leads him from the family to the family where sex is respected, protected, cherished, and loved, and where it brings forth its choicest fruits. The sensual phase of itself and by itself, corrupts and ruins the family, and tends to rapidly destroy the individual also.

Nothing so retards this proper development as excesses and perversions of the sexual life. This life exhibits to us in unequivocal terms the greatest usefulness, for it continues the race, and the utmost destructiveness, because it subjects individuals, and races even, to a degrading sensual bondage. War, rapine, drunkenness, gluttony, idleness, theft, and all the sum of cardinal sins and evils, are not so deadly as sexual perversions. These render all forms of excellence, growth, and development impossible. The sexual life as explicated and embodied in a loving and refined family is the sweetest thing on earth. As exhibited in any other form it is intolerably hideous. Examples are never wanting.

The intense anxiety of the parent and the family to protect and preserve this life from such profanation and destruction is justified by the intensity of the evil involved and of the good lost. No marvel that we look to early and late education as one powerful means of promoting the good.

Guard the beginnings. So spake an ancient wise man among the Greeks. Oppose the beginnings of evil was his meaning. There are two forms in general of sexual evil, very different in character. One is rightly called perversion; the other excess. Perversion belongs to



all periods of life, being manifest both in infancy and in old age. Excess belongs to the period of maturity. It is unnecessary here to designate particularly the perversions of infancy. They are known to all mothers, and to fathers also who know anything of the details of their children's habits. The tendency to perversion in early infancy is a surprising fact of physiology. Its analogue is not found in any other bodily function. It cannot have been acquired by suggestion from others, but is innate and quite spontaneous. It is manifest in the infant as a precocious consciousness of its own sex, displayed quite innocently in many ways. It cannot be regarded as a sin, or a vice, or a crime, in so young a creature, and ought never to be treated with harshness or punishment. But the tendency of it is to grow stronger with the growth of the infant, and it is the root of very probable evil in the future.

The remedy for this is to change the object of consciousness as quickly as possible — the moment that any manifestation of this predisposition shows itself. A babe that gives signs of too much interest in certain matters pertaining to the toilet, for example, ought at once to have its attention attracted elsewhere, by any little tactful device that will accomplish that end. Meanwhile the toilet may be made with haste also, and not with too much gentleness. The mother who detects any such tendency in her infant, who instinctively discerns the civil connotation, and directs its consciousness in another direction, is practically illustrating the essential principle of all education, which is always an effort to subordinate a lower principle to a higher. Thus education aims and strives to overcome what is unmoral, still more what is immoral, and to implant the moral instead.

Some parents are undoubtedly very remiss in such training, for various reasons, but not for any one good reason. Some regard such things as of trivial import, at the worst sure to pass away in a few months, as the child develops in other respects. And of some children this may be true; but it certainly is not true of all. On the contrary, the evil frequently increases year by year. Some, again, do not observe that what seems, and in a sense is, quite innocent in a babe, may become very revolting in the course of time. The young of all creatures are playful and pleasing, but of many it is only the tamed and domesticated that are fit for human companionship when grown. Others again see no way of correcting these depravities of infancy, and give them up in despair. To such the mothers' meetings ought to prove a mighty aid and support.

It is hardly necessary to specify more particularly the forms of perversion assumed by the sexual life in infancy. In general it is a precocious excitement, which is at first involuntary, but subsequently becomes voluntary. Artificial excitement then reinforces the spontaneous and is, of course, practised by the child. Depraved or thoughtless nurses also

are frequently instrumental in promoting the mischief. Strange to say, this possibility is often overlooked by otherwise careful parents.

But the mother is not required to bear alone the responsibility of correcting these early tendencies. Where she succeeds, it is enough. When she fails the father is an ever-present counselor; and when their combined efforts fail, there still remains the family physician. Sometimes pathological conditions of the organism are the cause of the perverse excitement; and when this is the case, medical interference is the remedy.

It is not necessary that parents should be proficient in the anatomy and physiology of such cases. This they cannot be without medical experience and education. The father, the mother, the trustworthy nurse, and the physician working in concert, are sufficient for the domestic phase of infant training.

It is when the child passes from the home to the school that danger is increased; and in general it may be said that the danger is greater with every year of development, owing to the larger and more frequent association of children with each other. The innocent are thus brought in close contact with those who are already experienced in vicious habits, and natural consequences follow.

Now the first great remedy and defense in this case is again the fixing of the attention of the children constantly upon work, play, or exercise of a pleasing, moral, and healthful character. Children who are neglected, or whose lives are not provided with anything attractive to them, may well be expected to find relief from monotony in improper ways. Here is where educational methods of the past deserve condemnation. The home was too often severely monotonous, the school was more so, and the church the most tiresome of all. We have known hundreds of children brought up from childhood to adult age without any real provision made for enjoyments suited to their years, either at home, or at school, or in the church. This is distinctly as it ought not to be. Parents should see to it that the household has its daily round of amusements, games, and romps, which are just as necessary to the right development of the human being as they are to that of the animals, in whom nature has implanted the love of playful exercises.

Opportunity for solitary vice is always given to the child when left for one or more hours alone. Punishing children by shutting them up in a room or a closet alone for any length of time is almost an invitation to one particular form of mischief. The child's consciousness is then reduced of necessity to mere self-consciousness, and he is such that he must seek relief from the pain of monotony—he can hardly be expected to spend the lonely hours in silent prayer. And not in punishment only, but also in the ordinary course of household affairs, the child is frequently

left entirely to his own resources. Having no companions, and his guardians being otherwise occupied, he must do something. What now ought we to expect of him under the circumstances? Why, surely, that he will occupy himself with whatever will give him relief from his loneliness, and especially with anything that will give him some sense of pleasure. Some children suck their fingers, some laugh and sing, some play with any trifling object, and some find the way to evoke in themselves an artificial sexual excitement. The plain indication is to provide children always with safe companionship, and with something to amuse and interest them.

Of course, where there is no tendency to the formation of vicious habits, the case is not so urgent. But then the mother ought to be observant, and quick and sure to *know* that nothing is going amiss with the child or children when left to themselves. Household cares are often dreadfully imperative, we know; but then there is no care so imperative as the care of the child. The child ought not to be subordinated to the cooking, but the cooking to the child. The mother's first duty is to live with the child, in constant companionship. Direct him to amuse himself in healthful ways. Talk to him; play with him; be his intimate friend; win his admiration, his love, and confidence. He will find comfort in little passing notices. He suffers from neglect, just as men and women do. The world of adults suffers more from lack of interest in and appreciation of its life and work than it does from long hours and low wages. In short, the mother who takes the time necessary to make her child happy in all harmless ways is building a very powerful barrier against the intrusion of depraving habits and inclinations.

"Papa," I once heard a boy of seven say to his father, "do you love me *very much*?" Thinking to tease him a little, I asked, "Why should your papa love you very much?" "Because," he promptly answered, "it is not right to love your little boy just enough to keep him alive." That is sound doctrine. It is not right to care for the children just enough to keep them from positive misery. They deserve to be loved very much, so as to fill them with a sense of contentment every hour. Only real mothers, and women who may not be mothers in the flesh, but who have motherly souls of great magnitude, can fill this requirement. Such "mothering" in all thoughtful ways, with an eye single to the solid welfare of the child, is really the greatest safeguard against the formation in him of evil habits. Give the child occupation, company, and amusement, and a watchful oversight, and he will grow up in an ignorance that is bliss, so long as he remains within the shelter of the family home.

It is a deplorable fact that many mothers, even in these days, who would be ashamed to be ignorant of almost any other duty of the



home, actually know nothing of the sexual life of their children. Any amount of mischief may be in progress without their so much as thinking of it. The whole subject is put away resolutely, as if it were untouchable and unspeakable. Now the one person in all the world who can first detect and most easily speak to the child, or otherwise direct him, is the mother. She has the child's confidence. With her he has no concealments, no bashfulness. There is not a mother living who cannot, if she thinks the matter over carefully, with the utmost naturalness and delicacy, do with the child, and say to the child, anything that the circumstances require. She can even in the early years impart information to children, which curiosity will prompt them to seek elsewhere, if they do not acquire it at home. And only from the mother are they likely to learn the domestic mysteries as they ought to be learned. It is quite certain that very few modern children will be content without inquiry, or will be satisfied with cunningly devised fables instead of knowledge. And only the mother can satisfy the requirements. She can easily instruct the child that certain things belong to the private life of the family—that the family has its sacred esoterics—which are not to be spoken of beyond its precincts. In fact, children are by no means destitute of tact in such matters. They soon learn to distinguish in many things between what is properly private and what is not.

Of course, this whole subject is always one requiring exceeding delicacy of management. In high art the nude may be impressively set forth, and in such presentation it is always the chaste and the beautiful that is shown. Only meretricious art embodies anything else. But in daily life the modesty of drapery is essential. So in the instruction of the young, remote illustrations and analogies are to be employed first. Thus the vegetable kingdom and its flowers and fruits may be used as living examples of procreation. This we have seen very admirably done in a little leaflet for mothers, written by Mary Harmon Weeks, published by the Mothers' Union, Kansas City, Mo. Thus the child-thirst for knowledge is satisfied, and the modesty of nature is not violated; nor is sex profaned.

With education becoming daily more general, it is folly to rely any longer upon the secretive methods of the ancient domestic régime. The modern mother will be responsible for results, if she does not find and lead the way to increase of knowledge and sexual cleanliness, both at the same time, in her children.

#### THE CHILD AT SCHOOL

So far we have only considered the domestic training of the sexual life in very young children. The family influence does not stop here, it

is true, but may be continued to adult years. Yet there now enters another and powerful agency, which also has its direct bearing on our subject; that agency is the public school.

Most happily for the present and future generations, the first introduction of the child to this larger life is now through the ever-blessed kindergarten. Oh! that it had come earlier, or that we had been born later! Nobly and with loyal hearts did the earlier teachers do their pioneer work with inadequate means, and feel their way to the more perfect method. Perhaps they made as decided progress, considering their starting point, as we are making now. They labored, and we have entered into the fruits of their labor.

Now in the kindergarten, with reference to the topic now under consideration, the ideal conditions are attained. The children's minds are fully occupied with a great variety of interests suited to their age and capacity. They are not forced to dreary tasks and tethered to dull routine. Every faculty is brought out by attractive exercises. The teachers and the children are always closely associated and on terms of affectionate intimacy. This is said with particular reference to the smaller schools, where every little group is always under a guardianship, which yet is felt as a pleasure, not as a burden. But where fifty or more children have but one teacher, and have therefore to be drilled through everything in masses, constant attention cannot be given to individual scholars, and oversight is incomplete. In the case of children requiring special attention, a good understanding between the mother and kindergartner is all that is necessary.

It is when the child passes from the kindergarten to the larger schools that the greatest opportunities for sexual mischief are offered. Here the young and unawakened come in close contact with older ones who have already acquired bad habits. This is the case in every school, and is direct proof that sexual education has been fearfully neglected in the cases of large numbers of children, especially of boys. This particular crop of weeds is so thickly sown and rooted in school-life that a plain illustration must be given: At one of the largest schools in a large city it is customary for the boys to rush in droves, during recess, to the toilet-rooms. On these occasions new scholars are sometimes initiated into the juvenile ethics of the place by the older ones in a very disgusting manner. Here is opportunity given every day, year in and year out, amid the most suggestive surroundings, for any amount of vulgarity and indecency.

If the boys of this school were allowed to pronounce their words in reading, not in accord with proper usage, but any way at all, the parents would be troubled, and would clamor for teachers who should see to it that every word was pronounced correctly. But other matters of far more

serious import were passed in silence! For the parents were not all of them ignorant of what was done, and we must suppose that silly shame-facedness prevented them from doing their plain outspoken duty in the matter. So it is with the whole sexual life of many children. It is permitted to take any form, howsoever wicked or repulsive, rather than make it a question for plain speaking and watchful guidance.

Now in the case of this public school (and the observation applies to nearly all of them), there were two things vitally wrong in the management: First, the best possible opportunity was given for wrongdoing; secondly, no guardianship was exercised. Add to these the preceding parental neglect, and the thing is fully explained. Given the imperfection of the little human animal, what else is to be expected? The practical lesson is that on the playgrounds, and still more in the semi-private places where children congregate, some of the teachers ought to be present always.

Nor will it cover the whole ground for the teacher to be a silent presence among his pupils. He must, when he detects undoubted symptoms of sexual perversion in a boy, take that boy to his special care, talk seriously and plainly with him, and be his loving friend, win his confidence, and thereby do that boy more vital and essential good than by making him graduate at the head of his class.

It must remain forever incomprehensible that we should give so much of our toil and substance for the purposes of an ornate intellectual development in the young, and utterly ignore some of the more vital interests of the moral life. That is to say, we ignore them in our system of public education.

The task is really not so difficult if once fairly considered. The removal of the degrading opportunities is the first step; next in importance comes close association of children and teachers, both in work and in play; and abundant provision for healthy and interesting occupation all the time. Idleness, solitude and monotony are as tempting as evil associations.

Whether in school or at home, there is a point of possible danger in sleeping arrangements. The very young sleep with the parents. Older children may generally be allowed to sleep together; but it is questionable whether separate beds are not healthier and preferable in every way for those beyond seven years of age. Respect for the privacies is thus cultivated, and health is promoted, while an obvious chance for wrongdoing is avoided. It is quite probable that among children of the same family, even where two or more occupy the same bed, liability to error is not so great as among those of different households. But boys who visit and spend the night at each other's houses ought certainly to sleep apart.



## PUBERTY AND BEYOND

By the time the young lad has reached the period of puberty, he and his parents ought to be on such intimate terms, that sexual matters may be frankly canvassed between them. The same ought to be true of daughter and mother. I know a gentleman who visited Paris, taking with him his son and his nephew, both about sixteen years of age. One evening, while they were seated together on the veranda of their hotel, a man approached them, and offered, for a small financial consideration, to take them to a private exhibition of an exceedingly vile character. The gentleman dismissed the agent angrily, and then at once sat down and explained to the two lads what the proposal meant. He closed with this admonition, "My dear boys, live clean lives until such time as you shall meet a young woman whom you would love to marry, and then you will know all about it in the right way, and your lives will still be clean; and there is no other way." That father related the incident to me, and the two young men, as they now are, would be selected in any company, as men of clean lives. They respect and admire young women, and are the true material out of which to make desirable husbands, and parents whom their children may honor. But this man could do what only a few fathers think of doing, or know how to do, what the mass of fathers utterly neglect to do—he could talk to his own children freely and without shame, and indeed with genuine modesty, about the private life of the family. His children love him the more for it. They know that he is an instructor whom they can trust. They believe in him. They know that he has no sneaking concealments behind which to pose loftily, but is just what they are and ought to be. And they have been deeply and purely influenced by his spirit and method.

Not in a moment can such confidential relations be established between parents and their children. Such intimacy begins in the infancy of the child, and is a thing of daily growth continued for years. Nothing but the earliest planting of entire family confidence can cause to grow up in the minds of the young those tastes, thoughts, and habits, which shall offer strong resistance to the encroachments of evil in later years. Fathers and mothers may not at first know how to combine candor and delicacy, frankness and modesty, in conversation with their children about family matters. They might err also on the side of telling too much or too soon. Moreover children are not all alike trustworthy or all equally curious for knowledge. But most assuredly parents can learn, and the innocent questioning of children suggests innocent answers.

Besides all this, there remains the great resource of the medical adviser of the family. His services may be most important, not only

in cases of disease, or when surgical interference is necessary, but also as an instructor in sexual hygiene. Many young men report their difficulties to the ear of their sympathetic physician, when their parents do not know that they have any troubles requiring confession or counsel. It is rare that sound advice is not to be obtained from this source. The advice of the physician is especially valuable in cases that have broken away into perverted habits. The professional warning is recognized as a thing of serious character. It depicts the consequences of abuses and excesses, and of all sexual immorality, in very impressive colors.

Indeed it is by no means parental effort alone that can carry through from beginning to end an effective course of this kind of education. Medical, social, and religious influences follow in their order. And among social influences may be placed association of the adult sexes in various ways. It will always be a matter of grateful surprise to the man element that young women are naturally such adepts in promoting just the kind of education that the young men need. With occasional sad exceptions, and those usually the fault of family training, they know how to regulate freedom so as to command respect.

#### ASSOCIATION OF THE SEXES

This fact constitutes the best of all reasons for as much association of the sexes, under proper conditions, as is consistent with the general duties of life. Such association in schools, at least up to the age of sixteen, and afterward in social entertainments of many kinds, is really one of the greatest safeguards against wild love affairs, ill-assorted and premature alliances, and runaway marriages. It is those who have been secluded carefully and unreasonably from such association, who are in the greatest danger. The spiritual influence is so new to them, that they are carried helplessly before it as by a flood. But let the acquaintance be an every-day affair, as it is in the family, and special attractions arise more gradually, and pursue a more temperate course.

And yet it must be admitted that the social and industrial conditions now prevailing do not afford a fair opportunity for a uniformly good education for the sexes. The word Education is undoubtedly the loudest utterance of modern times, and its meaning is growing larger daily. It has long ago escaped the original boundaries of the three R's, and has invaded half the business of life. Reading, writing, and arithmetic were but the bud. It is unfolding into the full leaf and flower. The social



fruit is concealed as yet, but it is sure to come. The fact of complete education in all things for all persons must ultimately create a social atmosphere and social conditions far more favorable to the lovely development of the family than any that we have at present. The means required now for the support of a household, however small, are hard, and even impossible for many to obtain. This postpones marriage too long. It affords strong excuse for extra-marital indulgences. It makes money too potent in social affairs. When our schools teach the true economy of housekeeping and other labors, and settle social affairs not upon a basis that demands wealth and luxury as the only means of obtaining respect, but upon the ground of simplicity, economy, and fine personal qualities, sexual education will be more effective. The painful suggestion that "marriage is a failure," now so frequently heard, is undoubtedly due in great part to the increasing expense of living, and to the increasing love of luxury and display. Our standard of living is too high for our means. The young married pair are thereby subjected to hard financial strain, which, added to the growing cares of the family, undermines domestic peace, and sometimes snaps the bond altogether.

But the subject grows of itself in this way, every part of it bringing in every other part by virtue of that unity of relation which pervades all being. We cannot neglect one element in education, and not thereby hurt all others. Money and marriage may seem rather indifferent each to the other, but in the end it does not prove that way. They are necessarily related, and either without the other, will be a failure. It is not within the province of this article to do more than to suggest this cardinal principle, that all attempts at sexual education (which means the education of the family) will be only partially successful, unless related conditions are also studied and adjusted at the same time.

As the object of this paper is to treat of sexual education chiefly within the limits of the family and the school, we need not go further. What has been said must be regarded as tentative and suggestive, not by any means as exhaustive or final. There remains a larger and more difficult field for cultivation, which is as yet scarcely touched; that field is the world and the life of the world, and the development of men and women in its fiercer struggle. The great educational power here is religion and the church, and when this also fails we may add the inner and outer experience of the fallen and unfortunate. Right direction in early life can render the work of this last stern teacher unnecessary. And to aid in the promotion of such early effort is the aim of these brief paragraphs.



## POSTURE

AMONG the influences which affect the lives of individuals during the first sixteen years of life, none are more important than those which help to build up strong physical bodies and establish right physical habits. Important as are the intellect and the moral nature of man, they are slaves to the general body, and a hard taskmaster the latter is, indeed, when it becomes weak and disordered.

It is a curious fact that children assume better postures in standing before the age of five or six than afterward — and at this time the body is usually symmetrical. Body symmetry is important to health and to the perfect and harmonious development of the internal organs and tissues; special and intelligent care, therefore, should be taken at this age to prevent the formation of posture habits which will result in such loss. It is unfortunate that so many mothers and teachers are ignorant of the principles upon which correct walking, standing, and sitting, are based. Surely, prevention is more economic than the expenditure of energy in efforts to correct; hence explicit teaching upon this subject should be welcomed by all who have the interests of children at heart.



If the human body is considered from the standpoint of its mechanics, we find it made up of a pedestal — the pelvis\* — mounted on two columns — the legs — which serve as a base of support for it. Upon this pedestal, the tall, upright spinal column stands, surmounted by the head which balances upon its summit, — when the spine is well-placed beneath it, — but which may, through the looseness of its attachments drop forward, backward, or sidewise. Other weights are attached to this slender, upright column, the heaviest of which is the chest, made up as it is of ribs, breastbone, collar bones and shoulderblades. The arms also are suspended at either side, connected with the spine through the scapular muscles.

In standing, the shape which the spine will take depends largely upon the position of the feet and of the pelvis. Every change in these supports demands a readjustment of the spinal weights in order that the body may retain its equilibrium. These changes affect the shape of the body materially. What position of feet and pelvis maintains the spine and its load (the head, chest, and arms) in the most hygienic posture?

\* The pelvis is the bony cylinder at the base of the trunk commonly called the hips.

Plainly it is that which gives largest space to the heart and lungs,— those faithful servants which keep up an almost ceaseless activity from birth till death.

If the legs were not shirks by nature and habit, it would be economy of force to stand with the heels beside each other (or a little separated), and with the body weight resting equally on both feet, a little in front of the insteps. Unfortunately, however, with the feet so placed, in a moment of forgetfulness — and who has time to keep his attention fixed upon his feet? — the muscles of one leg relax, and the weight of the body is transferred to the other. The center of weight is now no longer over the center of support, and the spine promptly sways over toward the active leg. To equilibrate in this new position it also shifts its weights, dropping the arm, shoulder, and head to a lower level on that side, to balance the unused and more or less suspended leg, which in turn promptly and unconsciously moves away from its fellow. The entire body has lost its symmetry through these changes,— skeleton, muscles, ligaments, organs, all are placed at a disadvantage, and if this position of feet becomes habitual, one shoulder becomes permanently lower than the other; the ribs below it approach each other, shortening the chest wall on one side,— that of the active leg,— and the spine assumes a long, lateral curve. We cannot, therefore, permit either a child or ourselves to form the habit of standing with feet together, or separated widely, with *knees apart*.

What position of feet, knees, and pelvis shall we encourage, and teach? The only one in which body symmetry will be retained with the weight resting upon one leg, is with one foot and knee *near to the other*, but *a little in advance of it*, the toe pointing directly *forward*. In this position the base from side to side is narrow, but from before backward it may be made as wide as is comfortable without interfering unfavorably with the shape of the trunk. Having found a place of safety for the feet and knees — the latter must always be kept *near together* — the head should be lifted high, and the *upper part* of the trunk swayed a little forward. In this posture permit the body to grasp, as it were, the ever-moving cable of gravity, and rest from muscle work. Forgetfulness will not be accompanied by loss of symmetry. The chest will remain high and the head erect. The attitude is one, not only of physical strength and courage, but of mental alertness. To cultivate the *habit* of so placing himself in standing reacts upon the mental and moral nature of the child, tending to make honesty and uprightness of character natural and easy.

In walking, the pelvis should be carried high at the back and low in front (as in standing), thus throwing the weight of the body in front of the instep rather than upon the heel. The chest and head should lead the pelvis and knees. The same position of pelvis should be maintained

in sitting, *i. e.*, high behind and low before, with the chest and head in advance. The chairs and school seats provided for children should be so constructed as to make this posture the most comfortable and natural one that the child can assume, while the unhygienic should be too uncomfortable in comparison to be often assumed. Any position in bed is hygienic if only the same one is not assumed until it becomes the habit of the body.

As many hours of sleep as possible during childhood and youth should be encouraged, and the night's rest should begin as soon after sunset as possible. Artificial lights overstimulate and fatigue both the eye and the brain, so the shorter the time children spend under their influence the better. Children should sleep in cool, quiet, and dark bedrooms, provided with a free flow of fresh air and a small amount of furniture and draperies. Dust is the arch enemy of health. Hence, the fewer surfaces upon which it may collect, especially in sleeping and living rooms, the more hygienic they will be.

Activity is the law of childhood, and play is its accompaniment. Children early become resourceful, finding ways of amusing themselves undreamed of by older folk. It is usually better to encourage them to utilize the things which they find at hand for play purposes, than to provide them with articles already manufactured. Most children are happy in a gymnasium, and the ease with which they perform exercises difficult to older persons, indicates the suitability of the work.

School requirements have become so exacting that they have taken away from the boys and girls of the present day the time and opportunity to help their parents in the performance of home duties. The loss which children thus sustain is greater than appears upon the surface, for it is not so much the facility gained in doing such work, as the associations which are unconsciously built up, helping to make the childhood home seem in later life the dearest spot on earth. If time and opportunity are lacking in the home for such duties and instruction, it is of the utmost importance that means shall be provided for it in the school. Manual training supplies this need, and while it should be scientific in its methods, it should also be made attractive to children, so that in after life, if such or similar tasks become a necessity, they shall, through happy associations, be found pleasing rather than irksome.

How to provide the best environment for boys and girls between the ages of twelve and sixteen, is indeed a difficult problem. During those years body growth is phenomenal, and with that which can be seen and measured with tape and calipers, goes on an unseen yet evident development of nerve lines, blood channels, muscle tissue, and glands which send throughout the body a new and previously unfelt influence. The subject of such rapid growth is a stranger to himself. New desires and



hopes and fancies are born. He (and more often, she) is restless, self-centered, and shaken by emotions which she cannot check. Healthy, unmethodic play, so full of attraction before, now seems foolish and childish. If ambition stirs her to great effort, which is uncrowned by success, life seems worthless and effort vain. How can this frail bark, so heavily freighted with possibilities for a noble and useful life later on, be tided over the bar of these difficult but eventful years? The needs of the *physical* structure without doubt greatly outweigh at this time all others in importance. Employment of hand and mind, wise companionship, and above all judicious home management, are all important.

It is of course essential to good health at all ages, that wholesome food shall be supplied in necessary amount, but not since the days of earliest infancy, has it been as important as during these years of rapid development. Such fast-forming tissues must be supplied with building materials easy of absorption and assimilation. Mothers need not fear that gluttony will be the result of satisfying the appetite (if such a thing were possible) at this time. If the food supplied is well chosen and properly cooked, the amount may be left to the child to decide.

The seats and desks provided for the pupils of this age in public schools, are especially harmful. It is through them largely that so many flat chests and round shoulders are produced; worse still and more far-reaching is their influence in producing pelvic disorders in girls. School seats and desks should be adjustable, to suit pupils of varying heights; chairs with adjustable and hygienic backs should replace the immovable and incorrectly shaped seats in use. School desks should be provided with appliances for supporting the book, at the height and angle needed by individual eyes.

Training the young consists not only in stimulating them to make right choices, but in helping them to acquire right habits both physical and mental. Habit may be defined as the more or less unconscious repetition of an act which was at first performed with conscious effort. Habit is like automatic machinery: it economizes labor. Muscle habits are easy to acquire and are long retained. The boy who early learns to remove his hat in the house, and to touch it or lift it when he meets his friends upon the street, will do it without conscious effort all his life. The habit of saying "Please!" and "Thank you!" is one which when once acquired is seldom lost, and demands no effort of mind. Muscle memory is more tenacious than mind memory, and, as every one finds to his sorrow, is a tyrant when it becomes necessary to break a physical habit. It is evident, therefore, that parents and teachers should spare no effort in training children to acquire right and helpful physical habits, and to avoid the formation of bad ones. The mind constantly receives impressions through motor activities in

the directing of which it takes no part; in a double sense, then, our motor habits help to mold even the expression of our faces and the outlines of our bodies through the development of muscles and the play of thoughts upon them begotten by their own activities.

We all tend to grow old and stiff, physically and mentally, long before we need to do so, largely because we separate ourselves in body and thought from young children. We thereby lose their point of view and become unable to understand them, and they know it and withdraw from us. A child of five in speaking of a woman of fifty not long since said, "Oh I know her, she's a girl!" That woman, and all like her, possess a sacred power of influence over little children which should be carefully used and guarded.

All children pass through stages of silliness, selfishness, etc. The most trying of these begins at ten or eleven usually and lasts until fourteen or fifteen. It is harder to be patient with them during this than any other period of life, and parents and teachers should "gird up the loins of their minds," so to speak, as this age approaches, and set themselves to endure it as patiently as possible, knowing that it is "but for a season." When the age is past these tendencies will, if the child has been kindly and patiently dealt with, pass also. It is like an attack of typhoid fever, which it is said "must run its course, and the individual will probably be stronger when he recovers from it than before the attack."

The influence of thought life upon body growth and development is often well marked. Badly managed and overtrained children are more likely to build up poor physical structures, other things being equal, than are those who are judiciously managed, or even let alone more or less. Uncertainty and discontent, like anxiety and grief, are mental activities, which are conducted outward, from the centers in the brain where they are generated, along general or special body lines. Their journey outward is manifested by an unhappy expression of countenance—the pouting lip, the frown—by body movement and attitude. A fitful appetite, sluggish digestion, and even slowness of body growth may indicate an unhappy mental state. Trustfulness, hopefulness, happiness, with their concomitants, send to the surface a far different influence, producing face and body lines so indicative of joyousness that they cannot be misinterpreted. Even body growth, under the stimulus of happy and satisfying surroundings, often exceeds the limit which inheritance would lead us to expect.

Our bodies are not only affected by our conscious but by our unconscious thoughts. Dreams which we do not recall often leave a shadow upon us which we cannot shake off. The images which daily pass before our eyes, yet which we seem not to see; the sounds which float upon the

air; the odors which do not awaken consciously our sense of smell, all may influence us not only at the moment, but, being registered in our subconsciousness, may come forth long afterward to affect our lives profoundly. Here lies the most subtle and far-reaching power of parent, teacher, and friend. To surround children in the home and in the school with such material things as are calculated to stimulate in them a love for the "good, the true, and the beautiful," to live such lives before them day by day as may later on be reproduced without giving us sorrow,— this is the task and this the privilege which is ours. This, too, the responsibility which rests upon us; for whatever the character of the surroundings we make for the young, whatever our words and our deeds, they will be built into the lives of those with whom we have most to do, and will become a part of the great life of the world.

ELIZA M. MOSHER, M.D.

## HINTS ON PHYSIOLOGY AND PATHOLOGY OF CHILDHOOD

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### DIGESTIVE SYSTEM

THE alimentary tract may be likened to a chemical test-tube, beginning with simple chemical reactions in infancy, and gradually increasing to more complicated ones as life advances. The food may be likened to the chemical substance to be analyzed (in this case the aim of the analysis would be the separation of the elements, and preparing them for absorption). The digestive fluids are the chemical reagents by which the foods are split up into the constituent elements.

The mouth, called the oral or buccal cavity, with its various accessory organs forms the first part of the digestive tract. It is lined throughout with mucous membrane, which discharges its secretion into the cavity, together with those of the various glands, the combined product forming the first digestive fluid, the saliva.

After being reduced to a pulpy consistency by the teeth and mixed with the saliva, the food is swallowed. The act of swallowing is performed through the contraction of the muscles forming the pharynx. Passing into the œsophagus, the food moves with a wave-like motion until it reaches the stomach. The œsophagus is a narrow tube nine inches in length, extending from the lower part of the pharynx to the stomach. For a short distance it runs parallel with the windpipe and



then extends backward and downward behind the lungs. This accounts for the pain under the shoulder blades in cases of indigestion. The œsophagus is lined throughout with a mucous membrane, in order that the surface may be kept moist to facilitate the passage of the food.

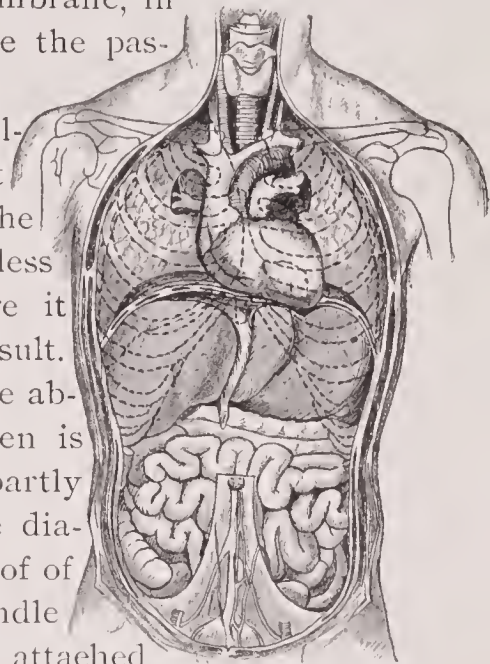
It should be remembered that the œsophagus or gullet does not follow a straight line in its course, but must deviate to pass various obstructions such as the trachea and lungs, and the curve of the spine. Unless the food is properly prepared by mastication before it reaches this part of the canal, indigestion will often result.

The principal part of the digestive tract lies in the abdomen, the largest cavity of the body. The abdomen is separated from the chest by a membrane composed partly of muscles and partly of fibrous tissue. This is the diaphragm, which forms the floor of the chest and the roof of the abdomen. It is fan-shaped in outline with the handle attached to the spinal column and the elliptical edge attached to the ribs in front. This diaphragm expands and contracts during the process of breathing, and it is the spasmodic contraction of it which causes hiccough.

The various parts of the alimentary canal found in the abdominal cavity are held in position by the peritoneum, a strong serous membrane which covers the organs but at the same time permits of their free movement during digestion. An inflammation of this membrane is called peritonitis, a disorder usually terminating in the death of the patient.

Just after the œsophagus passes through the diaphragm it expands into a funnel-shaped pouch called the stomach, which is a muscular sac, situated under the ribs and slightly to the left side of the body. It is the most dilated part of the digestive tract, being about twelve inches long and four inches wide, and, when distended, is capable of holding from two to three pints of fluid. It is the principal organ of digestion, for in it not only does the solution of the food take place but it becomes divided into its various elements in the process called chymification, and some parts of it are digested and absorbed.

The stomach has been likened to the chemist's retort, except that the curves are not so marked and the discharging tube is shortened. The entrance and exit are guarded by valves known respectively as the cardiac and pyloric valves. These valves guard the cardiac and pyloric openings or orifices, preventing the food from being regurgitated into the œsophagus or from being expelled from the stomach before the proper time.



The stomach is covered with a delicate serous membrane, a part of the peritoneum, and its walls consist of three coats: (1) A tough outer coat of fibrous tissue which strengthens and protects the organ. (2) A coat of involuntary muscular fibers, which extends in several directions. The peculiar arrangement of these muscular fibers gives the wave-like or rolling motion to the stomach, churning the food and mixing it with the fluids of the organ, by the alternate contraction and relaxation of the various strata of muscles. (3) The inner coat, containing the mesh-work of nerves and blood vessels, and called the mucous membrane. This coat is a continuation of the lining membrane of the mouth and œsophagus. When the stomach is contracted this membrane is thrown into folds running across the organ from front to back, but when it is full these folds disappear.

The peptic and mucous glands are situated in this membrane and pour out their secretions when stimulated by food. The food is mixed with the secretions from the little tubes which empty into little pits with which the surface is covered, like the cells of a honeycomb. A glance at a piece of tripe, the internal lining of an ox's stomach, will afford a fair but exaggerated picture of these pits.

The intestines are divided into the small and large intestines and are of such length that they fill almost the entire abdomen. The small intestines are doubled upon themselves many times. They form that part of the digestive tube in which the chyme from the stomach is mixed with the secretions of the liver, the pancreas and the intestinal mucous membrane. It is about twenty feet long and is divided into three parts. The first part is about nine inches long and adjoins the pyloric or right end of the stomach, and is called the duodenum. It is curved like a horse-shoe, to receive the head of the pancreas, and into it flows the secretion from the liver — the bile — and that from the pancreas or sweetbread — the pancreatic juice. The small intestine itself also secretes a fluid called intestinal juice, which acts upon the food products still undigested. The second part is called jejunum and comprises the upper two-fifths of the rest of the small intestines. The third part is called the ileum, which comprises the other three-fifths and ends at the ileocæcal valve, the beginning of the ascending colon of the large intestine. Situated at the juncture of the large and small intestines is the appendix, the inflammation of which causes so much trouble.

Like the stomach, the intestines are composed of three coats, the inner being filled with nerves and blood vessels. In addition, this mucous membrane is filled with myriads of minute projections, called "villi." They give to the membrane an appearance not unlike velvet or plush, the fine hair-like projections being so closely set together that it is difficult to distinguish them as projections at all.

In each of these villi is a network of very fine blood vessels and a tube called a lacteal, so named because it carries a white milk-like fluid. These lacteals may be regarded as numerous little roots which suck up the fluid food as the root does the moisture from the soil.

The large intestine begins at the ileocæcal valve which joins the lower or iliac portion of the small intestine to the large intestine, and extends upward as far as the under surface of the liver. Turning at right angles, it crosses the abdomen to the left side and with another turn extends downward, ending at the anus. In the adult the large intestine is about five to eight feet long, or about one-fifth the entire length of the alimentary canal. At birth it is only about a foot and a half long, the last eight or ten inches being the sigmoid flexure. No growth takes place during the first four months, but the parts become readjusted, the sigmoid flexure at the end of this time measuring only six inches and the rest of the intestine about fifteen inches.

The large intestine is called the colon or large bowel, and the intestines collectively are called the bowels or entrails. The colon is usually divided into four parts—the ascending, transverse, and descending colons, and the sigmoid flexure.

The large bowel resembles an inverted letter U—the ascending and descending colons being the upright lines, and the transverse colon being the crossbar. The transverse colon is the longest of the several divisions of the colon, and is the most movable part of the bowel. The descending colon terminates in the sigmoid flexure which is the narrowest part of the colon, and is situated on the left side at the crest of the hip bone. This part of the bowel is about eighteen inches long and is shaped like the Greek letter Sigma  $\sigma$ , whence its name.

The rectum is about eight inches long and is the terminus of the larger bowel, the external opening being closed by a sphincter muscle, called the sphincter ani. The narrowest portion is at the juncture with the sigmoid flexure, and from that point it rapidly widens.

Each of the organs of digestion secretes a fluid which acts upon certain elements of the food, dissolving them out of the mass. In addition to the solvent action of the water contained in each of these fluids there is also a substance called a "ferment," which chemically changes one or more of the food constituents and renders them soluble. Upon the proper action of these fluids, as well as upon the good condition of the various organs concerned in digestion, depends the power of food to nourish the body. When the glands and organs are in perfect condition, and the food is perfectly adapted to their capacity, the process of digestion is a subconscious one, giving rise only to vaguely pleasant sensations, and establishing itself as the foundation for many cheerful emotions.



## THE CIRCULATORY SYSTEM

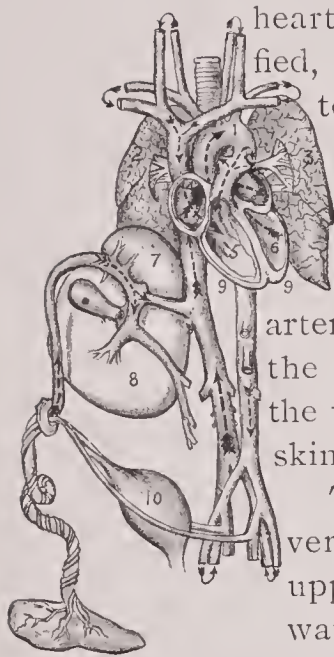
As THE food after digestion becomes absorbed by the blood, this fluid may be regarded as being in a manner an accessory to the digestive tract, for the ultimate purpose of digestion—tissue building—is not accomplished till the food elements are conveyed to the various parts of the body by the blood current.

The blood laden with these elements must go first to the liver, by means of the portal circulation, where certain portions are either changed or have some of their undesirable parts filtered out. Continuing on its way it leaves the liver and enters the right side of the heart, and from there it goes to the lungs to be oxidized or purified, and then back to the left side of the heart to be distributed to the various parts of the body.

This circulation in the human being is carried on by a delicate machinery which has been compared to the pumping station of a city's waterworks. The great central engine is the heart; the water mains are the arteries; the service pipes the arterioles or capillaries; the tenant in the house, who uses the water, the muscles and other tissues of the body; the sewer pipes are the veins; and the discharging outlets are the lungs, kidneys and skin.

The heart is a hollow, pear-shaped, muscular organ, situated very nearly in the center of the chest, with the broad end or base uppermost, toward the right side, and the point or apex downward toward the left. In the infant the position differs somewhat from that of the adult, owing to the difference in the diaphragm. The normal adult heart is about the size of one's closed fist, so that if the fist be placed diagonally upon the chest, thumb uppermost, and to the right, the knuckle of the little finger reaching to the space between the fifth and sixth ribs, a fair idea of the position of the heart in the chest will be gained.

The heart is a double organ, consisting of a right heart and a left heart, each being subdivided into two chambers, called auricles and ventricles, the whole being composed of involuntary muscular fibers. The auricles are situated uppermost and receive their names from their fancied resemblance to the human ear. The ventricles come together at the apex. The right auricle opens into the right ventricle and the left auricle into the left ventricle. The ventricles are much stronger and their walls thicker than the auricles and the left ones are stronger than the right. There is no direct communication between the two sides of the heart, as the blood-stream enters and leaves by veins and arteries in a



CIRCULATION

- 1, Aorta; 2, Right Lung; 3, Left Lung; 4, Right Auricle; 5, Right Ventricle; 6, Left Ventricle; 7, Left Lobe; 8, Right Lobe; 9-9, Heart; 10, Bladder.

manner soon to be described. Between the auricles and ventricles, and between the ventricles and arteries, are minute valves like those of a pump, which by opening but one way allow the blood to flow out but prevent its return. The valve separating the right auricle and right ventricle is called the tricuspid valve, because it has three points. The one on the left is called the mitral valve, because it has two folds shaped like a bishop's miter. The valves which guard the arteries at their exit from the ventricles are called semilunar, because of their half-moon shape.

At birth, the heart retains its foetal character, there being an opening known as the foramen ovale, which allows direct communication from the right auricle to the left auricle. A few days after birth this gradually closes and normal circulation is established. Bearing this important difference in mind, the child when laid down should be placed on its right side at birth, to facilitate this closing.

The largest artery of the body is the aorta, which starts at the left ventricle, and at first ascends, then turns downward, forming an arch. At the top of this arch two large arteries branch off to supply blood to the head and arms. The free end of the arch runs backward and downward behind the lungs, passing through the diaphragm, along the spine, to the lower part of the abdomen, where it branches into two large arteries, one going to each limb. As the aorta passes through the abdomen it gives off branches to supply the organs of that cavity, as the stomach, spleen, and liver. The large arteries branch into numberless smaller ones, becoming gradually smaller and smaller till they become very minute and are known as capillaries.

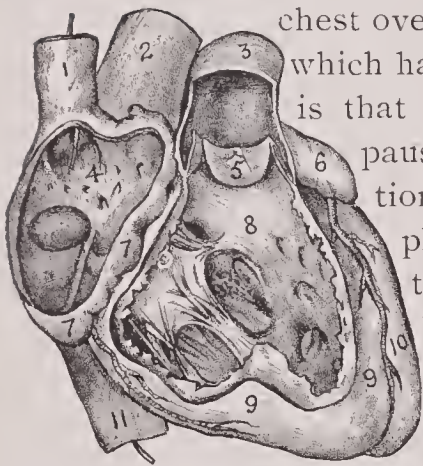
After permeating the tissue substances, the blood begins its return journey to the heart by means of veins. Beginning with the capillaries in the tissue, at a point where the artery and vein are practically the same continuous tube, the little veins gradually increase in size until they reach the largest in the body. The veins are nearer to the surface of the body than are the arteries, and consequently are more easily discernible, being quite noticeable in some fair-skinned persons. They are provided with minute valves, something like the semilunar valves at the entrance to the aorta, to prevent the blood flowing backward. The capillaries gradually increase in size, at first being so fine in caliber that the blood corpuscles, which measure about  $\frac{1}{32000}$  of an inch in diameter, can pass through them only one at a time. Those of the legs pass upward, larger and larger branches uniting till they become one large vein, known as the inferior vena cava, which flows into the right auricle. In a similar manner the veins of the head and arms unite to form the superior vena cava, which also empties into the right auricle.

When the auricle which is supplied with the venous blood, collected from all parts of the body, becomes filled, it contracts and forces the

blood into the right ventricle. As soon as this chamber becomes filled, the walls begin to contract, which action closes the tricuspid valve, preventing the blood from returning or "backing up" into the auricle which it has just left. Connected with the right ventricle is the pulmonary artery, which conveys the impure venous blood from the heart to the lungs, and which is the only example of the kind in the body, *i. e.*, of venous blood passing through an artery.

After the blood permeates the lung structure, and becomes purified, or oxidized, it is conveyed by means of four pulmonary veins to the left auricle. Here the same process is repeated as on the right side of the heart; the blood is forced through the mitral valve to the left ventricle, which in turn contracts, closing the valve, and forcing the blood into the aorta to be distributed throughout the body.

The alternate contraction and dilation of the heart causes the peculiar sound so familiar to every one. When the ear is applied to the chest over the region of the heart, two distinct sounds are heard, which have received various phonations, but the one most accepted is that of "lub-dub." These sounds are separated by a slight



HEART

- 1 Vena Cava Superior; 2, Aorta; 3, Pulmonary Artery; 4, Interior Right Auricle; 5, Corpus Arantii; 6, Left Auricle; 7, Right Auricle; 8, Interior of Right Ventricle; 9, Right Ventricle; 10, Left Ventricle; 11, Vena Cava Inferior.

pause or rest. The first sound takes place upon the contraction of the heart walls; the second and shorter sound takes place upon the closing of the semilunar valves. The contraction is styled systole, while the alternating pause or dilation is called diastole. The contraction of the ventricles causes a striking of the organ against the chest walls, which in thin subjects may be distinctly seen on the left side, between the fifth and sixth ribs. Any emotion, nervousness, or violent exercise or disease of the organ will cause the heart to contract faster, producing more frequent "beats." As the blood passes from the heart into the arteries, the impulse of the contraction upon the current is felt all along the line, and in those vessels near the surface the motion can be distinguished by the touch, and is called the pulse. The radial artery at the wrist, the temporal artery at the temple, the carotid artery in the neck, and the one just above the heel, are the most prominent.

In the adult the normal pulse rate is seventy-two to the minute, but in the child the number of beats per minute is greater. Slight differences occur, the number of beats depending upon the occupation of the child at the time of observation. Self-consciousness, fear, exercise, and eating, will alter the rate, so that the best time to count the pulse is during sleep. The position also has something to do with the variation, the pulsations being more frequent while standing than while sitting or lying down. The rate is likewise greater in females than in



males. In infancy the circulation of the blood is more rapid than at any subsequent period.

The pulse rate for different periods is as follows:—

AGE	NO. PER MINUTE	TIME OF CIRCULATION
Six to twelve months . . . . .	105 to 115	12 seconds
One to six years . . . . .	90 to 105	15 “
Seven to eleven years . . . . .	80 to 90	17 “
Eleven to fourteen years . . . . .	75 to 85	21 “
Adult . . . . .	72	22 “

Physiologists have estimated that the amount of blood forced into the aorta at each contraction of the ventricle amounts to about six ounces, which would make about eighteen pounds per minute, and twelve tons every day.

The total amount of energy expended each day by the heart is equal to the exertion of lifting a ton weight to the height of two hundred feet

## NERVOUS SYSTEM

THE nervous system may be likened to a delicate and complicated electric plant, with its dynamos, its positive and negative currents, its resistances, its transformers, its relays, and its innumerable current wires for lighting, telephoning, or mechanical purposes. The brain may be regarded as the great dynamo and the spinal cord as the great motor main wire; the optic nerve as the electric light wire; the auditory nerve as the telephone wire— and so on, the parallel extending in every direction. As these parts of an electric plant work harmoniously together, so the parts of the nervous system fit with such exact nicety that the entire system is influenced by the working of one slight part.

The nervous system is to the organs and muscles of the body what the electric current is to the electric plant. Shut off the current, and the plant is useless; destroy the nervous system, and the body dies; cut off a part of the current from one particular point, as, for instance, the electric light or the wire which feeds the trolley to propel the car, and the lights are extinguished or the car stops. Injure or destroy the optic nerve, and sight fails; injure the nerves which control the lower extremities, and the individual can no longer walk. These illustrations simply show that the functions of the body, and even life itself, depend upon the integrity of the nervous system.

This system is usually divided into two great divisions, the central nervous system and the sympathetic system. The central system is composed of the brain, spinal cord, and cerebro-spinal nerves. These are in communication with every part of the body. The sympathetic system has to do principally with the organs of digestion, circulation, and respiration, and is that part of the nervous system which is the most easily affected.

The nerve tissue of the brain is composed of cells, so arranged as to give the appearance of marrow. The spinal cord is made up in much the same way, while the smaller nerves, although composed of the same kind of cells, have their cells so arranged that they seem to be in the form of fibers. A nerve is made up of a large number of these fibers packed closely together, like the fibers of a plant. If a cornstalk be cut lengthwise, the longitudinal section thus made would show a multitude of very fine fibers running up and down the stalk. With a little care these can be separated one from another so that each individual fiber can be distinctly seen. The whole number of fibers are inclosed in a covering or sheath. Under the microscope, the nerves can be separated into similar tiny fibers which are united in a bundle surrounded by a sheath, and to the naked eye they appear as a single piece of thread. These nerves are nothing but an extension of the tissue of the brain and spinal cord, and they act as the wires to carry the vital current to the various parts of the body.

The brain is the great central dynamo, and is the part of the nervous system which serves as the organ of the mind, the intellect, the will, and the emotions. Modern physiologists have clearly demonstrated that it is composed of a number of aggregations of nerve cells called centers, which, though practically independent of one another, yet are bound together to form the whole organ. Each of these centers has a special line of work to do and is largely uninfluenced by the others, except when the stimulating force acts upon more than one center at the same time. Therefore we may consider the brain as composed of a large number of minute dynamos, whose current wires are all merged into one conduit and are then distributed to various parts of the body.

The average weight of the adult brain is three pounds, or, more exactly, fifty ounces. At birth, the average weight is one pound, at one year, thirty-two ounces, at two years, thirty-eight ounces; it is usually larger in the male than in the female. At birth the ratio of the weight of the brain to that of the body, according to careful estimates, is about one to eight; during the first year, one to six; during the second, one to fourteen; and in the adult, one to forty-three. Numerous examples of variation from these figures are found, the weight both being greater and smaller than the average. As a rule, a large brain indicates an active,

intelligent mind, but as the convolutions increase the area of the gray matter, a smaller brain with deeper convolutions may be equivalent to or even surpass the larger one.

The interior of the brain substance is made up of white nerve tissue like the nerves which extend to the various parts of the body. Outside of this lies the gray matter, about one-eighth of an inch in thickness. In this layer is supposed to reside the active powers of the mind; and this layer, and consequently the mental activity, is increased as above stated, by the number and depth of the folds or convolutions of the brain.

These convolutions are irregular depressions dipping into the substance of the brain. It is easy to see that the surface is enormously increased by these folds or plaits, so that if the convolutions were spread out the brain would cover a much larger surface. The object of the convolutions, then, is to compress a large surface into a small compass.

The brain is divided into three divisions, the cerebrum (the anterior part or brain proper), the cerebellum or posterior brain, sometimes designated as the lesser brain, and the medulla oblongata.

The cerebrum or anterior brain fills the upper and forward part of the skull and contains the chief centers of mentality. It is divided into two nearly equal parts called hemispheres. These halves or hemispheres are composed of three lobes each, thus making this anterior part of the brain consist of six separate lobes or divisions. In disease, these lobes are affected in different ways, so that in many instances the part of the brain involved can be accurately determined by the train of symptoms exhibited.

The cerebellum, posterior, or lesser brain, lies beneath and behind the cerebrum, and is separated from it by a fold of the dura mater or covering of the brain. The cerebellum also has two halves or hemispheres, arranged in layers, which upon a superficial glance resemble the interior of a chicken's gizzard. In this part of the brain is supposed to reside the motor centers which control the voluntary muscles and their actions.

The medulla oblongata is the enlarged upper end of the spinal cord; it forms the connecting link between the brain and the spinal cord. It is about one and one-half inches long, is situated just beneath the cerebellum, and is the center from which arise many of the nerves which control the involuntary activities of the body, such as respiration and circulation.

The brain substance is separated from the bony structure of the skull by a membrane composed of three distinct layers; the outer, called the dura mater, a strong, tough layer of membrane; the middle or arachnoid which secretes a fluid to keep the surface of the brain moist; and the third, the pia mater, a very delicate membrane which lies close to the brain substance, following its convolutions, and supplying the tissues with nourishment from the delicate blood vessels contained within its walls.



The brain sends out twelve pairs of specialized nerves, called the cranial nerves, which pass out of the skull by small orifices, and supply nerve force to the various organs of special sense and internal organs. They are either sensory, motor, or both, and give to us the sensations of sight, smell, taste, and hearing, and control the action of the lungs, heart, and stomach.

The spinal cord, as a prolongation of the brain, like that organ, consists of two substances, the gray and white matter, surrounded by the dural membranes. Unlike the brain, however, the gray matter occupies the interior, and the white the exterior. The cord is divided into halves, the spaces separating the hemispheres being styled fissures. It acts as a sort of telegraphic relay, receiving the sensations from various parts of the body and transmitting them to the brain; there these sensations are transformed into consciousness, and the reaction is sent back along the motor fibers to act upon the injured or excited muscle or tissue.

In addition to this action, the cord has a certain power of its own. From the spinal cord the trunk and limbs are supplied by thirty-one pairs of nerves, called spinal nerves. They pass from the cord by two roots, one from the front and one from the back. A short distance from the cord they unite to form one nerve bundle, although the fibers are in fact separated in the bundle. The roots which arise from the front or anterior part of the cord are the motor fibers, which control the *action* of the muscles to which they are supplied; those from the back or posterior part of the cord are the sensory fibers and convey the *sensations* from the various parts of the body to the spinal cord.

If any one of these nerves is injured, the sensation and movement are destroyed in those parts supplied by the injured nerve. It sometimes happens that one of the fibers is injured or diseased, leaving the other intact. Thus the motor nerve may be at fault, but the sensory nerve may be able to convey feeling or sensation. On the other hand, in some rare diseases the sensory nerve may be useless but the motor nerve be able to perform its function.

In the brain, these nerves cross one another so that an injury to one side of the head will produce paralysis of the opposite side. As an example, suppose a child is struck on the head with a stone, or falls and injures the right side of the head; the left side of the face may be paralyzed. The corner of the mouth is drawn up on the *injured* side of the head, but the paralysis is on the opposite side, or on that in which there is drooping of the corner of the mouth. The up-twist is due to the normal contraction of the muscles, the drooping to the paralysis of that part of the facial muscles.

It has already been stated that the spinal cord has the power of independent action outside the function of transmitting sensations to

the brain and receiving motor stimuli from that organ, to be communicated to the muscles or other organs. A sensation may be sent from the surface of the body, as a pin prick, or a burn, along the sensory fiber of a spinal nerve, and instead of going to the brain may be returned by way of the motor branch or fiber, resulting in the movement of the part touched. This return of motion without being carried to the brain, is a reflection of the sensation from the cord, just as a light striking a mirror is reflected back. To this reflection of sensation the term reflex action is given.

Such action is most important, as it relieves the brain of a vast amount of work which, if required to be performed by that organ, would exclude many other and valuable functions and would lessen its capacity as an organ of intellection. Most of the movements and activities of the limbs and body are the result of reflex action, for while the will power may be, and sometimes is, brought into play to control or exercise these activities, as a matter of fact, they are done for the most part unconsciously and without the action of the brain at all. They are reflexes of the spinal cord.

Besides these spinal nerves, there is the sympathetic nervous system, composed of a number of centers or ganglia, connected with each other by minute nerves, and with the sensory fibers of the spinal nerves, by gray nerve tissue.

The brain and spinal cord are incased for protection in bony structures, the brain in the skull and the spinal cord in the vertebral column; but the sympathetic system lies without and in front of the spinal column, like a chain of widely separated beads, the ganglia being the beads and the delicate connecting nerves the string. Radiating from these ganglia, a vast network of nerves extends to the various internal organs, each a complete system in itself and acting practically without relation to the brain or spinal cord.

To illustrate: The heart, lungs, stomach, the arteries, and even the minute capillaries themselves, are controlled by these nerves. The functions of circulation, respiration, and digestion, go on whether we are conscious or unconscious, awake or asleep, without the help of the will. That there is a connection, however, with the cerebro-spinal system is shown by the fact that a blow or injury to any part of the body will often cause nausea, proving the connection between the nerves of the stomach and the cord. From such phenomena this nerve system has derived its name of sympathetic system.

Through the blood which feeds and nourishes the various parts of the nervous system, the vitality of the nerve cells is maintained. If the food is insufficient or the breathing poor, the blood is first impoverished and this in turn affects the health of the nerve tissue. On the other hand,

the nerves control all the functions of the body, and if they are exhausted by disease or overwork, the several functions over which they preside become impaired. In other words, there is a reciprocal action between the two, and what affects the one will sooner or later affect the other. For example, if an individual in ordinary health subjects the nervous system to a severe strain such as overwork (and mental overwork is more depressing, and its effects more permanent, than is physical overwork), he will soon find his digestion impaired. The stomach, no longer stimulated to healthy action by the nerves which supply it with force, fails to secrete as much or as good digestive fluid as formerly; the food in consequence is not thoroughly digested, the amount assimilated is less in quantity, and less nourishing in quality; the blood does not receive enough of the proper revitalizing elements, and oxygenation is less effective because the lungs are affected in a similar manner; the blood is not purified to the proper extent, and the nerve food is thus rendered deficient in quantity and quality. The nerves not only do not grow as long as this condition lasts, but fail even to recuperate.

During childhood, the nervous manifestations are varied, peculiar, and profound, and many times out of all proportion to the exciting cause. The rapid growth, the comparatively large size of the brain, and the imperfect structure of the organ and its appendages, account for many of the peculiarities of this period. A very slight irritation is often sufficient to create a profound nervous impression, because the nerve centers are as yet but imperfectly formed and the nerves themselves, both sensory and motor, are more easily susceptible to irritation. They are more readily influenced by lack of nutrition, and are not only less resistant but are in fact more irritable. The chief nervous manifestations in early childhood are convulsions or spasms, Saint Vitus's dance, night terrors, and other disorders of sleep, incontinence of urine, stuttering, and stammering. Individuals differ materially in their nervous make-up and their ability to resist the adverse forces battling for supremacy, so that in no class of physical ailments is there variety so marked as in those of the nervous system.

For this reason, the greatest care must be given to the surroundings of the child, his health and hygiene must be guarded, and all undue stimulation or excitement prohibited. Artificial stimulants, such as tea, coffee, and alcoholics, must not be permitted.

Being physically active, and growing rapidly, children require an unusual amount of rest and sleep. Unless this quiet for recuperation is allowed, they soon develop symptoms of nervous disorders. The great fault of our modern life is, particularly with many of the school systems, that it is overstimulating, and affords too little time for mental and physical rest. Particularly is this true of city life, and it accounts for



the fact that country children usually succeed in the long run. Their nerves and bodies are not subjected to the constant strain of city life, already unwholesome from the unsanitary and unhygienic surroundings. It is true that the mental development of the country child may be less acute and a little more restricted, but after a time he forges ahead because he has his nervous and physical energy unimpaired.

The influence of heredity has been commented upon elsewhere; it remains but to call attention to the fact and to emphasize its importance. Nervous parents are almost sure to have children as nervous as themselves. It should be remembered, however, that a part at least of the adverse influence of heredity may be removed by favorable environment. Unless the child from his birth is afforded plenty of fresh air, pure, digestible food, exercise, and suitable clothing, he will not only fail to overcome the handicap of this faulty inheritance, but in addition will fall from his already poor condition to one less favorable.

#### THE RESPIRATORY SYSTEM

FOOD that has been digested and absorbed must be oxidized before it can be utilized by the tissues. This oxidation is accomplished during inspiration. During expiration the impurities are thrown off, chiefly in the form of carbonic acid gas, thereby bringing into play the secondary function of the lungs, that of elimination. The lungs are the first and most important of the secondary eliminative organs, the kidneys the second, and the skin the last.

Breathing is practically an unconscious, involuntary movement, like the action of the heart, yet it can in a slight degree be controlled by the will. A person can voluntarily stop breathing for a few seconds, that is, "hold the breath" as in diving under water, and suffer no ill effects.

The respiratory system is divided into three parts: (1) The air passages, (2) the lungs, and (3) the skin. To most persons it will be surprising to learn that the skin is classed as a part of the breathing apparatus; yet as a matter of fact such it really is. That it has other and important functions, does not detract from its importance as a part of the breathing apparatus. For the present, however, the first two only will be considered.

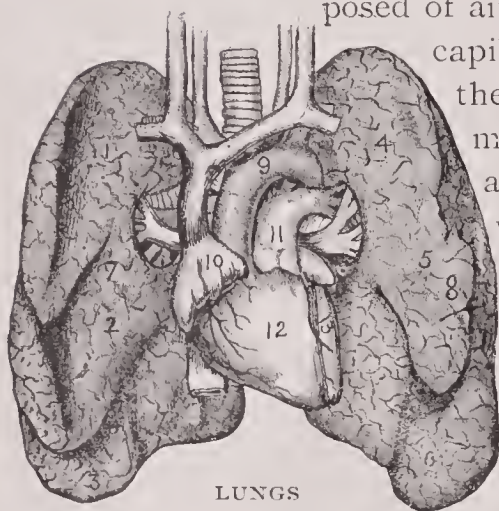
The air passages consist of the nostrils, the mouth, and the windpipe. The nostrils are designed as a passageway for the air in which it may be warmed before it reaches the lungs. The air from the nostrils passes through the trachea or windpipe and thence into the lungs. The windpipe is a hollow tube about four inches long, made up of cartilaginous rings which prevent the collapse of the tube when subjected to pres-

sure. The upper part is called the larynx, and is separated from the lower part of the nasal passage, termed the pharynx, by the epiglottis. The epiglottis consists of a fold of delicate membrane, attached to the inner surface of the larynx, like a trapdoor. When food is taken into the mouth this closes down, in order to prevent the particles from entering the larynx, and as the air escapes from the lungs, it lifts.

Just below the folds of the glottis, in the slit formed by its free edge when open, are the vocal cords or bands, which are so fixed that they can vibrate when the air comes in contact with them. This vibration constitutes the voice. When these cords are thickened, as during a cold, or in case of sore throat, they cannot vibrate to the same extent, and consequently produce a hoarse sound.

The lower part of the trachea after entering the chest divides into two branches, one going to the right and the other to the left lung. These again divide into smaller and smaller branches until they become too fine to be discerned save by the microscope. The lungs, together with the heart and blood vessels, fill the entire chest cavity. The right lung is the larger, having three lobes, while the left has but two, the difference being due to the space occupied by the heart.

The function of the lungs is to purify the blood, making it fit for the work imposed upon it. The lung tissue is a sponge-like substance com-



1 and 4, Superior Lobes; 7 and 5, Middle Lobes; 3 and 6, Inferior Lobes; 2, Right Lung; 8, Left Lung; 9, Arch of Aorta; 10, Right Auricle of Heart; 11, Pulmonary Artery; 12, Right Ventricle of Heart; 13, Left Ventricle of Heart.

posed of air cells with a network of minute blood vessels. These capillaries are the connecting link, so to speak, between the arteries and the pulmonary veins. The air cells are minute hollow sacs closely bunched together, not unlike a cluster of grapes, and are connected by minute tubes which become gradually larger, finally uniting into a single bronchus from each lung, and these in turn join to form the trachea or windpipe. When the air is breathed through the mouth it flows through the trachea into the bronchi, until it finally reaches the small air cells. The delicate mucous membrane lining these cells allows the air to come in contact with the minute blood vessels or capillaries, so that the oxygen of the air enters the blood and the effete matter in the form of carbon dioxide gas is released from the blood and is expelled through the mouth. This process is called respiration and its two divisions are

called inspiration and expiration.

It is necessary that oxygen be introduced into the blood and the carbonic acid gas exhaled in order that the blood may maintain its normal condition, otherwise the blood corpuscles cannot discharge the function of tissue building. Air is a mechanical mixture of oxy-

gen and nitrogen, in the proportion of about twenty-one volumes of oxygen to seventy-eight of nitrogen. The remaining volume is a mixture of carbon dioxide, watery vapor, and ammonia. The nitrogen acts simply as a diluent. Oxygen is a supporter of combustion and of animal life. The carbon dioxide is very poisonous, and two or three parts per thousand in the atmosphere is sufficient to produce drowsiness, headache, nausea, and even vomiting; and five per cent may prove fatal.

As air is a mechanical mixture containing oxygen, and as certain elements of the blood have a chemical affinity for oxygen, it naturally follows that the oxygen will readily leave the air to unite with the blood. On the other hand, carbon dioxide and watery vapor have a greater affinity for air than for the blood, and as these two substances are both contained in the blood as impurities, when the opportunity is afforded for entering the air they avail themselves of it. Nitrogen simply acts as the medium or receptacle, as it were, for both the oxygen and carbon dioxide.

#### BREATHING

The air, during its stay in the pulmonary cavity, acquires not only a large proportion of carbonic acid gas, but also organic impurities in the form of waste material thrown off from the blood and lung tissue, by the process of osmose, or transudation. In other words, it leaks through the membranes and enters the air in the cells whence it escapes as above noted. When we are out of doors, these baneful products of expiration are continually being dissipated by the currents of air, while the lungs are constantly supplied with fresh oxygen through inspiration. In the house, or in a closed room, the air is rapidly deprived of this oxygen, while the noxious gases rapidly accumulate in its place, unless there is some arrangement for the frequent renovation of the atmosphere. A healthy adult breathes at the rate of about sixteen times per minute, taking in about twenty cubic inches of air with each inspiration.

The mechanism of respiration is as follows: The diaphragm, which is a serous membrane separating the abdominal cavity from the chest cavity, alternately rises and falls as its fibers contract and relax. This movement is involuntary, though partially under the control of the will. When the diaphragm expands, the capacity of the chest is increased, the additional space being filled with the air rushing into the bronchi and expanding the elastic walls of the air cells. When it contracts, it rises and forces out the air. Both of these movements of inhalation and exhalation are further assisted by the muscular action of the intercostal muscles, which alternately elevate and depress the chest walls, thereby decreasing and increasing the chest capacity. The entire capacity of



the lungs is not filled with each inspiration, a certain amount of air remaining in the lungs and thus preventing an entire collapse of the cells. Although the amount taken in and out each time forms but a portion of the entire capacity of the lungs, it rapidly diffuses through the entire lung structure. Following each expiration is a period of rest equivalent in time to the period of action. If the respirations are normal — that is to say, about sixteen to eighteen per minute — the amount of air breathed per day would be about three hundred cubic feet for each individual.

A very common cause of vitiated air in the home is the presence of gas, either from the stove or the gas burner. Poisoning by escaping coal gas or ordinary illuminating gas is quite common among children. While it is true that many of the cases do not prove fatal, other conditions are caused which may entail great suffering, or the effects may linger for years before entire recovery takes place.

#### THE NOSE

Breathing, when properly performed, should take place through the nose; therefore, as the first of the air passages, it has an important office to perform. The outer nose, which forms so important a part of the facial outline and expression, is formed by skin and muscles held in place by the nasal bones, which are practically processes of the upper jaw. To this bony projection is attached a piece of flexible cartilage, which divides the nose into two parts, or nostrils. The nostrils are irregular canals extending backward into the head as far as the roof of the mouth. Here they expand into a vaulted chamber called the nasopharynx.

The partition wall, or septum, forms one side of each nostril, while the turbinated bodies form the other. These turbinated bodies, three in each nostril, are composed of thin pieces of bone covered with a spongy tissue. According to their position they are designated as upper, middle, and inferior turbinated bodies.

The nose is the organ of smell, as well as the conduit by which the lungs receive air. By properly warming the air during its passage through the nasal cavities, the lungs are relieved of much of the strain that would be placed upon the delicate mucous membrane if cold air came in direct communication with it. Cold air acts as an irritant to the lungs and causes fits of coughing.

The membrane of the nose is the beginning of the lining of the lung, and, while exceedingly delicate, is not so susceptible to air as is the lung membrane. The olfactory tract, or the path along which the sensations of smell are transmitted, has its terminal nerves in the "superior turbinate." The lower body is covered with nerves of sensation and they are

extremely sensitive to irritation. When any foreign body, germ, or irritant of any sort stimulates the nerves just described, there is a rush of blood to the membrane, and this disturbance of the blood supply causes sneezing, which is a forcible effort to expel the source of irritation.

There are three practical conclusions to be drawn from this brief sketch of the respiratory tract:

First: If the habit of taking deep inspirations is fully established, the strength and capacity of the lungs will be increased. Second: The air introduced through the nose will be gradually warmed and filtered so that it will be in a suitable condition to act properly on the blood corpuscles. Third: Constriction of the chest walls interferes with the breathing and expansion of the lungs so that the normal capacity is reduced and general impairment of the circulatory system takes place. In other words, the inability of the blood to receive its proper amount of oxygen in order to purify it, affects every tissue in the body.

## CARE OF THE SKIN, HAIR, TEETH, AND NAILS

### THE SKIN

THE skin is not merely a factor in personal appearance, but is one of the most important organs of the body. It forms one of the channels for the elimination of the products of tissue waste and has a marked influence upon the bodily health. It is composed of two layers, the outer, or scarfskin, which contains neither blood vessels nor nerves, known also as cuticle and epidermis; and the lower layer, or true skin, called the *cutis vera*. The latter is richly supplied with blood vessels and certain appendages necessary for the proper performance of the several functions of the skin, as the sweat glands (sudorific), sebaceous glands, and the hair follicles.

The true skin is highly sensitive and is protected by the horny layer or scarfskin. The true skin is seen when the outer layer has been rubbed off as by scratching, or by a blister, or by some slight accident. The surface is raw and painful, and from it oozes a little fluid or blood. This scarfskin is formed by myriads of small round cells, or scales, which are compressed tightly, and when still further pressed together by use, form the compact, horny skin so frequently seen on the palms of the hands of persons engaged in manual labor, as the "callous" on the hands of the blacksmith, or carpenter.



In this layer is found the coloring matter, or pigment, which gives the complexion to the skin. When the amount is small, we have the blond complexion, and when it is large, the brunette. As this increases still further, we have the dark races, running from yellow, red and brown, to black. In the latter cases, the pigment cells are more numerous and crowded together. The sun's heat tends to increase this coloring matter. Cases of sunburn, for example, exhibit marked differences between those parts protected by the clothing and those exposed to direct sunlight. In common sunburn or tan the coloring is generally distributed over the exposed surface; when it collects into small spots it is called freckles. Slight burns, bruises, cuts, blisters, cold sores, and many skin eruptions affect only this layer, and consequently leave no scar after healing.

The true skin is a firm, elastic tissue resting on meshes of tissue not unlike absorbent cotton. This tissue-bed is known as the subcutaneous tissue, and just where it begins and the true skin ends is not sharply defined; for all practical purposes it may be considered as part of the true skin. Unless otherwise noted, when speaking of the true skin the two layers (the *cutis vera* and the subcutaneous connective tissue) will be considered as one. It is the true skin that contains the sweat and oil glands and becomes filled with water in dropsy. It is covered on its outer surface with minute projections known as "papillæ," which contain the terminations of the nerves and capillaries forming the organs of touch. When it is injured, a permanent scar is formed. Well-known examples are the white scars of cuts, pits from smallpox, and the raised scars from burns.

The functions of the skin are more numerous and varied than those of any other organ of the human body. It serves as (1) a protective covering; (2) prevents too rapid dissipation of water from the tissue; (3) assists in keeping up the normal temperature; (4) acts as an organ of sensation, secretion, excretion, and absorption; and finally, (5) helps in the function of respiration. The first four functions are so self-evident that they need no special explanation, either as to their purpose or mode of action.

The skin secretes sebaceous matter and perspiration, or sweat. The former is a semi-fluid material secreted by the sebaceous glands, and is composed of fat, cell débris, and certain odorous material. This substance, when secreted in too large quantities, gives rise to the oily skin so often dreaded by women. In normal quantity it renders the skin soft and pliable, prevents the outer layer from too rapid chafing or excoriation when parts come in contact, and gives luster and pliability to the hair.

The chief function of the perspiration is to aid in the elimination of effete materials and to prevent the temperature of the body from rising



above normal. In health it is colorless, salty in taste, and acid in reaction. That it is of great importance in eliminating deleterious matter from the body, is shown by the close relation it sustains to the kidneys, for in cold weather the urine increases and the perspiration decreases, while in summer the reverse is true. Furthermore, in certain diseases of the kidneys the perspiration is heavily surcharged with products which should normally be secreted by the kidneys.

The skin excretes carbonic acid and water, and is therefore one of the methods of breathing. We do not breathe entirely by the lungs, as is proved by the fact that if an animal be covered with varnish so that this process is prevented, death will result in from six to twelve hours. It therefore follows that it is of the utmost importance that the skin be kept healthy, as otherwise the general health is soon impaired. If the little exits of the glands become closed, the function of these glands ceases and to all intents and purposes they are dead.

Not only is carbonic acid gas excreted from the skin, but oxygen is absorbed by it, just as it is by the lungs, and these two processes may be called skin breathing. Moisture is also absorbed, as shown by the fact that thirst may be diminished by the person being clothed in wet garments; moreover, one is usually not so thirsty on damp or wet days as on bright, sunshiny ones.

#### BATHS AND BATHING

In discussing the physiology of the skin, it was stated that one of the functions of the skin is to act as an aid to respiration. In other words, the skin is a secondary breathing apparatus. It also is used to discharge impurities from the blood. The superficial scales of the epidermis are mechanically rubbed off and have a tendency to mix with the sebaceous matter, perspiration, and dirt, thus forming a thin covering that has a tendency to close the openings of the pores. This interferes with the functions of the skin. The purpose of bathing, therefore, is to mechanically remove this pellicle; and, since the skin is intimately connected with all the internal organs by means of nerves, it acts as a stimulant or tonic to the nervous system.

It is well known that many children fear to be put into a tub of any kind. They have been accustomed only to sponging, and their strong aversion to the tub often prevents the use of medical bathing in the case of fever or exhaustion from heat, and of the more thorough cleanliness obtained by a plunge bath. To avoid this fear, the child should never be put suddenly or roughly into the water, and especial care should be taken that the head is not accidentally allowed to slip below the water. The fear once contracted may often be cured by permitting the child to play in an empty tub for some time, and then putting in a small quantity

of water, the next day more, and each day increasing the amount; or the condition may be met by putting a blanket over the tub, placing the baby on that, and gradually letting both down into the water.

Every part of the body should be well soaped, but care should be taken that no soap is allowed to remain in the ears. For some months soap should be put on the scalp every day, but after six months this should be stopped, because, if long continued, it makes the hair dry and brittle. Vaseline should occasionally be rubbed on the head. The soapsuds should be removed by streams of water squeezed from a sponge.

Cold baths should never be given to children under five years of age, although sponging the body with cool water may be begun as early as two or two and a half years of age, as a mild stimulant immediately following a warm bath. In every case, the head and face should be the first parts washed. In placing an infant in the tub, he should be made to lie in a semi-prone attitude, and the water should be of sufficient quantity to reach the neck. As he grows older he may gradually sit up. If the bath is to be given in the bath-room, much stooping can be avoided by placing the infant's tub upon two slats laid crosswise over the stationary tub.

Many mothers complain of the aversion of their babies to the full bath or even to washing with sponge or cloth. The physiological reason for this is, that the shock to the nervous system occasioned by the sudden reduction of temperature and overstimulation of the nerves of the skin, causes a congestion of the blood in the internal organs, especially in the lungs, and a marked difficulty in breathing, or shortness of breath.

Care should be exercised in holding the child during the tubbing process, for much depends upon this to obtain success. When the infant's body is wet and slippery from the application of soap and water, it is easy for him to slip from the mother's grasp and have his eyes, nose, and mouth suffused with water. A struggle for breath ensues and the child passes through an experience, momentary it is true, yet never forgotten, and the mere sight of a tub thereafter almost throws him into convulsions. The form of bathing best borne by the majority of children is the full bath of the proper temperature, followed by a cold sponging while the child is standing in the lukewarm water. The duration of the bath for very young infants should be only one to two minutes. This period may be lengthened as the child grows older, until the longest desirable time, ten minutes, is reached. Prolonged bathing in hot water is to be deprecated, since it causes a relaxation of the entire system, and susceptible children are liable to feel ill effects. In the case of young children, bathing three times a week is all-sufficient, except the local bathing, which should always follow the removal of soiled napkins, when

the parts should be thoroughly washed with warm water and thoroughly dried. In summer time a daily bath is of benefit, not so much for its cleansing as for its cooling effect. As a tonic, immersion baths are valuable only when they are of short duration and followed by a brisk friction, to cause the glow of reaction which must follow if they are to be of benefit. If reaction does not follow, or the child becomes chilled, it is an indication that either the bath must be discontinued or the method of administration is wrong.

For infants, about ten o'clock in the morning is the best time for bathing; for older children, the bath is best given during the dressing process in the morning. The morning bath is better than the evening bath only as a matter of convenience, since the child is fresh in the morning and does not so readily rebel as when tired and sleepy. If, however, the child is a poor sleeper, the bath may be given in the evening, as it has a more or less sedative effect. The two things to be borne in mind are, first, regularity, and second, the avoidance of the bath just after meals. The mother should select the most convenient hour for this operation and not vary from it. The habit once established, the child will look for his bath as regularly as for his meal or his nap.

At least an hour should elapse between the times of feeding and of bathing. The reason for this is not far to seek. If bathing takes place shortly after the ingestion of food, the stomach being already congested, the blood, which is always driven from the surface by the water, will find its way to the stomach, and supereongestion, so to speak, or hyperæmia, will ensue. As a result, indigestion or colic may follow. It is never advisable to bathe a child whose skin is covered with an eruption, except upon the advice of a physician, because ill effects often follow in eczema and other skin diseases, from the use of soap and water.

Eruptions of the skin requiring immediate treatment should be very carefully handled. The slightest pressure of the fingers will sometimes bruise and inflame the sensitive spots. Vapor baths are, possibly, the most successful and least harmful methods of eradicating the accumulation of dust and oily deposits that so often fill the pores of the skin and create what are commonly known as "black heads." A vapor bath may be easily taken by holding the face over a vessel of boiling water, and covering both the head and the vessel with a cloth sufficiently large to prevent the escape of the steam. After fifteen minutes' steaming, the face should be well washed with hot water and soap.

Freckles are either hereditary or are produced by exposure to the sun, and in either case are due to an increase in the pigment of the lower



layers of the epidermis. To remove them, one must have recourse to some simple remedy that will not injure the delicate skin texture. An old-fashioned recipe is the following:—

One ounce of lemon juice,  
A quarter of a dram of powdered borax,  
Half a dram of pulverized sugar.

Mix well and allow the preparation to stand for several days before using. It should then be applied to the face and allowed to remain over night. Wind will sometimes freckle a sensitive skin, and in such cases a veil of close mesh should be worn whenever the weather is blustery.

Sunburn may be cured by applying the following lotion: Peel a cucumber and let it soak for a few hours in milk, then with the milk bathe the affected parts two or three times a day. Lemon juice is excellent for ordinary cases of sunburn, but should never be used when the skin is blistered. Elder flower and lavender water are famous for their cooling properties. Moth patches are quite difficult to remove, and nearly always require professional treatment.

Wrinkles arise generally from bad health, anxiety, study, or extreme old age. Nutritious food, plenty of outdoor exercise, and a cheerful, happy temperament retard their formation. Whatever tends to promote the general health will aid in preserving the skin in a smooth, un-wrinkled condition. When the lines are first forming, massage the face gently each night for ten minutes, applying small quantities of good cold cream with the tips of the fingers. Let the rubbing be upward and backward, as the tendency of the face is to fall in forward lines. This simple means will remove wrinkles that are only in the outer skin. Deep creases in the face are almost impossible to eradicate, but may be softened and made less pronounced by treatment of the outer surface. Moisture is very beneficial to the complexion. It is a recognized fact that the moist atmosphere of England has had much to do in producing the beautiful complexion of the English women.

The woman who wishes to secure a beautiful skin for her child must resolve to be steadfast in her efforts and must not look for a speedy or sudden transformation. Permanent advantage should be striven for rather than immediate effect, which advantage is gained not by outward application but by due attention to the laws of health.

## THE SICK ROOM

Most families are so situated, both as to means and the size of the house, as to be unable to command a separate room for sickness. Nor is this always necessary or even advisable. While the comfort of the patient

must always be the first consideration, we must not fail to remember the convenience of the nurse, especially if she be the mother. Too often the care of the invalid is but one of many duties, and to have the sick child in her own room is therefore easier than to put him into a room by himself. Again, people of moderate means cannot afford to undergo the expense entailed by the use of separate apartments, which might otherwise be required to lie idle between the several attacks of illness in the family. The sleeping chamber of the patient or of the mother will usually suffice. In cases of infectious disease, however, the patient must be isolated.

A room on the sunny side of the house, with a south or west exposure, is the most desirable location for the home hospital, and as wall paper is not considered hygienic, bedroom walls would better have a tinted rather than a papered surface. This is especially true of a room that is used in sickness. The designs on the wall paper are often very annoying to a nervous sufferer, and sometimes they are positively harmful. In one such instance, to relieve a nervous little patient from the fancied bugs and spiders hid in the wall paper, an ingenious mother procured some sheets of pale rose-tinted print paper from a printing office, pasted the sheets of paper together and hung them on the wall by means of wire and string. Pretty pictures, all of happy subjects, were hung over or pinned to the paper. These were changed about to relieve monotony. As colors affect people differently, in trying this plan, any tint that is a favorite with the patient might be substituted for the rose color. The paper has an advantage over cloth sheets, which are sometimes used, as it is prettier, lighter, and more easily kept in place.

Next to be considered is the floor. One of the rules most strictly adhered to in sanitariums and hospitals is that there shall be no carpets used, and as their abolishment in such places involves a scientific principle, why not consider them out of place in the home retreat for the sick? A bare floor, with a few rugs scattered about to deaden sound, is conceded by the best authorities to be the only hygienic floor for a sick room.

In arranging a room for a sick person, remove all unnecessary furniture. Among the articles that will be found most useful are an easy chair; a couch, where the nurses can rest, when opportunity offers, or the patient during convalescence; a footstool; and a chiffonier, in which not only the garments of the patient, but also the bedclothing, can be kept in a neat and orderly manner. A commode for adults and larger



children is a great convenience many times, but the most scrupulous care must be exercised in keeping it clean. Rocking chairs should be banished, as the rockers so often prove literal stumbling blocks for the feet of weary attendants; in short, do not retain any furniture that is in the way or is not of practical value.

The ideal room would be entirely free from plumbing, but, if such a room is not available, the plumbing must always be guarded for the possible escape of sewer gas. If a toilet or bath-room adjoins the sick chamber, the door should be kept closed, and where a stationary wash-basin exists in the room, it is well to fill the holes in bottom and side and cover the top with a board. These precautions are wise, even where there is the best of plumbing.

A few suggestions about the room and its care in case of infectious diseases may not be amiss here. If a disease of a contagious or an infectious character is suspected, remove from an isolated room all unnecessary drapings and furniture, dress the bed in absolutely clean bedding, convey the patient to the room as speedily as possible, arrange for his nurse, supply her with everything she may need, and let the other members of the family keep their distance unless absolutely needed. The family physician will immediately report the case to the health officers and quarantine regulations must be strictly adhered to. I would emphasize the necessity, however, of disinfecting everything that comes in contact with the patient, or that is used in the room. Especially should great care be exercised in the treatment of the clothes to be laundered; they should be rinsed in Platt's Chlorides or some equally good antiseptic solution, and boiling water, and thoroughly aired before they are put with other washing. I know of an instance where neglect of this latter precaution caused the spread of diphtheria in the family of a laundress and the death of three of her children. Any style of bedstead may be used, but the single, white enameled, iron bedstead is best adapted for this purpose. Wooden bedsteads are frequently the source of trouble, as they catch the dust and form admirable breeding ground for germs and vermin, no matter how scrupulously clean they may be kept.

In case vermin should appear, despite all precautions, the bed should be cleansed with a solution of corrosive sublimate, about one-half ounce to a pint of water. As this is a deadly poison and many fear to use it as freely as is necessary, the following formula is much in vogue among housekeepers:—

Potassium nitrate, one ounce,  
Ammonia water, two ounces,  
Soap shavings, one ounce,  
Water, one quart.

*Directions*—Apply very freely with a long-handled brush.



Casters are quite an important feature of the perfect bed, therefore creaking and obstreperous ones should be replaced with those that move easily and silently. The bed should stand out from the wall, and as near the center of the room as possible to permit of free access to the patient. The mattress should be made of hair or felt and covered with some light covering beneath the lower sheet. Many mattresses sink in the center from the weight of the patient and the material in that part becomes impacted, resulting in an uncomfortable depression. Care should be taken to overcome this defect by placing a pad of some material under the hollow place. Feather mattresses never should be used in a sick room.

It has been recommended by many practical nurses that a number of pillows of various sizes and shapes be employed, in addition to the one or two usually found on the ordinary bed. These may be made of cotton or wool, if the more expensive ones of feather or down are beyond the means of the family. Cotton sheets have the double advantage of being cheaper and more easily laundered, and are far better, than linen ones, since the chilliness occasioned by the linen sheet is repugnant to most sick people. It is economy to use three sheets, and in the best hospitals, sanitariums, and among trained nurses that method is usually adopted. The first sheet is drawn tightly and smoothly over and fastened with safety pins at the corners of the mattress. When occasion requires the use of a rubber sheet, this is fastened in like manner and covered with a draw-sheet, which is folded to the size of the rubber and tucked in at the sides of the bed. The use of the draw-sheet obviates the necessity of entirely remaking the bed when a change of linen is desired, as it can be withdrawn and another readily substituted with but little disturbance to the patient.

The disadvantages of the rubber sheet are, first, its liability to wrinkle; second, the tendency to cause perspiration; third, the combination of both these aggravations, producing bed sores. The rubber sheet should therefore never be used except in those cases where there is reason to suspect that the discharges from the patient will soil the bed.

It is not a very difficult task to change the sheet while the patient is in bed without disturbing him. There are two methods employed by nurses—the usual one of rolling the sheet into a cylinder, and a newer one offering some advantages, of folding the sheet in accordion-like folds. The first method is accomplished by rolling the soiled sheet lengthwise, beginning at the edge of the bed and rolling toward the patient, till it reaches him. A clean sheet, rolled in a similar manner, is unrolled over the space thus uncovered, the free end having first been tucked into the side of the bed to prevent slipping when drawn tightly. The patient is then turned—or lifted if he is too weak to move of his

own volition — upon the clean sheet, the soiled one is removed, and the clean one is drawn to the other side by unrolling.

The second method is casier to manipulate because the sheet lies flat, and by catching hold of the top fold the whole sheet may be opened with a slight pull. In folding, the sheet is spread out and alternate folds, six inches in width, running lengthwise of the sheet, are made. In order to get the folded sheet under the patient, raise his head and pull the upper part of the folds under him; the lower part may be got under the limbs in the same manner, then by depressing the mattress and grasping the folds in the center, the sheet can be gradually worked beneath the patient.

To change the upper sheet without exposing the patient, loosen the bedclothes from the foot of the bed, tuck in a clean sheet, or sheet and blanket, if desired, draw these up to the waist or chest of the patient, reach under the clean covers and gently withdraw the soiled ones. These should always be thoroughly aired before they come in contact with other unlaundered clothes. Unless otherwise instructed by the physician, the sheets should be changed daily. The patient will appreciate the efforts for his comfort and it will help to break the monotony of his illness. When you cannot change the sheets, pull them as tight as possible and tuck them in the sides of the bed, as this will freshen them up a bit.

The pillow-cases ought to be changed as often as, if not more frequently than, the sheets, as they become uncomfortably heated from the constant pressure of the head, especially when the patient is suffering from fever. When a patient is restless, the pillows should be frequently shaken to air them, and make them feel cooler. Never begin to change the linen of the bed or person till everything needed to replace the soiled clothing has been aired and warmed and placed where it can be immediately reached.

And now just a word about the bed covers. It is well to remember that cumbersome bedding is debilitating and uncomfortable. Eider-down quilts, though light, are likely to cause excessive perspiration. Two light coverings which allow an air space between them are warmer and lighter than a single heavy one, and a sheet and two single blankets are usually all that are necessary. Undue warmth is weakening, and perspiration causes the bed and bedclothing to become damp, hot, and sticky, a very undesirable trio of conditions.

In some instances, the patient is unable to bear the weight of the bedclothes. When this is the case, a support for the clothes can be made by fastening to laths the ends of several barrel hoops that have been cut in halves, and inserting the device under the clothing at the foot of the bed. Or by spreading the half hoops and fastening them in the center

to a lath, a device may be made that will slip over the patient and relieve him of the weight of the bed covering.

There are three special points to be observed about the condition of beds for the sick. There should be cleanliness, no ridges, and no crumbs. One of the latest devices to guard against the last mentioned inconvenience, is the little invalid table, which is so constructed that the upright portion of the stand can be placed upon the floor and the leaf or shelf swung over the bed and adjusted to the position and needs of the patient. This, of course, presupposes the patient to be so far convalescent as to be able to partake of solid food. For a similar purpose bed trays are sometimes employed. They are about two and a half feet long and a foot and a quarter wide, surrounded by a low rim on three sides, the side next to the patient being minus the rim. This tray is provided with short legs, of sufficient length, however, to keep the weight of the tray from the limbs of the patient.

#### HEAT

The problem of heating the sick room is always a difficult one, depending, as it does, upon so many different factors. An even temperature is the point sought. To ascertain the presence of an equable temperature, a thermometer must be placed near the center of the room, an equal distance from the window and the source of heat, this being the best point from which to obtain the average temperature.

A thermometer hung near a window will show a lower temperature than will be found elsewhere in the room, because the draughts from the poorly-fitting window cases will have the effect of lowering the temperature of the room at that point. If it is placed near the fire, it follows, of course, that the instruments will show a rise in temperature. These two extremes will lead to a false impression as to the actual condition of the room, and either too much heat will be added, or too much cold air admitted. The best temperature for a sick room is about 70 degrees F., although five degrees less may be allowed with comfort when the patient is suffering from a disease attended by a high temperature. If an ordinary stove is used, one burning wood is preferable, as it not only gives a more cheerful fire, but at the same time does away with the danger of coal gas. An open fireplace is, however, the best means of heating, affording, as it does, opportunities for ventilation as well as warmth. Whatever the method of heating, care should be taken to put on fuel in such a manner as to make as little noise as possible. Coal can be wrapped in old newspapers and the bundle placed in the stove, and a wooden poker is a good substitute for the noisy iron one.



## VENTILATION

Fully as important as the question of heat, and one demanding as much care and consideration, is that of ventilation. If a well person needs ventilation in the house and bedroom, of how much greater importance must it be to one who is ill! The fact that a sick person does not move about in the open air, and thus have the opportunity of filling his lungs with oxygen, is an evidence that a greater supply of air is necessary in the sick chamber than in an ordinary room. Protracted illness is rendered more tedious, and the convalescence more prolonged, from a lack of proper ventilation during the time the patient is confined to the bed. After the period of convalescence has so far progressed as to admit of the patient going out of doors, we see the magical effect of pure air upon the blood by the rapid return of color to the cheeks.

Although we find sufficient ventilation to be thus always important, still we find ourselves obliged to use various means to secure it. Suppose a room has two windows facing each other: the top sash of each should be drawn down about three inches; this will give a continuous current of air, but far enough above the bed to prevent a draught. The same course may be followed when there is only one window. From careful observation it will be clearly seen that the same object is accomplished, but in a slightly different manner. It is a well-known law of physics that hot air rises and cold air descends, the latter being denser and consequently heavier than the former. In the case of two windows, it will be seen that the draught passes directly from the top of one window to that of the other, but as it is heavier than the hot air it falls to the floor gradually and evenly so that its effect is insensible. In the case of one window, the current of air enters at the top and falls more or less directly downward along the sides of the wall, pushing, so to speak, the hot air in front of it, not unlike the old-fashioned snowplow that carried everything before it.

Another mode of ventilation is to raise the window from the bottom about three inches, and place across the opening, and two inches in front of it, a strip of wood about eight inches high. By this means the air enters the room in an upward direction, without producing a direct draught upon the patient. This is practically reversing the method just described.

The indirect method of ventilation is perhaps to be preferred to either of those just mentioned, in cases where cold air is liable to produce ill effects, as in bronchitis or pneumonia. To accomplish the result by this method, fill the adjoining room with fresh air and allow it to filter

gradually through an open door. As convenience dictates, the choice of introducing the air into the room may be accomplished by one of two ways: either by filling the room with cold air and closing all doors and windows except the door leading into the sick room, or by keeping one or more windows open all of the time.

Where possible, in cases of fever, a current of fresh air should be allowed to pass continually into the room, as this helps to dissipate the peculiar odors usually accompanying these diseases. Care should be taken, also, to dispense with the hangings and all unnecessary packages or vessels around or under the bed, as they interfere with the circulation of air and afford opportunity for the collection of dust.

Growing plants are not only a cheerful adjunct to the sick room, but are an aid to ventilation and purification of the air, as they give off a supply of oxygen that is beneficial. They must, however, always be removed from a sleeping room at night. There is seldom any objection to cut flowers, especially during the period of convalescence, when they are usually hailed with delight. A patient cannot always eat, even the daintiest food; and flowers are much the safer and more acceptable expression of love and remembrance. A little care given to their preservation will enhance their beauty and utility. The following suggestions will be found helpful in keeping flowers fresh: Clip the stems in a diagonal direction, lay them over night in a bowl of fresh water, or place them in a box, sprinkle well, cover tightly to exclude air, and put them outside of the window or in some convenient place where they will keep cool.

Although ventilation is such an essential, yet the construction and arrangement of the room often makes it very difficult to obtain. The bed is usually so situated that a direct draught more or less harmful will fall upon the patient if the windows be open. To obviate this, a light screen, one which can be easily moved from place to place, should be interposed between the bed and the window. This is particularly necessary with children at night, because of the difficulty encountered in keeping them properly covered. Heavy embroidered or velvet screens should not be used, as they collect dust and germs and give a somber, stuffy appearance to the room. A light bamboo frame, covered with China silk, silkalene, or some similar goods, is best for the sick room, as at the end of the illness the material can be destroyed without loss to the household.

Another reason for screens is found in the necessity for keeping the glare of the light from the eyes; particularly when the patient is suffering from fever. In nearly all such cases, the eyes are exceedingly sensitive to light. An improvised screen can be made by covering an ordinary clothes-horse with a sheet or shawl. To children who tire very

quickly of their surroundings and need frequent changes, especially during the tedious days of convalescence, such a screen can be made a source of much amusement by the simple means of pinning upon it pictures in various designs. If the child be strong enough and old enough to sit up in bed, he may cut figures of dolls, men, or animals, and have his nurse fasten them on the sheet. A screen in which the panels are made of white cheese-cloth or cotton is well adapted to such arrangements. By inventing a story of some sort, these figures may be employed to pass away many a weary hour.

#### CARE OF FOOD

One of the annoyances of the sick room is the difficulty of keeping food hot or cold. The impatience of the sufferer makes it undesirable for him to be kept waiting until the nurse can go to the kitchen, to say nothing of the extra labor on the part of the nurse. In contagious diseases, also, it is out of the question for the nurse to do so, as she will thereby come in contact with other members of the family. A small alcohol lamp, with a stand attachment, can be kept burning all the time that is necessary, without producing sufficient heat to increase the temperature of the room. Additional advantages are found in the economy of space and small cost of maintenance.

For keeping things cold, a small bed-room refrigerator can be obtained for a small sum. After the illness, it can be utilized for the ordinary use of the kitchen, provided it is thoroughly disinfected and cleansed. These refrigerators have three compartments, one for milk, another for fruit, and a third for ice.

If one of these ice-boxes cannot be obtained, the best method of preserving the ice is to wrap it in several thicknesses of paper. Ordinary newspaper will answer the purpose. The package is then enveloped in a piece of old flannel and placed on a cup or bowl, which in turn has been placed bottom upward in a basin or pan. The milk, jelly, broth, and other food to be kept cold is then placed in the basin where it soon becomes cool. The basin or pan is covered with a towel and placed near a window, or, better still, upon a small shelf outside of the window, if there be sufficient shade. All food or water must be securely covered if kept in the sick room. When ice is not available, the water, milk, or food can be cooled slightly by wrapping the pitcher or other vessel in a damp towel and standing it outside of the window.

Much of the success of a nurse depends upon her ability to anticipate the wants of a patient, and to be ready at a moment's notice to serve his food and drink in a palatable and acceptable form. For this reason it should be her first care upon assuming charge of a patient to see that she is provided with the necessary appliances for nursing.



## THE RELATION OF EMPLOYER AND NURSE

When a family is obliged to employ a nurse without having had any previous acquaintance with nurses, or when a nurse that has before proved satisfactory is engaged elsewhere, the very best adviser is a physician. This is especially true when the sickness is of a serious character and requires the service of a trained nurse. In ordinary illnesses, unskilled assistance may be sufficient; but in severe and critical cases, experience, skill, and special training on the part of the nurse are indispensable. It is obvious without argument that the physician is the one person most likely to know, either from his own acquaintance or that of his colleagues, just what particular nurse is best adapted to the case in hand.

The educated nurse is a connecting link, long missing, between the physician and the patient. She has a semi-professional standing, therefore, and cannot be classed with the unskilled laborers of the household. Provision has to be made for her accordingly; in respect to meals, sleeping apartments, and assistance that may be required from the kitchen service and elsewhere in order to carry on the work. In short, every facility ought to be provided to enable her to discharge her duties well and to keep herself in good physical and mental condition. The duties of her office are often onerous and exhausting, and she cannot endure the strain long without intermission and friendly support.

I have known cases where a nurse was supposed to be able to watch day and night with no intermission for rest, sleep, or outdoor exercises for a period of several days. Now, while in an emergency any nurse will endure unbroken fatigue for thirty-six hours, or even longer, it is only in rare and urgent cases that this is necessary. Aid ought to be at hand sufficient to allow the nurse one or two hours' outing each day, and rest in bed equivalent to eight hours.

Several difficulties often arise in regard to sick-room etiquette, more from lack of thought than from lack of courtesy on the part of the home-keeper. Of these, the vexing question of washing has perhaps most often given trouble. To a careful observer, it seems that in justice to the patient, as well as to the nurse, she should not be asked to do any washing, save perhaps in obstetrical cases, when she may be expected to wash some of the baby's clothing.

Another troublesome point is what to do with the nurse at meal-time; but a little consideration will show that when the case is so serious as to demand her unvarying attention, the meals may be sent to the sick room; otherwise some member of the family may remain with the patient, and the nurse be invited to the dining-room. Her training entitles her to this courtesy and to all others due to a lady. A good and

competent nurse is an aid and comfort to every one concerned—to the patient, to the family, and to the physician. She has spent laborious years in acquiring the necessary skill and knowledge to enable her to assume the responsibilities of her work, and she is entitled to consideration accordingly.

#### HINTS ON NURSING

The following hints are given as possible aids to the mother when obliged to assume the duties of a nurse. A trained nurse, of course, would already be conversant with these simple rules of the sick room:

Never say, "Dr. Blank does thus and so," for you are not employing Dr. Blank, and must follow the directions of the attending physician.

Always arrange for a liberal amount of light, unless there be specific reasons for excluding it.

Never give a dose of medicine until you have first read the label to be sure you are right, for no matter how sure you may be that you have placed a bottle in a particular place, some one may have changed it.

Always hold a bottle from which you are pouring medicine with the label upward; this will keep the contents from soiling the label.

Never administer a dangerous medicine except upon the advice of a physician.

Never allow visitors in the sick room except with the consent of the physician in charge.

Never ask a patient what he desires to eat, for nine times out of ten he will want the very thing he ought not to have.

Never leave food uncovered in the sick room. If it is desired to use what has been left over, put it in a place where it will keep fresh and serve it in another dish; it will prove more appetizing.

Remember that sick people are more exacting and fastidious, as a rule, than those who are well.

Never fill a dish with fruit; a small quantity may be relished and easily digested, while a larger quantity will prove harmful; if more is desired, it will be better to give it at another time. Eating is often the only break in the monotony of a sick room, and is therefore doubly welcome, and may be indulged in more frequently than in health, but only small quantities must be taken at a time.

Never permit any one to sit on the side of the bed, as it is very disagreeable to many patients, particularly if they are of a nervous or irritable temperament.

Every noise must be carefully guarded against; rattling windows, or blinds, or creaking chairs, should be attended to at once. Rustling skirts, crackling newspapers, and similar petty noises are very distracting and annoying to a sick person.

Do not talk to the patient more than is absolutely necessary, as it disturbs him, even though he be interested in the subject.

Never worry him with the details of the household cares, nor tell of the misfortunes of friends and neighbors.

Do not allow visitors to tell harrowing tales of the illness of others similarly affected; it has a depressing effect on the patient.

Never permit loud conversation in the sick room. If a visitor should forget himself as to the style or manner of conversation, it is your duty to remind him of the error.

While loud talking is always reprehensible and should be guarded against, still the nurse must also remember that to the patient there are few things more exciting than a whispered conversation. It is true that those indulging in it are doing so with the very best intent, but the patient, believing that it has something to do with the outcome of his case, strains his attention in the effort to hear it. His failure to do so only excites him the more, and leaves him to imagine all sorts of unfavorable things about his illness, which he thinks are being kept from him. It is better to talk in a low, yet in a distinct tone, so that he may hear without annoyance; for nothing should be said in his possible hearing which may not be desirable for him to know.

#### THE FAMILY PHYSICIAN

Respecting the physician of the family, little need here be said. But there are two problems concerning him which oftentimes present themselves, and are a cause of embarrassment. The first problem regards the choice of a physician, and the second and more complicated has reference to a change of physicians.

As to the first, it need only be said that the family doctor ought not to be chosen haphazard, by rushing out of doors in an emergency and bringing in the owner of the first doctor's sign that is seen. For strangers in a strange place, the recommendation of sensible neighbors ought to be a sufficient guide; or the opinion of a clergyman in the place, or of any other person whose standing will entitle his preference to respect. Where families are not strangers, their opinions respecting the comparative value, to them, of this or that physician, are sure to be formed already by knowing the judgment of the community.

The more difficult question is how to make a change of physicians during the progress of an illness, without doing wrong to any, and without infringing on professional etiquette. Nevertheless the matter is quite simple, if fairly considered for a moment. The family employing the physician have an unquestioned right to dismiss him whenever they choose so to do. Even if they do so under a wrong estimate of the value



of the physician's work, or an undervaluation of his skill and competency in the case, they have the right. Responsibility for results rests with the family.

Now, to effect such dismissal gracefully and in such way as not to unnecessarily wound the natural feelings of the doctor, requires kindness, frankness, and intelligence. Too often the anxious and painstaking physician is dismissed from attendance in a rude and insulting manner. This arises from ignorance and embarrassment combined. The doctor should be told that the friends of the sick one have become alarmed, thinking that the patient was not making the progress they ought to expect, and that they have decided, while fully conscious of the physician's devotion and good-will, to try a change of treatment. Regret may be expressed that such a course seems necessary, and all possible kindness, by word and act, ought to be shown the physician. This leaves opportunity also for a return afterward to the same physician, when future experience may have proved that he was more desirable than had been supposed.

Difficulties arise also in the arrangement of consultation, when it is desired by the family, but is not deemed necessary by the physician. Here, again, the family have the right to request that counsel shall be called, and likewise to express preference for some particular physician. Usually the attendant will acquiesce willingly, but if he objects, either to the physician suggested or to consultation with any other physician, he is at liberty to do so and to resign the case. This leaves the family free to make whatever arrangements they may deem best.

To this must be added that the family cannot call in another physician until the first has been relieved, or has voluntarily resigned. This is evident from the fact that the utmost confidence should exist between the physician and the family. Nurse and patient obey only with half-heartedness the directions given by a doctor whose personality is disliked or whose ability is questioned. If he feels such a lack of confidence he cannot give his best thought and attention to the case, and it is therefore only justice to him to make the change unless you can give him full confidence. The relation between the family and the physician is one involving the issues of life and death, and therefore of the first importance. The clearest justice and right-mindedness are needed on both sides to keep the relation at its best.

Having seen that the sick room is comfortably provided with every necessary, that it is well warmed and well aired, that appetizing meals are served in it, cheerful conversation prevails in it, a neat nurse presides over it, and a good doctor visits it every day, let us hope that it will speedily make itself unnecessary and resolve itself back into an ordinary bedroom.

## PREMONITORY SYMPTOMS OF DISEASE

EVERY one having the care of children should know the early indications of disease and the significance thereof. If the signs and symptoms of the more common disorders are not already known, there should be no delay in learning them, as such knowledge is easily accessible. Add to this the exercise of a little common sense and patience, and not only will needless heartaches be spared the mother and unnecessary suffering of the child be averted, but often impending disease of a serious nature will be arrested.

Early recognition of disease in infancy is of the utmost importance, because the feeble resistance at this period makes delay dangerous. In making an examination of a child to determine his ailment, there are several fairly accurate guides, the importance of which, however, is usually evident only to the trained observer. To the mother, many of the avenues of investigation are closed, since only an experienced physician has the necessary knowledge and skill to examine them. Many serious cases have followed the errors of home diagnosis, and it must be obvious to every one that the non-professional lacks the necessary discrimination and judgment. For example, a slight, apparently insignificant, symptom, that is overlooked or passed by as of no real value, may be to the physician the key to the diagnosis.

As speech is not developed in the infant, we are obliged to interpret his condition by objective means, *i. e.*, by physical signs; for instance, the site of the pain may be revealed by characteristic movements or by the position of the hand, which will almost inevitably light upon the region of discomfort. The flexing of the thighs upon the abdomen in intestinal pain or colic is instinctive and not from design.

Likewise, the temper of the child is sometimes an index of the state of his health. Fretfulness, peevishness, crossness, or crying, is frequently the forerunner of disease. The cry is many times characteristic, and when it precedes, accompanies, or follows any activity of the body, it may safely be assumed that it is an indication of pain in the parts affected by such movements. To illustrate, movement of the head in certain directions, accompanied by a cry, would indicate earache, and when the child picks or claws at the ear the diagnosis is confirmed. A cry succeeding a cough would seem to indicate pain in the chest. If it accompanies swallowing, it shows that the throat is sore, or that the tonsils are inflamed. Evacuations of the bowels or bladder, followed by crying, would be an evidence of trouble in one of these localities.

In attempting to ascertain the nature of the child's ailment, the mother must consider: (1) the cry; (2) the breathing; (3) the pulse; (4) the temperature; (5) the posture; (6) the gestures; (7) the expression; (8) the tongue; (9) the urine; (10) the skin.

### THE CRY

It is a well-known fact that attendants and nurses who have had the special care of infants, and opportunity for the observation of them, can detect such slight shades of difference in the cry of infants as to be able to diagnosticate the cause of the distress.

*A constant cry* may indicate hunger, thirst, earache, or some form of continuous pain, of which the nature of the sound is an indication. If, after the child is fed or drinks water, the cry ceases, the source of trouble is ascertained. But many times, as in colic, the feeding does more harm than good, and in a short time the cry is renewed. In earache the cry, while constant, loud, and shrieking, rises and falls, with a more or less rhythmic motion. This is due to the character of the pain. Sometimes the change in volume is scarcely perceptible, yet with a little care it can be noted. This is characteristic of no other trouble. It should not, however, be confounded with the paroxysmal cry.

*Paroxysmal Cry*—This cry is very severe for a time, then there is an entire cessation, followed by a sudden outbreak. It is caused most commonly by colic, with distention of the abdomen; also from pins in the clothing sticking into the body.

*Nervous Cry*—Babies cry from fear, fright, loneliness, and sleeplessness. The various surroundings will naturally suggest to the mother the cause of such cries, as a little noticing and comforting will distract the infant's attention, and he will gradually relax and quiet down, and, possibly, soon fall asleep.

*Pecvish Cry*—This usually occurs in children in poor health, when there is a lack of nourishment of the tissues. Such infants are pale, weak, and puny.

*Screaming Cry*—The shriek, or shrill cry, piercing and intermittent, generally indicates brain trouble.

*Moaning Cry*—This indicates that the child is so weak and exhausted that he is physically unable to cry louder, and the low moan is heard deep in the throat or chest. It is sometimes called "chest cry." This is not infrequent in pneumonia, pleurisy, and other forms of lung trouble. The pain produced by the deeper breathing required by the crying is soon felt and the cry sinks to a moan.



*Croupy Cry*—Every one is familiar with the hoarse, stridulous cry of the child attacked with croup or sore throat.

*Sleepy Cry*—This cry, accompanied with restlessness and rubbing of the eyes, is sufficiently familiar to need no explanation.

*Temper Cry*—No child, no matter how amiable he may be, but has given utterance to cries of this character at some period of his existence. It is usually easily known from its associated cause, which may be the deprivation of some much-desired object.

*Nasal Cry*—The stuffy, nasal, twangy cry indicates cold in the head.

*Muffled Cry*—Tonsillitis, sore throat, mumps, or other forms of swelling in the throat give rise to the muffled cry.

#### RESPIRATION

In addition to the various characteristic cries, the mother has also the nature of the respiration to guide her in diagnosing diseased conditions. In the healthy adult the number of respirations is sixteen per minute. They are somewhat slower when asleep, and greatly increased during or immediately following active exercise. They may be more accurately taken while the individual is lying in a comfortable position than when either sitting or standing. The same rule holds good with regard to the temperature and pulse. To count the number of respirations, the best method is to place the palm of the hand upon the chest of the patient, when the rising and falling of the chest walls which accompanies inspiration and expiration will be distinctly seen and felt. However, if the patient is conscious that you are watching his breathing, he will be unable to breathe naturally, and will unconsciously increase or decrease the number of respirations per minute. It is well, therefore, to resort to a little artifice, or to make the examination when the patient is asleep. Respiration below twelve or above thirty to the minute portends danger, and there should be no delay in seeking medical advice.

#### THE PULSE

The contraction of the heart forces the blood stream through the various arteries of the body. The elasticity of the walls of the larger vessels permits of expansion under this pressure, followed by contraction, and this alternate distention and reduction is called the pulse. As the heart itself cannot be seen, and as its movements are felt or heard only with difficulty by the experienced, the pulse becomes a reliable guide to, or indicator of, the heart's action.

An increase or a decrease in the number of the heart beats, above or below normal, would be an evidence of some abnormal condition present. The pulse may be quickened in such manner by a sudden fright, shock, or over-exertion. If so, the number of beats will return to normal upon the cessation of the cause. If, however, it continues at a more rapid rate, it is an evidence that the cause is deeper seated and more permanent in character. Difficulty of breathing, fever, or exhaustion, will also cause an increased pulse; while hemorrhage, brain trouble, and certain affections of the kidneys will cause a slowing of the pulse. Generally speaking, however, the pulse serves as a guide to the height of the fever, and as such is a valuable sign to the mother.

In addition to the pulse rate, the *character* of the pulse is an important sign. If feeble or intermittent, it shows the heart to be in danger of collapse. A full, bounding pulse is likely to signify the onset of a high fever accompanied with delirium.

The normal pulse rate in the adult is 72 beats per minute; in children, from 80 to 90 beats, and in infants, 10, 20 or 30 beats higher. It varies more than other functional movements of the bodily organs, because the heart is more susceptible to sudden influences.

The old method of determining the existence and height of a fever was by means of the pulse. While this is a fair guide in the absence of more accurate methods, it is so uncertain and subject to so many disturbing influences that it is not reliable, except to assist in determining the action of the heart.

To count the pulse, place the index and middle fingers of the right hand upon the inside of the patient's wrist, and the thumb opposite, *i. e.*, on the back of the wrist. By making a slight pressure, the pulsations will be readily felt. It is better to count a full minute and then repeat, to assure correctness.

#### THE TEMPERATURE

Taking the temperature of the body during sickness is attended with many difficulties, and only one accustomed to it can give an accurate opinion as to its true value. In a general way, it may be said that a high temperature indicates fever, and fever is an evidence that rapid and excessive tissue changes are taking place. It is one of the almost constant symptoms of disease, particularly in children. Commonly, it is the first intimation of an approaching illness. As a rule, the more intense the fever, the greater the degree of illness. It is important, therefore, that certain fundamental facts concerning the temperature of the body be known, in order to detect any deviation from the normal.

The normal temperature of the body is 98.6 degrees F. in the adult, but is slightly higher in children — about 99 degrees. A range of

temperature of more than one degree above or below normal indicates the presence or onset of disease. So that in the child the presence of a temperature above 100 or below 98 degrees would be the occasion for inquiry as to the cause thereof.

It will be found that the temperature is highest between six and nine o'clock, evening, and lowest between three and six o'clock, morning. The former is designated as the evening temperature and the latter the morning temperature. In sickness the temperature is therefore usually taken at nine or ten o'clock in the morning and about four or five in the afternoon.

When you use the thermometer, take it, bulb end downward, and shake it carefully, until the mercury falls several degrees below normal. Do not shake it sufficiently to force all the mercury into the bulb, as it will take too long for it to rise. Previous to and after using, it is always necessary to wash the instrument in water and wipe it dry. The bulb should then be placed beneath the child's tongue, and the lips, not the teeth, pressed tightly over it to exclude the air.

It is more satisfactory to take the temperature of an infant in the armpit or in the groin. It requires about three minutes in either case to get a proper registration. When necessary to take the temperature several times a day, the result should be recorded each time on a sheet of paper prepared and kept for this purpose; and the instrument should be placed, and allowed to remain when not in use, in a glass containing a solution of bichloride of mercury ( $\frac{1}{1000}$ ), or in alcohol. To prevent the thermometer from being broken by contact with the bottom of the glass, a piece of absorbent cotton should be placed in the bottom. Always rinse off the thermometer immediately on taking it out of the solution.

In selecting a thermometer, do not be guided by the price, for the cheap ones are never accurate, and one offered at a greatly reduced price is sure to prove defective and inefficient. The self-registering variety is by far the best and most satisfactory.

#### POSTURE

The child readily learns from experience that certain postures will ease pain or discomfort. In colic he will draw his thighs up to the abdomen, as this relaxes the abdominal muscles and relieves the tension. Certain diseased conditions of the brain are known by the position of the child's head; for instance, the head may be drawn back and the neck become rigid, and remain for a long time in this position. Again, there may be a constant tossing of the head from side to side, as in cerebrospinal meningitis. Or perhaps the child may lie in a stupid condition, taking little or no notice of his surroundings. This may show exhaus-



tion, or it may indicate that the system is overwhelmed with the poison of the disease.

Not only is posture of significance, but so also is gesture. It has long been the custom among mothers to attribute picking at the nose to the presence of worms. This sign is sometimes of real diagnostic value, only confirmed, however, by detecting the worms themselves. It is also known that picking at the bedclothes is an indication of extreme danger to the patient. The hand pressed to the ear or clawing at the ear shows the existence of earache. In convulsions, the toes and fingers are stiffened and the thumb may be pressed tightly upon the palm of the hand.

Every one who has had the least experience in the sick room knows that the expression of the face changes with the disease. In colic the face is distorted; in diarrhea it becomes white, pinched and shriveled; in fever it is flushed; in whooping cough it becomes swollen, dusky and congested. A rapid distention of the nostrils is an evidence of difficult breathing. Pain is usually accompanied, even in sleep, with wrinkling of the forehead.

#### THE TONGUE

It is usually necessary, or at least desirable, to examine the tongue. In children this is often an exceedingly difficult and exasperating procedure, taxing the patience of all concerned. Moreover, the vain attempts, pleadings, coaxings, or threats have a bad effect on the little patient, and may give rise to temporary symptoms, such as irregularity of pulse and breathing, that may cause an error in diagnosis.

The mother should early teach her child to put out his tongue and open his mouth wide when told to do so. When the child is afraid or obstinate, it is extremely desirable that he should not be frightened or lose confidence in the mother or nurse by being forced to submit to the procedure, when it is necessary to examine his mouth or throat. Numerous plans have been suggested to accomplish this end, the one used in some of our infant asylums and children's hospitals being attended with the greatest success. The finger is placed on the little one's lips, which, when felt, will cause the mouth to open, the child believing it to be his food. By rapidly passing the finger over the tongue and drawing it slightly forward, the throat, the gums and the state of the tongue can readily be seen. A little dexterity, brought about by faithful practice, will save much trouble and inconvenience to both mother and child.

The tongue becomes coated from two sources, local and systemic. Decayed teeth, catarrh and sore throat are examples of the first, while nervous strain, loss of sleep, indigestion, etc., are causes of the second. The coating of the tongue, especially the base (back), just after eating

is, of course, frequent, and without significance. This is especially true of bottle-fed babies, whose tongues are often coated with a thick white layer of milk or starchy material used in the food. On the tip of the tongue, coating indicates disease of the stomach, liver or intestines. In constipation due to, or connected with, stomach trouble, a dirty patch is seen in the center of the tongue, with red, clean edges and tip. A thick brown fur indicates biliousness. The mottled appearance so often seen on the tongues of children results from the general impairment of nutrition. In such cases the skin or mucous membrane of the tongue peels off and becomes mixed with the secretions of the mouth.

The color of the tongue affords an indication too slight for the mother to use, although in a general way, it may be said that in fevers the tongue is bright red and increases in redness as the fever rises. The degree of moisture is dependent upon the amount of saliva and other secretions of the mouth. In young infants, as just noted, the tongue is almost always coated with mucus and portions of food, because the saliva is practically absent till the third month, and these particles are not washed away mechanically as they are after the flow is established. The amount of saliva normally secreted each day, being from two to three pints, has a marked effect in this direction. It is easy to distinguish between milk curds and genuine coating, for the former can be readily removed, while the latter cannot be rubbed off. In a number of diseases, dryness of the tongue is a constant symptom, showing that the drain upon the general system has influenced the secretion of the salivary glands and impaired their activity. The return of these fluids is usually considered a favorable sign and marks the decline of the disease.

#### THE URINE

The quantity of urine passed is very significant, being at one time scanty, at another, profuse. In fever it is apt to be scanty and high-colored, leaving a stain upon the napkin, or a sediment after standing for some time in a vessel. Many diseased conditions cause a decomposition of the urine, which gives rise to an offensive odor that is often characteristic of a particular disease. It may, however, be due to certain foods, such as asparagus, lettuce, or carrots.

#### THE SKIN

The skin is more tender and susceptible to external influences in early childhood than later in life, and is, therefore, a better index at this time than at any subsequent period. That it is more susceptible is

shown by the great number of skin diseases peculiar to children, and by the fact that eruptive fevers are more marked in them than in older persons. The color of the skin, also, which depends upon the circulation, is more easily affected by disease at this age than later in life. Harshness, dryness, excessive moisture, especially in certain localities, such as the head, are signs of a disordered system. The skin may be pale, flabby, or flushed, according to the cause of the disease. In liver complaints, the skin is yellow; in diarrhea or kidney troubles, it is a sickly, pasty color; in heart or lung diseases, it is dusky or bluish.

Dark semicircles below the eyes show a lowered vitality, and prominent blue veins about the forehead, instead of being characteristic of gentle birth or high social standing, are more often the signs of a poorly nourished child.

By all these means the watchful mother can detect the onset of disease and oppose it — first, by wholesome food, plenty of sleep, and good nursing generally, and, when these fail, to promptly restore the child to his normal condition, by calling in the doctor.

#### HOME MANAGEMENT OF COMMON DISEASES OF CHILDREN

IN THE following pages, some of the prominent symptoms of diseases and their home treatment are given, but no attempt is made to be exhaustive. The object is simply to give to the mother a few hints that will enable her to judge intelligently as to the condition of her child, to recognize the approach of disease, and as far as possible to ward it off. In such troubles as convulsions and diphtheritic croup, where prompt and intelligent action is often necessary to save life, the hints here supplied, though simple, will, it is hoped, be found sufficient. In other cases, a knowledge of the self-limited character of the disorder may save unnecessary anxiety. In all cases, helpful suggestions as to home treatment have been given; but in no case are such suggestions intended to do away with the services of a competent physician.

#### RESPIRATORY DISEASES

NEARLY all of the diseases of the nose, throat, and lungs, are the result of colds. An impoverished condition of the system, exhaustion, and sudden changes of temperature are important factors in the process of catching colds, but the commonest cause of all is imprudence. This does not apply to unnecessary exposure only, but to the lack of proper care of the body as to bathing and clothing, and to living in



poorly ventilated rooms. When from any of these causes it happens that the warm body is suddenly exposed to cold air, a chilling of the surface of the skin takes place, causing a sudden contraction of the pores; then the *effete* material that should be eliminated with the perspiration is carried into the blood, and this is followed by a mild sort of systemic poisoning which we know as a "cold."

Catarrhal troubles, pneumonia, bronchitis, and, in short, all diseases of the respiratory tract, are aggravated by the modern system of dry heating common to city houses in winter. Steam, hot water, furnace heat, and even stoves and latrobes, cause the air to become too dry so that it readily absorbs moisture from whatever surface it touches. The heat from a stove will dry the air of an ordinary room to such an extent as to extract moisture from the furniture and woodwork and to cause an imperceptible but rapid evaporation of the moisture from the surface of the body of all persons in it. To prevent this a broad, shallow vessel, filled with water should be placed on the stove; in this way air is moistened by the evaporation of the water. If the skin be healthy, such exposure may have no bad effect. The blood will still be driven momentarily from the surface to the interior, but the reaction will be instantaneous. The blood will then be returned to the surface, and if the air is cold, a glow of warmth will be felt. If the air is warm, there will be a flow of perspiration, the evaporation of which, since it extracts heat from the blood vessels, causes a coolness of the surface. On the other hand, if the skin be below the normal standard, the reaction will be slower, and the tissue changes less complete — conditions most favorable for taking cold.

Most children, from their birth, have certain weak parts in their constitution which may have been handed down to them from their parents. In one instance it may be the lungs, in another the intestinal tract, while in the third, it may be the nervous system. Upon such parts or organs the effects of exposure will naturally first be felt. For example, if a child have a weak throat, he is likely to contract tonsillitis through getting his feet wet, sitting in a draft, or even by exposing himself to the cold air in cold weather; while another may suffer from neuralgia from the same causes.

In the earliest stage of a cold, that is, as soon as the first symptoms manifest themselves, the child should have a hot mustard footbath and some kind of hot drink. The temperature of the footbath should be about 110 to 115 degrees; and the proportion is a tablespoonful of mustard to a pail of water. To better retain the heat, a blanket or other covering should be wrapped about the patient in such a manner as to fall to the floor and entirely envelop the pail. The duration of the bath should be about ten minutes, the water being kept hot by additions from

time to time, as needed. The feet and legs should be dried by rubbing briskly with a coarse towel, and the patient then be placed in bed with an extra blanket or two thrown over him to assist the sweating process.

Just before the patient is ready to get into bed, he should either take a drink of hot lemonade, or a glass of hot water with a teaspoonful of cream of tartar, sweetened if desired. The diet for a day or two should be simple; consisting mainly of toast and tea, or milk, which is generally the best food, and which may be given hot if preferred. A pinch of salt will add to the taste of the milk, which to some persons is "flat" when taken hot. The milk is sometimes more palatable when well shaken and sweetened, or if cooled by crushed ice. The white of an egg beaten into froth, mixed with an equal part of water and sweetened, may be used in place of the milk. A simple cold is not always checked by these measures, but in whatever form it subsequently manifests itself, the above treatment will tend to lessen the severity of the attack. Some of the commonest *sequelæ* (or results following an unchecked cold) will now be considered.

#### SORE THROAT

Simple sore throat is an inflammation of the mucous membrane of the pharynx, usually accompanied by swelling of one or both tonsils. It is not always easy to distinguish between an innocent and a malignant sore throat, especially if some of the symptoms of malignancy are present, such as patches, fetid breath, and swollen neck. In such cases the mother should not trust to her powers of discrimination but should consult a competent physician at once.

The examination of the throat is often attended with difficulty because of the inability of the patient to open the mouth wide enough or to depress the base of the tongue sufficiently to expose the fauces. When this is the case a good plan is to have someone hold the child near a window, or in any strong artificial light, with his head bent back and his chin pulled down. His mouth now being open, the tongue may be depressed by the curved handle of a teaspoon and all of the parts of the throat thus brought into view. When the patient is old enough to understand what is wanted of him, the repetition of the sound "ah-ah-ah-ah" will sometimes depress the base of the tongue without the aid of a spoon.

Treatment in simple cases consists in laying upon the front of the throat a folded square of flannel, wrung out of cold water, and covered by a fold of oiled silk to retain the moisture, and the whole kept snug in place by a turn or two of linen or muslin. A gargle of bichromate of potash (one drop of the tincture to half a tumblerful of water) or dilute creolin (five drops to a tumblerful of water) will be found efficacious.

## COUGHS

Nearly all diseases of throat and lungs are attended by a cough; that is one of the most prominent and characteristic symptoms. All coughs are not the result of cold or inflammation of the lung structure, for there are coughs which are due to irritation of another kind, such as particles of dust in the bronchial tubes; and there are also still others resulting from reflex action. The cough is merely a symptom and not a disease, although as a general rule the deeper and more prolonged the cough, the graver the cause.

## SNUFFLES

In snuffles, the nose becomes filled with mucus, and it is impossible for the child to obtain through the nostrils enough air to enable him to breathe properly and at the same time to nurse. The child grasps the nipple and pulls at it violently for a moment or two and then sinks back wearied and unsatisfied. After a short breathing spell he goes through the same process repeating it until he is satisfied or until he falls asleep from sheer exhaustion. In some families, the nasal passages are small and the children in consequence are affected by croup and snuffles; these diseases are seldom found in families the members of which have good nasal organs.

## MOUTH BREATHING

Mouth breathing is developed from just such troubles. The air passing continually over the tongue dries up the moisture, the organ becomes harsh, dry, and coated, the breath bad, and sleep troubled; the habit of snoring soon manifests itself.

Mouth breathing also results from the obstruction of the nasal passages. The commonest cause is an abnormal growth, such as an adenoid tumor or a nasal polypus. These technical terms mean very simple little swellings. An adenoid tumor is an enlargement of the third tonsil, a small glandular body situated behind the posterior orifice of the nose; and a nasal polypus is a tumorous enlargement of the mucus membrane lining the nose.

Another common cause of this condition is nasal catarrh; but more often both the catarrh and the mouth breathing are the result of obstruction to the nasal passage. A deflected septum — a bending of the cartilaginous partition separating the nostrils — may also cause obstruction. If the tonsils are much enlarged, it is impossible for the child to free the nostrils of the collected mucus by blowing the nose, as the post-nasal obstruction prevents the entrance of a sufficient current of air to



eject the mucus. The child who is unable for any of these reasons to breathe properly through the nose becomes a mouth breather, which results deleteriously in several ways; first, the obstruction prevents the proper development of the interior of the nose, so that in adult life it is inadequate for the increased work demanded of it; second, this internal contraction of the nasal organ results in a narrow, disproportioned upper jaw, which causes a projection of the upper teeth; third, the child does not get an adequate supply of oxygen to the lungs, so he becomes pale, anæmic, and dull; fourth, chronic nasal catarrh may supervene.

#### CHRONIC CATARRH

In Chronic Catarrh the pharynx (or that portion of the back part of the mouth which connects the inner nostrils in the roof of the mouth with the throat) is filled with a glairy mucus. During sleep this mucus flows in such a manner that a considerable amount makes its way into the œsophagus and thence into the stomach, where it forms a coating upon the delicate mucous membrane of that organ. The nausea, so common to this disease, is accounted for in this way.

This condition needs careful attention both in the matter of hygiene and as to local applications. The same care should be exercised in the matter of clothing, bathing, etc., as in preventing cold. The simple method of snuffing warm water and salt up the nose has a soothing and healing effect. Relief may also be obtained by inhaling steam, or through the frequent cleansing of the nose with an antiseptic solution, such as carbolic acid, listerine, creolin, or peroxide of hydrogen.

#### TONSILLITIS

This is an acute catarrhal inflammation of the tonsils, which are vascular lymphatic glands located on either side of the jaw back of the soft palate and fauces. The glands contain numerous crypts or follicles, which are lined with a delicate epithelium. The follicles readily inflame, and fill with pus, or muco-pus, which forms small, yellow, creamy-looking patches upon the tonsil. This form, the most frequently seen, is called follicular tonsillitis; it is almost always found on both tonsils, although one tonsil may be infected before the other.

The general symptoms—chills, pains in the back, limbs, and head, with high fever, usually precede the local symptoms. The fever may run up as high as 104 or 105 degrees. The local symptoms begin with a tickling or dryness of the throat or pharynx, followed by swelling of the tonsils, pain, and the formation of the follicular patches or pus. The general symptoms are most severe the first day, gradually subsiding and disappearing after the third day, but the local symptoms persist

a day or two longer. This form of tonsillitis is comparatively mild in character, and is self-limited in duration. An antiseptic gargle, or one of hot water and salt, every half hour, is all that is needed in the way of local treatment. Attention must be paid to the general health and hygiene in order to prevent recurring attacks. The chief danger in tonsillitis is its tendency to terminate in quinsy, or phlegmonous tonsillitis. This form of the disease is not so common, particularly in younger children, and unlike the preceding variety, is nearly always confined to one side of the throat.

#### QUINSY

Quinsy, or phlegmonous tonsillitis, is in reality an inflammation of the cellular tissue surrounding the tonsil, but in severe cases it always invades the gland itself. This form of the disease is produced by the same causes as the follicular variety, but in those suffering from post-nasal catarrh the tendency is greater. The symptoms in the beginning of the attack are about the same as in the former, the difference being that the general symptoms are not so severe in this while the local ones are more pronounced. The pain in the throat is very severe, especially when an attempt is made to open the mouth or to swallow food. At first the inflammation of the tonsil is not noticed, except perhaps a slight redness, notwithstanding that the patient complains of severe pain. The reason for this curious condition lies in the fact that the inflammation begins in the peri-tonsillar tissue, that is, the tissue surrounding the gland itself, and it is only after the abscess forms that it involves the tonsil. When there is severe sore throat, with pains extending down the muscles of the neck, and no apparent signs of inflammation in the tonsils, quinsy should be suspected.

Hot applications in the form of poultices or cloths wrung out of hot water, the hot-water bag, or cold applied in the form of ice poultices or cold cloths, relieve the pain and fever, and hasten the formation of the abscess. As soon as the abscess points, it should be opened by a physician. Gargles, sucking of ice, or the drinking of flaxseed tea sometimes prove grateful to the patient. As tonsillitis in this form is very contagious the patient should be at once isolated to prevent further infection.

#### CROUP

There are two kinds of croup, true and false. The alarming symptoms of croup sometimes cause it to be confounded with diphtheria and many times it is difficult to distinguish between them. In false croup the cough and other symptoms are chiefly the result of spasms of the muscles of the larynx, which shut off the entrance of air to the throat

and lungs. The effort to overcome this momentary suffocation and the subsequent explosive entrance of air, causes the characteristic barking cough; hence the name spasmodic croup. While this disease is quite alarming in its symptoms, it is seldom dangerous. Although frequently it is the result of exposure to cold or dampness, there is no accompanying inflammation of the mucous membrane.

These attacks rarely occur after the sixth year. An attack usually lasts from two to three nights, the second being perhaps as severe as the first, with an interval during the day in which no cough, or at least, only a slight one, manifests itself. As these symptoms rapidly abate, and are never succeeded by serious symptoms, there is little occasion for alarm, as the ordinary treatment effects a cure.

Hot fomentations and hot foot baths may be given to advantage, as described under treatment of sore throat. Internally, a teaspoonful of melted lard and New Orleans molasses, mixed in equal proportions, may serve to lubricate and clear the throat. Relief can also be obtained by provoking vomiting. The mere effort to vomit, whether anything comes up or not, will soon be followed by relaxation of the tense muscular fibers of the larynx, and the breathing, consequently, will become less labored and more natural.

#### TRUE CROUP

True croup, otherwise known as membranous croup, is comparatively rare. Clinically, it is scarcely distinguishable from diphtheria, and by many it is considered a form of diphtheria, and as such is termed laryngeal diphtheria. Its onset is gradual, the cough being preceded by languor, fever and loss of appetite for a day or two before the paroxysm. Instead of occurring in the middle of the night, as in the case of false croup, the symptoms of barking cough usually make their first appearance early in the day, increasing in intensity as night approaches till they are in full force. The false membrane rapidly forms in the larynx, shutting off the ingress of air. The child struggles and makes vigorous efforts to catch his breath. In infancy the case usually reaches a fatal termination in from twenty-four to thirty-six hours, while in older children it may be from two to four days. In most cases, death results from the failure to provide prompt treatment, the disease being allowed to develop because of the slight importance attached to the initial symptoms. The death rate is between ninety and ninety-five per cent in untreated cases. As this trouble for all practical purposes may be considered as a virulent form of diphtheria, its treatment is practically the same. Mechanical help, in the way of a tube, to prevent suffocation, may be imperative. This, however, can be inserted only by one



skilled and practised in the operation. In fact, medical treatment throughout the whole course of the disease is imperatively demanded.

### BRONCHITIS

This is one of the most frequent diseases of childhood, and is usually the result of a neglected cold, or at least one that is of such severity that its sudden onset has not been preceded by any marked symptoms. The cough—at first dry—is due to an irritation or congestion of the bronchial tubes. When the collection of mucus is sufficient to cause irritation the cough becomes loose and is usually increased in force and frequency. In infants and small children but little mucus is coughed up, most of it being simply swallowed and discharged through the bowels. Unless the cough be very severe there are few attendant symptoms, but there may be slight fever, wheezing, and pain in the chest. The danger of neglecting an acute attack of bronchitis is that it may easily run into a chronic form, or terminate in pneumonia.

The local treatment consists in rubbing the chest with camphorated oil, to a tablespoonful of which may be added ten drops of turpentine. A hot flaxseed poultice placed on the chest will increase the flow of mucus and relieve the pain. To make the poultice, mix a sufficient quantity of flaxseed meal with boiling water to make a soft mush, to which two tablespoonfuls of melted lard is added; this must be spread about one-half of an inch thick on cheese cloth, the loose ends of which are then folded over so as to completely inclose the flaxseed. The poultice should cover the chest and come well up around the neck. To do this easily and neatly cut the cheese cloth as follows: Take a piece of cloth of sufficient size when doubled on itself to cover the chest and cut it with a space in either end to allow for the neck. A piece of tape sewed to the end will allow the poultice to be tied or pinned around the neck so as to keep it in place and prevent slipping; and another piece sewed to the center of either side will allow the poultice to be fastened around the chest or abdomen.

### PNEUMONIA

There are several varieties of this disease recognized by the physicians, but for all practical purposes they may be considered as identical. Croupous or lobar pneumonia and catarrhal or lobular pneumonia are the principal varieties and are indifferently called congestion of the lungs, capillary bronchitis, pneumonia, and inflammation of the lungs. It is an acute infectious disease, due to a specific organism. At least the organism is present and seems to thrive on the medium furnished; whereas, if the lung were normal no harm would result from its presence. The usual course of the disease is an extension of rhinitis or laryngitis, or a

bronchitis, downward, into, and involving, the small bronchial tubes and air cells. There is high fever, rapid pulse, weakened heart, loss of appetite, pain, restlessness and loss of sleep. The secretion of mucus rapidly takes place at or near the onset of the disease, the whole forming a clinical picture not unlike bronchitis as above described, with the exception that the symptoms are exaggerated and of greater importance.

The shallow, labored breathing indicates an insufficient amount of air in the lungs. The air cells and bronchial tubes being more or less filled with mucus and cast-off epithelial cells, the capacity of the lungs is that much lessened. More oxygen or a better quantity of air is required to compensate for the loss of lung area. It is, therefore, of the first necessity that the room contain fresh air in abundance, but of course without drafts.

As the heart's action is increased by an extra effort to force more blood into the lungs to supply sustenance to the inflamed structure, which is undergoing rapid change, it is obvious that if this exertion is long continued, the muscles of the heart will be impaired. This is the case where there is pallor succeeding a flushed face, blue lips and finger-tips. To overcome this speedily is an imperative necessity in order to prevent death. This can best be accomplished by plunging the baby into a hot bath.

The disease is of such gravity as to require medical skill at once, and no one should think of attempting domestic treatment. In but few cases can the results of good nursing be more appreciated and be of more service than in pneumonia. Likewise poor nursing or painful blunders nowhere prove more directly fatal.

## DISEASES OF THE DIGESTIVE SYSTEM

### *Indigestion*

There are two varieties of this disorder, the acute and chronic. The acute variety may be termed colic. The chronic variety occurs more frequently in later life, and, like the former, is mainly dependent upon injudicious diet. Certain forms of food, as we have seen, are digested in the stomach only, while others are digested in the intestines alone. Albuminous materials are converted in the stomach into substances ready to be absorbed. Fats and starches are digested in the intestines. Since the intestinal function is not fully developed until late in infancy, it follows that materials containing much starch or sugar should be withheld until after the nursing period.

Colic is due, usually, to a collection of gas in the abdomen, the distention causing severe pain. This may occur in infants who are in other respects practically well. In many cases there is high temperature, intense thirst and vomiting. The food, solid or liquid, is rejected imme-

diately after being swallowed, and the nausea and vomiting often persist long after all the food has left the stomach. The extremities are cold, more or less bluish, the abdomen tense and swollen, and there is more or less continual drawing up and 'straightening out of the arms and legs. The attack often subsides when the gas is expelled either through the mouth or the bowels. These attacks vary as to number, period of duration, and time of onset. They are more frequent at night, especially after feeding.

The ordinary wind colic of infants, though distressing, seldom requires medical treatment. There is practically no reason for the existence of the so-called three months' colic, as it is usually due to improper food or lack of proper care of the breast or bottle. In cases where the cause is due to the character of the food in artificially fed babies, the nourishment may perhaps be required to be changed, but this should never be done except upon the advice of the physician.

During an attack, place the feet in hot water or against a hot-water bag, and apply heat to the abdomen and well up over the stomach. A good plan is to wring cloths out of hot water and apply one after another without exposing the skin between applications. Have a fresh cloth ready and close to the body before removing the old one. Relief can also be obtained by laying the child upon his abdomen over a hot-water bag. Many times an injection of a gill of warm water, to which ten drops of turpentine have been added, will relieve the attack by assisting in the expulsion of gas. Peppermint water (five drops of essence of peppermint in two teaspoonfuls of warm water, sweetened with a quarter of a teaspoonful of sugar), or milk of asafetida (sold in all drug stores) given immediately after nursing, in three-drop doses, diluted, will frequently prevent an attack. Many of the herb teas, the sovereign remedies of our childhood days, should not be employed. The use of brandy or whiskey as a remedy is to be avoided, and under no circumstances should soothing syrup be given. One of the greatest and commonest errors is the feeding of the child at such times in the hope or belief that it will cure, or at least assist the trouble. This is but adding insult to injury, as either too much or improper food is at the bottom of the whole trouble. Therefore the child must not be fed. He should be warmly dressed, especially the feet and legs, the covering extending above the knees, and the abdomen wrapped in flannel.

A good protector, and one furnishing heat, is an abdominal pad made of the following ingredients:—

- Powdered ginger,
- Powdered cinnamon, equal parts,
- Powdered allspice,
- Powdered cloves, one-fourth part.



The powder should be thoroughly mixed and placed in a bag of cheese cloth, then spread out flat and the whole quilted. A pad made in this way can be worn night and day if necessary.

Improper food, disregard of hygienic principles and improper habits of eating will soon convert acute attacks into chronic forms of indigestion. In these latter the intestines become involved; in fact, gastric is often associated with intestinal indigestion. In such cases the gastric juice fails to prepare or elaborate the contents of the stomach for subsequent digestion in the lower alimentary canal; the stomach acids become so thoroughly mixed with the food that when it passes into the intestines it cannot be neutralized by the bile and pancreatic juice, and the further process of digestion is arrested. More gas then forms and a peculiar noise, due to the passage of gas from one "knuckle" or portion of the intestine to another, is produced.

In nearly every case the giving of potatoes and other starchy foods to children before intestinal digestion is well established, is responsible for the trouble. Those suffering from rickets and other forms of malnutrition are the most frequent sufferers from it. The same general rule holds in this class of cases as in gastric indigestion, namely, the causes are either improper food or too much food.

Besides flatulency, there will be pain, diarrhea, or constipation, loss of flesh and general signs of imperfect nourishment. Constipation, when it occurs, is usually accompanied with considerable flatulency, the stools are hard, white or grayish balls, passed with great effort, and the hardened masses are streaked with mucus and blood. In diarrhea the stools are greenish, excoriating and foul-smelling, showing that fermentation has taken place.

The first step in the treatment of all forms of indigestion is to prepare a food adaptable to the digestive powers of the child. The starches and sugars must be reduced or withdrawn altogether. In those who are eating much solid food, the vegetables, particularly potatoes, must not be allowed. Minced beef, mutton broth and peptonized milk, well diluted, form the chief articles of diet. The amount of food at a meal should be considerably less than usual, but the number of meals may be increased to five or six per day.

#### *Biliousness*

Contrary to the generally accepted opinion, biliousness is not due to a superabundance of bile, nor, as it is more commonly expressed, to a sluggish liver, but is invariably due to indigestion. Those who are said to be of a bilious temperament are in reality of an inherited or acquired dyspeptic tendency. In this condition, an excessive quantity of food or an improper diet causes the food to be insufficiently

digested, or constipation causes the absorption of "ptomaines," or an excess of urates. Ptomaines and urates are products of tissue waste, that diminish the vitality of the blood, thus causing the functions of the various organs to become less vigorous. Certain forms of gross food, the continued indulgence in one kind of diet, lack of exercise, close confinement in overheated houses, or any drain on the physical strength that will affect the digestive functions, may cause the attacks.

Loss of appetite, nausea, vomiting, and a coated tongue, are the prominent symptoms. Rest in bed, light diet, and quiet will accomplish a cure in a few days. When fever develops, the case should be brought without delay to the attention of a physician.

### *Thrush*

Thrush, or stomatitis, is a very common disease during the early weeks of life. It is characterized by small white patches formed on the mucous membrane of the mouth and tongue. In severe cases, they may be numerous, some of them coalescing and forming large patches. They are similar in appearance to curdled milk, but they can be removed only with difficulty, whereas the milk patches are easily brushed off, leaving no trace behind. The thrush patch, on the contrary, when removed, leaves a raw, bleeding surface. This disease is usually associated with some derangement of digestion, but it is a germ disease, and is contagious. The immediate cause is usually a lack of cleanliness about the mouth itself, or the use of nursing bottles provided with tubes which allow the accumulation of sour or decomposing milk—a good medium for the rapid development of germs.

Treatment, both preventive and curative, consists in cleanliness. Just before and immediately after nursing, a small mass of cotton saturated in a solution consisting of a pint of hot water in which is dissolved a teaspoonful of borax, should be used to thoroughly cleanse the nipple and the skin immediately surrounding it. If the rubber nipple is used, it should be washed in the same solution, both within and without, and placed in a solution of soda water until again desired for use. Both before and after nursing, the mouth of the infant should be thoroughly cleansed with the borated water.

### *Hiccough*

Another of the disorders symptomatic of digestion, closely associated with the foregoing, is hiccough. It is due to spasmodic contraction of the diaphragm,—the partition wall between the cavities of the chest

and abdomen. While this may result from other causes, especially nervous causes, it is usually dependent upon some digestive disturbance. Although annoying, it is of little real significance except in those cases where persistent hiccough is the symptom of some grave disease. In infants it can usually be relieved by giving hot water and soda-mint, or by patting on the back. Every one is familiar with the old domestic cures applied to older children, such as holding the breath while a certain number is being counted; or drinking a glass of water when the arms are stretched high over the head. Any of these methods will be found of service, especially the latter.

### *Vomiting*

It is no uncommon sight to see a child a month or two old taking from four to six ounces of milk when the stomach will hold conveniently only half that quantity. One of two things must then take place—either the child will vomit a portion of the milk or the stomach will become abnormally distended. Such habitual stretching of the muscle fibres will soon cause them to lose their power of contraction. After a time the organ remains large, requiring an excessive amount of food to fill it, otherwise the sense of something lacking is very speedily noted by the child. Under such circumstances, he cries from a feeling of hunger, or rather a feeling of emptiness, even when the stomach has already received what would be a sufficient amount of food for a normal stomach. If he then receives the extra food he craves, it remains for a long time in the stomach, because that organ cannot digest it or pass it into the small intestines in the time usually required for normal digestion. The acid gastric juice coagulates the casein into hard curds, which pass into the bowels almost unchanged, causing constipation. For this reason many children do not thrive on artificial food; they are literally starving in the midst of plenty.

Vomiting is not a disease but a symptom. In true vomiting there are nausea, coldness of the skin, and clammy sweat, usually more pronounced about the head. This may be due to an effort to expel the undigested food from the stomach, or it may be an indication of the onset of some acute disease. Vomiting, further, may indicate acute intestinal obstruction, or the presence of certain affections of the brain or nervous system. It may be simply reflex, or the result of habit. If from nausea, the act of vomiting is followed by relief; if persistent, it may be the result of some grave lesion.

Special attention should be paid to the character of the material vomited, as it is of great diagnostic value. In ordinary cases nothing but the contents of the stomach, consisting principally of undigested food, will be thrown up. If the trouble be deeper seated, the ejection



may contain blood, bile, or fecal matter; the latter is an indication of serious intestinal obstruction. When the ejected material has the appearance of coffee grounds, it is an evidence of blood in the stomach.

No food should be given for about six hours. Complete rest of the stomach is necessary in every case. Ice water may be sipped, or small pieces of ice may be sucked to allay thirst.

### *Constipation and Diarrhea*

During the first week, an infant's bowels should move three or four times daily, gradually diminishing to once or twice a day by the time the child is a month old. The bowels at birth are loaded with meconium, which is thick and black. The laxative properties of the colostrum (the first secretion of the mother's breasts) speedily relieves the bowels of this mass, as shown by the gradual change to the normal, healthy stool, which is soft, yellow, and without lumps. The normal stool of the infant under six months of age is about the consistency of thick molasses, of a golden yellow color, and has a sour odor. After that age and until the end of the second year, the color gradually changes to a yellowish brown, with a slightly fecal odor and a change to a mush-like consistency. As more solid food is fed to the child, the stools approach the color and character of adult feces.

In infants, the character of the stool forms a better index of intestinal disturbance than in adults. The diet being milk only, the stool is not discolored by a variety of foods, as in the case of an adult. If, therefore, discoloration take place, the cause must be looked for outside the diet. Medicines such as iron or bismuth will turn the stool dark, or the dark color may be due to blood. If the stools are white, liquid, chalky, and lumpy, it is an indication that the food is improperly digested. If they are green in color or frothy, it denotes fermentation; if very yellow or brown and foul-smelling, putrefaction has taken place. When the feces are streaked with blood, it is usually indicative of internal hemorrhoids, or dysentery.

The chief symptoms which indicate intestinal disturbance, are constipation and diarrhea.

CONSTIPATION may be said to be present when the fecal mass is hard, dry, and difficult to pass. Diminished secretion of bile is productive of constipation, the stools being hard, dry and chalky. Gastric indigestion also produces a similar result. Another cause is irregularity of habit. Unless a regular time for going to stool is established very early in childhood, the habit of neglecting this very important duty will increase as the child grows older, until it has become so firmly fixed that it will be difficult to educate the bowel to regularity. By forming a proper habit in

infancy, this evil may be almost entirely avoided. It may be formed by regular hours of feeding, in the first instance, and by placing the child upon a small vessel held between the knees of the nurse, in the second instance. This latter procedure, however, has little effect before the child is six months old.

Relief of the impacted bowel by means other than diet and hygiene is only temporary at best. Suppositories and enemata are often of practical value and many times superior to laxatives or purgatives. The great advantage of these local measures is the immediate result obtained, and the rest given to the stomach and the intestines by the withholding of drugs which always derange the secretions of these organs. The action of these remedies is due to the stimulating effect they exercise on the bowel, inducing peristaltic movement which expels the contents. As they are palliative only, having no tendency to promote regular action, they should only be used as temporary measures.

Suppositories made of tallow or Castile soap should be about one and a half to two inches long, with a short point and of sufficient size to enable their insertion without injury. In some cases the blandness of the Castile soap is not sufficient in its stimulating power to accomplish the desired results. Ordinary bar or laundry soap may be used in such cases, the excessive amount of caustic having a good stimulating effect, but for most babies it is too strong and should not be used frequently. Cocoa butter suppositories, or soap shavings pressed into a conical shape, will act well in some cases, especially in older children. Glycerine suppositories are now much used for this purpose and are the best yet devised, but should not be used too often on account of their activity.

An enema acts mechanically by distending the bowel with fluid which stimulates the peristaltic action. By dissolving or softening the impacted feces it allows the expulsion of the mass to take place with greater ease. When the mass is very hard or the bowel unusually sluggish, some stimulating substance must be added. Glycerine, in the proportion of a teaspoonful to the pint of fluid, has a very beneficial effect. The habitual use of injections, however, will have the same effect as continued dosing, the bowels refusing to move unless one or the other is given.

As constipation is a disease of digestion due chiefly to errors in diet, it naturally follows that the final cure lies not in medicine but in the correction of the diet. The dietetic treatment resolves itself into two natural subdivisions, namely, that for infancy, and that for childhood. As milk is the only food for the infant, the question of a change in diet is simply one of modification of the constituents. Infants nursing at the breast are rarely constipated if the mother's milk is of a good quality. When constipation does exist, it is a fair assumption that the milk of the mother does not contain the food elements either in the proper propor-

tions or in sufficient amount. When the dietetic and tonic treatment of the mother fails to produce a richer milk, and the constipation still continues to exist, a small amount of cream may be given to the infant after nursing. The amount of cream will depend upon the degree of the constipation; in mild cases half a teaspoonful will prove adequate, but in obstinate cases at least two teaspoonfuls will be necessary.

In bottle-fed babies, constipation is an evidence, as a rule, that the milk is too rich in proteids or casein and too poor in fats. Therefore the aim should be to secure a larger percentage of fats than casein, it being an error to feed milk in which these constituents are too nearly equal, and the milk too concentrated.

In those children where the constipation is somewhat obstinate, the milk may be diluted with oatmeal water instead of plain water. Never give raw oatmeal water, as it seems to aggravate the trouble instead of aiding it. Barley water, arrow root, corn-starch, or infant food containing starch should be prohibited. Some persons prefer the action of Graham flour, and make a water of this preparation as a diluent.

After the twelfth month, a little fruit may be added to the diet to increase the bulk of the residue and to obtain in a slight degree the laxative fruit acids. Orange juice, baked apple, ripe peach pulp and prune juice are excellent for this purpose. Porridges of oatmeal or Graham meal, thoroughly cooked and served with cream, will be of great service, both for their laxative effect and their nutritive value. Stale bread with butter is also useful in the same manner. Molasses and bread, or the old-fashioned ginger bread, in small quantities, may be given toward the close of the second year. Stewed fruits, such as prunes, or figs deprived of their seeds, are laxative. As the diet increases in variety, a better opportunity for adding laxative and correcting foods presents itself. Poorly nourished children should be given cod-liver oil. Beginning with half a teaspoonful, or even less when the stomach will not tolerate a larger dose, the quantity may be gradually increased till the amount reaches a teaspoonful. Spinach well cooked and mashed may be served with olive oil for those who like it, or with butter. Water should be drunk every morning before breakfast, especially in those cases where the stools are hard and dry. Mush and milk, or mush with a little molasses, is also very well borne and is usually relished by the child.

Massage is often of great value. The abdomen should be manipulated in the evening just before bedtime and in the morning upon awakening. Knead the abdomen as in making bread, but gently, and then rub with the finger-tips in a circular motion going from point to point till the entire walls have been treated. About five minutes should be expended in these manipulations.



Open air exercise is essential to a successful cure, and if the child is too small to take active exercise, he should at least be kept out of doors as much as possible.

Diarrhea is the opposite of constipation, and while it is sometimes the result of the latter, it is more often the effect of the irritation produced by improper food. Bottle-fed babies are the greatest sufferers.

In this condition the kidneys and liver are required to do an extra amount of work in throwing off the poisonous products absorbed from the bowels by the blood, which renders them liable to permanent damage, particularly where there is inherited predisposition to disease of either of these organs. Frequently occurring green stools, especially very thin and foul smelling ones, demand prompt and intelligent treatment, as they are an indication of imperfect digestion. Children suffering with stools of this character are an easy prey to gastro-intestinal inflammations, and the death rate from these causes is very high.

In all cases of diarrhea where the attacks come on suddenly with a rise of temperature, a physician should be summoned at once, as grave results sometimes follow delay. In the meantime place the child in bed, rather than in the lap or in the arms, and keep him as quiet as possible. Do not give paregoric, diarrhea mixtures, cordials, soothing syrups, or similar preparations containing opium. The diet should be light and simple and given every two hours, with water in small quantities between times to quench the thirst. Too much water must not be allowed at a time or too often, as it may provoke vomiting. Albumen, peptonoids, barley and rice water, whey, and, if the child be old enough, a little wine gelatine, may be given. Koumiss and matzoon are usually more easily digested at this time than is plain milk.

## SKIN DISEASES

### *Prickly Heat*

This is an inflammation of the sweat glands occurring commonly in the summer months, although not infrequently in the winter as the result of injudicious methods of clothing. When the child perspires freely and there is no opportunity for evaporation, the impurities, deposited in the form of salts, bring about a redness, and congestion which finally develops into actual inflammation. The skin is covered with fine, red, slightly elevated spots or pimples, something like the eruption of measles, or they contain a little clear watery matter, or both may be present. This eruption is found more frequently in those regions where the skin lies in folds and where the perspiration does not become so readily absorbed by the clothing. They may gradually fade away, or break and form fine, brownish, bran-like scabs.

In treating a case of prickly heat the first thing is to reduce the temperature. If the clothing is excessive (and it usually is) some of it should be laid aside. It is safe to conclude whenever a child perspires freely that it is due to some constitutional trouble and should be investigated.

The itching in this disease is intense and the child is sure to be restless and irritable. To give relief, the parts should be sponged every two or three hours, with equal parts of vinegar and water, or a ten per cent solution of menthol.

When the folds of the skin are involved, such as exist in the arm-pits, neck, or groin, a dusting powder will afford considerable relief. A favorite powder is composed of:—

Oxide of Zinc,  
Powdered Camphor,  
Rice Starch. Each one-half ounce.

Another powder in common use is:—

Boric acid,  
Starch. Equal parts.

#### *Tooth Rash*

This is an eruption occurring any time before the first teeth make their appearance; hence the name. It has no connection with teething, for it occurs during the first two or three weeks of life, when it is known as "red gum." Digestive disturbance is the cause of the rash, and as such disturbance is frequent in teething children, the teeth have erroneously been assigned as the cause.

Small red papules, few in number, make their appearance on the face, neck, and shoulders. An itching and burning sensation is the only discomfort they produce. It sometimes causes anxiety on the part of the parent, who supposes it to be some form of infectious disease. This is all the more liable to be the case if any form of epidemic, such as measles, scarlet fever, or chicken pox is known to be in the vicinity.

A correction of the digestion and a soothing ointment, such as lanoline or cold cream, will suffice to give relief.

#### *Hives*

Hives, or urticaria, is a common disorder of childhood, found less frequently in adult life. It is characterized by intense itching, and the presence of large flat elevations called wheals, which appear with startling suddenness and disappear with a like rapidity. The wheals are generally pale white, forming a marked contrast to the red ring, or

aureola, about them. These eruptions change to pink or red and then disappear in a few minutes, leaving no trace of their existence.

In some cases the eruption is composed of a large number of small red elevations from one-sixteenth to one-eighth of an inch in diameter, on a patch of red skin. Again, the white wheals sometimes appear so close together that they run one into another, forming a large, elevated, fantastic figure.

As a rule, the disease is of short duration, coming on at night when the child is undressed, and warm in bed; the first symptom is the itching, and an examination then discloses the eruption which was unnoticed before. The wheals appear and disappear quite rapidly, and the disorder may last only a few hours, or a day or two, or it may become chronic, when there will be a succession of crops of wheals, the cause not having been removed.

Other symptoms may accompany the outbreak, giving evidence of some disorder of the general health, but the most usual cause is a disturbance of digestion. Sea food, crabs, fresh fish, oysters and clams, perhaps, most frequently bring on the disorder; so do some kinds of meat, as lamb, pork, and sausage; also certain fruits and vegetables, as strawberries, tomatoes, nuts and mushrooms, and many other articles of diet. But there can be no set rule as to diet, for what can be eaten with impunity by one person will cause an immediate attack in another. Moreover, food otherwise unobjectionable may be either too great in quantity or unsuitable to the age of the child.

To relieve the itching and burning, either bathing in cold water, to which salt has been added, or in equal parts of water and vinegar, or sponging the surface with a ten per cent solution of menthol, will be found of value.

### *Ringworm*

Ringworm is a contagious parasitic disease of the body or scalp, due to the growth of a vegetable fungus on the skin. It begins at a point and radiates in every direction, forming a complete circular patch, quite regular in outline, something like the circle produced when a stone is thrown into the water. The circle gradually widens and the center becomes clear, while the eruption dries and undergoes a scaling process, which proceeds concentrically from center to circumference.

Children are the most frequent victims of ringworm because of their personal contact in play—in the wearing of one another's garments, the use of the same towel and comb, and through other means whereby the parasite is transferred from one to another.

When a child suffers from ringworm, the disease is likely to recur and to run a more or less chain-like course. In ordinary or circular ring-



worm, as generally known, the treatment by a fungicide is not only simple but satisfactory. After cleansing the parts with soap and water the following ointments may be rubbed in:—

Ammoniated mercury, 20 grains,  
Lard or lanolin, 1 ounce;

or

Sulphite of sodium, 1 dram,  
Cologne water, 1 ounce.

*Directions*—To be applied night and morning.

Ringworm of the scalp differs in no essential from the above, except that the parasite invades the hair follicle and causes the hair shaft to become dry and brittle and to break off just outside of the skin. This causes round patches to form as the disease spreads.

The persistence of this form of ringworm is greater than that on the body, for the reason that the fungi are so deeply imbedded in the roots of the hair that it is difficult to reach them by treatment. The only sure way is to pull out the hair affected. This can be accomplished by the use of tweezers; the operation is tedious and troublesome, but many cases will not respond to other treatment.

Many fungicides are valuable if they could only reach the roots, but sometimes this is impossible. The following well-known formula will be found useful:—

Acid, carbolic, 1 dram,  
Citrine ointment,  $\frac{1}{2}$  ounce,  
Sulphur ointment, 1 ounce.

To be rubbed over the patches twice a day.

In all cases the physician should be consulted, as, otherwise, permanent baldness may result.

### *Stings*

Stings of small insects are caused by the insertion into the skin of a small quantity of a poisonous substance called formic acid. If this acid is applied to the skin in an undiluted state, it will produce redness and a prickling sensation, followed by pain and blistering. The sting is a little barbed tube containing the poison, and acts something like the barb of a fishhook. When plunged into the flesh it is difficult to withdraw; for, in addition to the spreading out of the barbs as the attempt at removal is made, the act of pulling out compresses the tube and injects the poison into the flesh. Instead, the sting should be scraped off with a knife blade; the parts can then be treated with an alkaline bath or covered with wet clay or mud. All acids are neutralized by

alkaline substances; if the parts are bathed in a solution of bicarbonate of soda or ammonia water the irritating acid is thereby changed into a harmless product.

### *Eczema*

Eczema is the most common of all skin diseases, as it is also the most varied. Aside from the disfigurement produced, it is perhaps the most irritating, painful, and troublesome of all skin diseases. No attempt will be made to describe its many forms, as even physicians are at times puzzled to classify a given case. In children a vesicular form is the most frequent under a multitude of common names, such as moist tetter, milk crust and scald head.

There are a few characteristic features common to all cases of eczema; the itching and burning, and in the vesicular variety, an exudation of sticky serous secretion which leaves a yellow stain upon the clothing. Another form found in children, although by no means confined to this period of life, is the fissured eczema, or chap. When the disease affects that part of the skin which is flexed or bent upon itself, it causes a fissuring or cracking, as shown in the lips, fingers, and hands. In this form the disease is more prevalent in winter than in summer, and it is never contagious.

One of the frequent causes of eczema is the improper and *too frequent* washing of the skin, insufficient drying, and the use of soaps strong in alkalis, or of powders or lotions which contain irritating substances. It is never due to a humor in the blood, although at times impoverished and impure blood may be coincident with the disease. If the health is poor, the constitution debilitated from any cause whatever, the trouble is always increased.

Regulation of diet is of the first importance; all articles difficult of digestion must be avoided, especially salt meats, pastry, beer, and liquors. Water should be used sparingly, and then only for cleansing purposes. Soap, except pure Castile, does much harm, and if used at all should be completely rinsed from the skin.

When the eruption is clearly due to local causes, no form of internal treatment is necessary, but when the disease is diffuse and the cause not clear, constitutional treatment under the supervision of a physician is indicated.

### *Warts*

Warts are generally nothing more than exaggerated growths of the papillæ of the skin. It is not easy to assign an exciting cause in any given case, unless there be a history of some continuous irritation at the site of the growth. An example is the development of warts from the use of

the thimble, although in older people a callous or corn is more likely to develop. Probably the reason why more warts are found among children is because all the developmental phenomena are more active at this period. Warts, like mushrooms, seem often to be the growth of a night, appearing suddenly, remaining for a time, and then disappearing. This sudden disappearance of the warts is attributed to the virtue of the various charms used as cures. The rubbing of a piece of meat over the growth and then burying it, in the belief that when the meat rots the wart will drop off, is one of the most familiar and widespread of the magic cures.

If let alone, most warts will in time disappear. If it is desired to remove them, scraping out with a thin, sharp knife is the surest method. This leaves a little depression in the skin which will heal rapidly if no dirt is allowed to accumulate in it. Hot water will stop the bleeding. Ordinary lunar caustic (nitrate of silver) will prove efficacious in most cases of warts. The following preparation of salicylic acid is almost always a sure cure: —

Acid, salicylic (gr. X.), 1 dram,  
Tincture of Indian hemp, 1 dram,  
Collodion, 1 dram.

Apply to the wart every night and morning.

The liquid should be applied with a toothpick or match stem, but care should be taken that the fluid does not touch the surrounding skin, as it will form a painful blister. To prevent this, the surrounding area may be covered with vaseline. A word of caution must be given as to the above solution. Unless the bottle is quickly and securely corked each time after using, the ether in the collodion will evaporate and the preparation will become a solid jelly-like mass which cannot be used. Fuming nitric acid, or a fifty per cent solution of chromic acid, will successfully remove warts, but in applying the same, precaution must be observed as in the above.

#### *Chilblains and Frostbites*

A chilblain is a superficial inflammation of the skin and underlying tissue, the result of exposure to cold. As the circulation of the blood is more feeble the further the vessels are removed from the central source of power, the heart, it follows that the hands and feet have a much less energetic circulation than other parts of the body. Any cause, therefore, that will impede or cut off the blood supply in such localities will cause the death of the tissues of those parts. When the feet are exposed to cold, the circulation will be slowed; the delicate nerves are unable to act, and tissue change is arrested. When the parts are only slightly affected the condition is termed chilblain; when they are severely



affected it is called frostbite. The condition may vary from a slight temporary deadening, to complete death of the part, with sloughing of the tissues, known as gangrene.

Chilblains may occur on the hands, feet, nose, and cheek, although the first two are the more usual sites. In mild cases there is tenderness, slight redness and swelling, and itching. Sometimes the swelling is quite marked and bluish. The itching and burning are most intense when the parts become warm. When blisters form and rupture they are known as broken chilblains, and this is often the beginning of serious mischief. Many cases of bunion are neglected chilblains of childhood, which have been irritated by imperfectly fitting shoes. An inflammation has developed and causes permanent changes in the parts.

Chilblains are more likely to occur in children of weak, anæmic, debilitated constitutions. In such conditions the circulation is poor throughout the body, and the child cannot withstand the same degree of cold as would merely produce a healthy glow in a more robust one. Tight shoes and stockings constrict the parts and impede the circulation. An adult knows how much colder a pair of new shoes renders the feet than does an old and comfortable pair. Children have less resisting power than grown persons, and if the stockings are wet, the moisture, being a good conductor of heat, will carry off the warmth of the parts. Persons with a tendency to foot-sweat are also frequent sufferers from chilblains, for the reasons just stated.

If the child's general health is poor, tonics and other constitutional treatment are necessary. If the feet perspire, warm, dry stockings should be put on just before going out and changed on coming in, precaution first being taken to rub the feet briskly. Such children should not be allowed to remain out long at a time. Warm woolen stockings and comfortable, broad shoes must be worn. When the chilblain first makes its appearance it should be rubbed in snow; if that is not obtainable, the foot should be plunged into ice water, and then be gently massaged with flannel, but not too briskly as it may rub off the skin and produce ulcers.

To allay itching, the parts may be bathed in vinegar and water. Alum water and camphorated oil are good to harden the surface of the skin and to make it more resistant to cold. The painting of the parts with tincture of iodine or tincture of iron is efficacious. Under no circumstances must the child be allowed to go near the fire. It is a common practice of children, and even of grown people, to dry their wet shoes at a fire. This is laying a foundation for chilblains and should be avoided.

#### *Frostbite*

The ears, tip of nose, lips, cheeks, fingers and toes, being most exposed to cold, are the chief sites of frostbite, which may, for practical

reasons, be considered as a severe form of chilblain. A red nose, changing to blue, then white, is characteristic of frostbite. The sharp tingling of cold gives way to numbness, and if not treated, the part shrivels up and decomposes, turning black. When there is danger of frostbites, it is better to protect the exposed parts with two layers of material equal in thickness to one, as the air between is a good non-conductor. Instead of a single pair of heavy stockings, two pairs of lighter weight should be worn.

The same course of treatment is indicated as in chilblains. Many of the ulcers developing from this source can be prevented if the proper treatment is instituted promptly.

#### *Fever Blisters, or Cold Sores*

Fever blisters, herpes, or cold sores generally form on the lips where the mucous membrane and the skin meet. The corners of the mouth are favorite sites of these disagreeable and painful lesions. Any part of the body may be affected with them. It is generally supposed that the deterioration of the nervous system has a marked influence upon their formation. Certain acute febrile diseases which show marked nervous symptoms always present some form of herpes as one of the characteristic phases of the ailment. When found upon the body they usually follow the course of one of the intercostal muscles, crossing half-way round the body, and are then called shingles. An old superstition declares that when the ends of the eruption meet after encircling the body the individual will die. The vesicles ordinarily form on the lips and extend to the nose, the cheek, the forehead, and the ear. When no definite symptoms of cold are found they are called fever blisters. If the vesicles are formed in the mouth they soon lose their top and develop into ulcerous patches called canker-sores. Indigestion is the most frequent cause of this form of herpes.

The fever blister is a self-limited disease lasting from eight to fourteen days. No abortive treatment will prove of value; the only course being to relieve the disagreeable symptoms. The relief of the irritation and tension can best be accomplished by some protective dressing such as vaseline, cold cream, or other ointment. Painting with collodion is the best protective dressing, and court-plaster comes next in efficacy. General systemic conditions must of course be improved and the source of irritation removed.

#### *Boils*

There is no essential difference between a pimple, a boil, and a carbuncle, except as to size and extent of tissue involved. A pimple is an

inflammation of a hair follicle, without much involvement of the adjacent tissue; the amount of pus formed is small and no scar is left. Boils involve the deeper tissues, which become hard, red, swollen, and painful, and later suppurate, discharging a yellowish, tenacious mass called a core. Carbuncles may, for practical purposes, be considered as a number of severe boils, which coalesce into one, forming a large cavity filled with dead tissue and virulent pus. The danger of carbuncle is from the rapid absorption of the pus, tending to produce a form of blood poisoning which, if permitted to continue, may prove fatal.

Boils are painful and tender; the underlying tissue involved being out of all proportion to the size of the lesion. As they occur most frequently on such parts of the body as are in constant motion, they interfere with the free use of those parts, and cause a stiffness which is very characteristic of the disease. As the inflammatory process continues, intense throbbing is felt, until the formation of pus is far enough advanced to lessen the tension of the skin. It soon becomes soft, and "points"; shortly after there is a discharge of pus, succeeded by the expulsion of the "core" and then the reparative process begins. When the inflammation subsides before suppuration takes place, it is called a "blind boil."

Certain seasons of the year are thought to increase the tendency of certain individuals to the development of boils; but the change of habits, occupation, and diet, with poor hygiene, is more likely to be the cause.

It is usual to apply poultices to boils to "bring them to a head," but the modern treatment is to make an early incision in order to let out the congested, germ-laden blood, and then to wash the parts with some antiseptic fluid. Diluted peroxide of hydrogen is perhaps the best for this purpose. Some prefer the application of an ointment of acid salicylic, composed of

Acid salicylic, 48 grains,  
Lard, 1 ounce.

*Directions* — Mix well and apply night and morning on a piece of plaster.

The boil may be aborted if the hair growing in the center of the lesion be pulled out. To allay the pain from tension it is well to apply four narrow strips of adhesive plaster in the form of a hollow square about the boil, as near to the center as possible, leaving only room enough for the point of the boil to protrude.

### *Moles*

Moles may occur upon any part of the body, but are more common upon the face and trunk. The large, hairy moles are congenital; while the smaller are both congenital and acquired.



Whenever possible, the growth should be removed by an experienced surgeon. The smaller ones can be removed by application of nitric acid, glacial acetic acid, or caustic potash, but, as these are poisonous, they should never be used in domestic practice except under specific directions of the physician. Hair moles are best treated by electricity, which is applied with needles inserted into the hair follicles.

### *Shingles*

The peculiarity of shingles is the intense, throbbing neuralgic pain which accompanies the eruption of the vesicles and often precedes it by several days. The disease is often mistaken for neuralgia, rheumatism, pain in the lung, or a pain or ache accompanying an incipient cold, and is generally treated as such. The pain is entirely disproportionate to the amount of eruption, and is often so severe as to make movement of any kind impracticable.

The eruption occurs as a minute pin-head cluster of vesicles which, from being entirely distinct in the beginning, are crowded together and then coalesce into patches of irregular form. This continues from four to six days, when the height of the eruption is reached. After remaining for several days at this point, the vesicles shrivel up, forming brown scabs, but they never break and run as in eczema. The eruption occurs in various portions of the body, as the arm, head, or face, but the usual site is the intercostal region, where it follows closely the course of the nerves.

Shingles rarely occurs twice in the same person, although in a few neurotic individuals it may recur year after year. The neuralgic pains and the burning sensation of the eruption are about the only points to be treated. Belladonna plasters, or an ointment of belladonna and opium may be used over the seat of the eruption. Tincture of iodine painted over the parts affords considerable relief.

### *Birthmarks*

Birthmarks are found on children at their birth. They may be of unusual size, shape, or color, or they may be almost imperceptible. Whether these marks are due to prenatal influences or are the result of heredity cannot be successfully proved. The only positive thing that can be asserted is that they are due to imperfect development. There seems to be, however, a weight of evidence against a belief in maternal impression as a cause of their foundation, and a growing belief that the only effect a mother can exert on her unborn child is one which affects its organic constitution through the quality and quantity of its nutrition.

These blemishes are called by the general name of *nævi*. They are superficial and vascular. Some of them are colored and elevated—the so-called mole. The latter forms the most common variety. The vascular *nævus* is formed by the blood dilating the small superficial vessels of the skin, particularly about the face and neck, where they form the well-known “spider marks,” and “port-wine marks.”

As a rule birthmarks as above described are of no special significance, causing no trouble other than the disfigurement. If they are so situated as to become subjected to irritation or injury, they may bleed and become sore. If the mark is in a locality where it will be hidden by the clothing, it is better to attempt no treatment. If it is on the face or other part of the body where it can be seen, or if it becomes inflamed or troublesome, it should be removed. It is a mistake to suppose that surgical interference of a mole will cause the development of cancer or other malignant growth. On the contrary, it is the proper procedure to insure against the possibility of the development of dangerous growths; for, while the child is young, the tumor must of necessity be small, and its removal will be attended with less danger, loss of tissue, or disfigurement. Then, too, the normal growth of the adjacent tissue will have a tendency to cover up the scar. Only a skilled surgeon can remove these blemishes, either with the knife or by electrolysis. By electrolysis is understood the removal by means of an electric current, applied by the use of a sharp needle inserted into the *nævus*. This is attended with but little pain and no danger, but it requires skill and patience.

Some of the smaller birthmarks entirely disappear as childhood advances, and need, therefore, no attention in the beginning. In the vascular variety the capillaries are weak and distended, having no power to react. The appearance of the skin is one of superficial redness, simulating a blush. When moderately large areas are involved about the forehead, chin, or side of the face, no treatment, either surgical or otherwise, should be attempted, for any interference, to be at all effective, is almost sure to leave a scar. If this variety appears upon an extremity or any place where pressure can safely be applied, it will often prove efficacious to wrap elastic bandages around the part and preserve a continuous and uniform pressure for several months, or until the vessel walls have regained sufficient tone to contract properly and drive out the blood.

#### CONTAGIOUS DISEASES

##### *Chicken-pox or Varicella*

This is an acute, contagious, febrile disease, accompanied by a vesicular eruption of slightly elevated rose-spots numbering from twenty to two hundred. The vesicles become filled with a watery fluid, within

twenty-four hours after their first appearance. The disease has no premonitory symptoms by which a diagnosis can be made, and when the eruption appears, it runs a rapid course.

A severe case of varicella may be confounded with a mild case of smallpox. There is this difference, however; the watery fluid in the vesicles of chicken-pox is never changed into a yellowish, purulent matter, as in smallpox; nor is there the characteristic noxious odor of the latter disease. Smallpox has a preliminary stage of pain in the loins, chills, vomiting and fever. When the eruption occurs, the temperature perceptibly drops. In varicella there is no fever until after the eruption takes place; in the latter the eruption is complete on the third day, and in smallpox on the ninth day. Varicella runs its course in six or seven days; while smallpox takes fifteen or twenty days.

The treatment of varicella is simply rest in bed, a light, non-stimulating diet, cool drink, and cleanliness.

### *Measles*

This is an infectious disease preceded by catarrhal symptoms of the head, and accompanied by a rash similar to that found in scarlet fever. The contagion is carried by fomites; *i. e.*, the various articles of clothing, and no susceptible person can be exposed to the infection without risk of taking the disease. The symptoms are first premonitory, as just stated above, resembling those of an incipient cold. This condition is observed ten to fourteen days after exposure, accompanied by fever of about 103 degrees F.; three or four days later an eruption appears, first on the face, then on the neck and breast, and finally over the whole body. The eruption consists of small pimples or raised spots close together, but not coalescing as in scarlet fever. When the hand is pressed over the skin the eruption feels rough, and when the finger-nail is drawn through a thickly spotted area, the white streak produced quickly disappears. The thicker and more general the eruption, the better, for by this means the impurities of the blood are eliminated. Three or four days later the fever declines and the eruption begins to disappear, its disappearing being followed by scaling of the skin. This stage lasts several days, and the epidermis is cast off in little bran-like particles. The contagious period lasts until the scaling is complete, and it is a safe rule to keep the patient isolated even a week later.

The *sequelæ* are more to be dreaded than the disease itself. Unless precaution is observed, there is danger of bronchitis, pneumonia, glandular swellings, or some chronic disease to which the patient is predis-



posed. This is particularly true in the case of children of weakened constitutions, or those afflicted with certain *diathesis*, such as scrofula and tuberculosis. What may be termed a mild case of measles, with scanty eruptions and but little fever, may pass into a grave form of disease because of neglect, due to the slight importance attached to the symptoms.

The treatment in all cases from the very beginning should be, first, isolation; a darkened room to protect the eyes; cold sponge baths and a liquid diet. Second, when the fever abates and the eruption dries, a little solid food, such as fish, eggs, and the cereals, may be allowed and the room be a little less darkened; but isolation should be enforced until the scaling process is over. Sometimes a diarrhea supervenes as the rash declines, but it should not be checked unless it becomes excessive, as it is more likely to prove beneficial than otherwise.

#### *Scarlet Fever*

Scarlet fever, like measles, is an infectious disease. It is accompanied by a scarlet rash, sore throat, and depression, both physical and mental. Disturbances, varying in different individuals, will exist in the mucous membrane of the stomach and bowels, in the kidneys, the circulation and the nervous system. The incubation period is from twenty-four hours to six days.

The first symptoms are chills followed by high fever,—104 to 106 degrees F.,—inflamed and even ulcerated throat; thirst; rapid pulse; nausea and vomiting; frontal headache and, possibly, delirium. In about forty-eight hours the rose-red rash appears, first on the breast, gradually extending to the neck, face, trunk and extremities. It consists of innumerable red spots, smooth to the touch, and sometimes running together. In appearance the rash has been aptly compared to a boiled lobster shell. The finger-nail drawn through one of these patches leaves a white streak which remains a full half minute or so. The tongue is coated brown at first, with red tip and edges; afterward the coating peels off and it is left all red and beef-like. About the fifth day the efflorescence begins to decline, and entirely disappears about the eighth or ninth day. The cuticle subsequently exfoliates, but this process varies in duration. From the face and trunk it takes place in the form of scurf; from the hands and feet in the form of large flakes.

The treatment includes isolation, inhalation of steam, frequent sponging with water and alcohol; a wet compress to the throat; and a liquid diet—cold water, gum water, rice water, lemonade, milk, and small pieces of ice. Upon the decline of the fever the following food may be permitted: toast, gruel, grapes, strawberries, peaches, roast apples. Disin-

fectants such as Platt's Chlorides should be used freely throughout the course of the disease. A sheet dipped in the solution and wrung out should be placed in front of each door, and clothes saturated in the same way should be hung around on the furniture and gas fixtures. As little furniture as possible should be left in the room. All changes of bed-clothes and patient's nightdresses should be dipped in a solution of Platt's Chlorides or carbolic acid — (proportion of a tablespoonful to a quart of water) — before leaving the apartment. When the patient has passed the peeling stage, he should be thoroughly rubbed with alcohol, followed by a weak solution of carbolic acid. He may then be removed to another room, while the sick chamber is being fumigated and scoured, including all the furniture. The woodwork of the room should then be freshly painted and the walls papered.

### *Mumps*

This disease is an acute, specific infection, characterized by a swelling of the parotid and salivary glands. It is extremely contagious, being transmitted from one person to another by the breath or secretions of the mouth. It is endemic in all countries, and frequently occurs as an epidemic. It is more often found in children from five to fifteen years of age, being rare before the first year and seldom occurring in adults. The spring and autumn are the favorite seasons for its development, probably because of the fact that these two seasons are conducive to carelessness and exposure on the part of the child. The period of infection lasts from two to three weeks, during which time the patient must be isolated.

As this is a self-limited disease, no special treatment is indicated other than to guard against the possibility of complications, and to meet the indications as they arise. If the swollen glands are very painful they should be poulticed with flaxseed. Liquid food is the only kind that can be taken in severe cases, on account of the extreme pain occasioned by solids.

### *Pertussis or Whooping Cough*

This is a specific, contagious disease of childhood, found more frequently in children of more than six months and less than five years of age, although no age is exempt. While one attack usually affords immunity, second attacks have been known to occur. As a rule, the younger the child the more fatal the disease. The greater number of deaths is, however, attributable not so much to the disease itself as to the *sequelæ*. It seems to start up certain latent conditions, the presence of which may

or may not have been suspected. As a result, such complications as pneumonia, convulsions, tuberculosis, or digestive derangements may develop.

Whooping cough is extremely infectious, and is communicated with great facility from one child to another. It may even be conveyed by the wearing apparel, toys, or other objects used by the infected one. All such children should be isolated, and not permitted to mingle with others, nor allowed upon the cars, in the public parks, or kindred places.

The question is often asked, "When is whooping cough catching?" In general terms it may be stated that the contagious state lasts for at least three months and, sometimes, longer. It is communicable from the beginning of the catarrhal stage, and lasts as long as there is any cough. The beginning of pertussis is so gradual that it is almost impossible to say just when it does begin. Most authorities agree that the invasive stage corresponds very closely to that of measles, which is from seven to fourteen days. If a child has been exposed to the source of infection and fails to develop the disease before the end of three weeks, it is fair to assume that, in all probability, he has escaped an attack.

Usually the attack begins with a slight cold in the head, and a cough, which is more troublesome at night, and one that the usual remedies fail to relieve. At the expiration of a few days the cough appears to become more or less periodical. During coughing spells the face is suffused, and there is difficulty in breathing, which is usually, though not always, followed by vomiting. This may be termed the catarrhal stage. While in some children the characteristic whoop may be noted from the beginning, it is usually about two weeks before it appears, thus ushering in the spasmodic stage. The paroxysms now become longer and more severe. The whoop is caused by the short cough frequently repeated without taking a breath, and it is the long-drawn inspiration at the conclusion which gives the characteristic whoop. In some cases of a mild type it sometimes happens that no whooping takes place, yet the paroxysmal character of the cough indicates the nature. When the disease is fully established, a tough, tenacious mucus more or less streaked with blood is expectorated after coughing.

The spasmodic stage is usually about one month in duration. Gradually the severity of the attack abates; the whoop ceases and the cough bears a close resemblance to that of ordinary bronchitis. This stage lasts from three to four weeks.

One of the peculiarities attending this disease is the habit which so often occurs in whooping cough long after the attack has ceased. In such cases the characteristic whoop returns after a period of intermission in which no cough is manifest. This must not be regarded as a return of the disease but simply as the cough habit which the disease fosters.



Cough mixtures and cough syrups have no effect upon the paroxysms or the duration of the disease, and only make the stomach more irritable. Inhalations of steam or of vaporized carbolic acid or creosote are sometimes beneficial by clearing the nose and pharynx of mucus, thus permitting freer breathing.

### *Diphtheria*

Diphtheria is a disease best known by the grayish-white membrane which it causes, and is most commonly found in the throat. It is liable to be conveyed by the patient's breath, which passes over the membranes and becomes impregnated with germs. The virus adheres to the clothing, furniture, and all objects which the patient touches. Domestic animals have what corresponds to this disease, and it seems probable that they may convey it to man. After exposure, the disease may develop in from one to eight days. No sure means of warding off this attack is now known.

The attack is ushered in with fever, sore throat, loss of appetite, and general *malaise*. The local lesions usually manifest themselves first upon the tonsils in the form of patches or follicles, giving it the appearance of an ordinary case of tonsillitis. The tonsils may be only slightly swollen, or they may be greatly enlarged. With the development of the membrane, the patches coalesce and extend into the pharynx, over the uvula, and, unlike the membrane found in ordinary tonsillitis, are tough and tenacious; extending into the mucous membrane so that, when detached, it leaves a raw, bleeding surface behind.

No treatment will be given here, because the gravity of the situation is such that no person should for a moment think of attempting to treat a case without the assistance of a physician. During an epidemic, every case of sore throat should be looked upon with suspicion, the patient should be isolated and the energetic use of antiseptic sprays or gargles be at once instituted, pending the arrival of a physician. All cloths used to receive the expectorations should be burned at once. Where there is depression of breathing the following vapor may be used: Acid carbolic, 1 ounce; oil of eucalyptus, 1 ounce; turpentine, 8 ounces; two tablespoonfuls to a quart of water placed in a shallow pan which is kept simmering over a slow fire. In nursing infants the milk must be obtained by a breast pump and fed to the child, for on no account should the child be placed to the breast.

## SELF-PRESERVATION AND FIRST AID TO THE INJURED

THE suggestion that another branch of study should be added to the public school curriculum will be received at first as absurd, in view of the prevalent feeling that this curriculum already contains more branches than any one "small head" can find room for. But our educational system is a growing thing, and far indeed from its complete form; in the process of development it may happen that we shall discover some good and necessary branches of knowledge which may be added to it, as well as many that are useless or of secondary worth which should be discarded.

It is strange, considering all the effort made by modern thinkers to follow Nature's plan with the child, that the care with which she teaches and enforces her first law—self-preservation—has been overlooked. She begins her lessons with the first breath, working in the beginning through instinct, but as the will and mental powers develop, she gradually withdraws the intuition and leaves the individual to preserve his body alive by knowledge and experience. Is it not a duty devolving upon parents who have learned this lesson themselves to train their children in it? Surely there is no question of the value of the knowledge. It would almost seem reasonable to claim that the failure to give each new generation proper training in self-preservation has deprived the whole race of a great advantage. When we compare the number of instincts which protect the child through his sense organs with the ignorance of the laws of health and the proper conduct in accidents and emergencies of the average adult, it is plain that the child has the germs of much greater power of self-preservation than the adult develops.

The charming animal stories of Ernest Seton-Thompson and others show us how carefully the brute mother drills her young in all the knowledge that will help them to avoid and escape danger and to preserve life. It is because this has been faithfully done in each generation that the wild animals are able to withstand the destruction of their natural conditions and to escape the snares and encroachments of man. And though we human mothers may scorn our poor brute sisters, we must yet recognize their motherhood. Their children have but one nature, and are doomed to perish, yet with all their powers, and at any cost, they train and broaden and strengthen that one gift and benefit all who come after them. Our children have the threefold endowment of body, mind, and spirit, and we have an obligation to develop each part of it to the fullest; and though the physical nature has sometimes been

ranked below the others, certain it is that mind and soul depend upon it. It is true that much of the early home-training relates entirely to the preservation of the body; we always teach babies that fire will burn, knives cut, falls hurt, etc., but there is little thought as to how this should be done, little effort to systematize the instruction, and less to continue it as the children grow older. Many of us make the mistake of using fear to impress these facts upon the minds of young children; we teach them to avoid dangers in order to escape pain, and we make no effort to show them that the real injury is to the tissues or bones, that pain is merely a symptom, a warning that we must take better care of the body intrusted to us.

We make too little of the gift of life; it is every being's first and greatest wealth, and we should be able to free ourselves from the idea that the body and its necessities should be treated with contumely—which has come down to us from old and savage religious rites.

In all our efforts to teach self-preservation, let us be careful to eliminate fear of pain as a means of impressing children. The real evil lies in the injury to that body which every one of us should strive to keep in the best possible condition, not because we shall suffer pain if we do not, but because it is the home of the mind and soul, and can neither develop freely nor do its perfect work in an illy-cared-for body.

Little children show a natural love for their own members, which should be utilized in teaching them how to preserve and care for them. John, being a normal boy, wants to swim, to hunt, to ride, to drive, to brave the storm and the snow; to sail a boat, to experiment with chemicals, with fire, and steam, and electricity.

It is rare indeed that a boy is not forbidden these pleasures, and much rarer that he does not take them in spite of prohibition. And it is by no means an uncommon event for boys to be drowned, shot, thrown, made ill by exposure, maimed, or burned, or otherwise injured in the pursuit of them. It is because we understand the dangers that lurk in all these things that we forbid them, but there are few things more difficult than to convince the average boy that they really exist, or that he is liable to be their victim. If we could do this there would be a wonderful lessening of disobedience and accidents.

If all boys were trained in self-preservation and the proper course in case of accident, would not the training convince them of the existence of danger? Take, for instance, the method of resuscitating the drowning,—suppose school children were given a certain amount of drill in it, would not boys see more clearly the dangers of water and instinctively use more caution?

We have, heretofore, taught self-preservation through fear alone. Now fear is a low and despicable motive for any action; would not



knowledge be a better one? To tell a boy that he may not go in swimming because he may drown is seldom of any use. In the first place, he cannot believe in the danger; the knowledge that you have gotten by accumulated experiences cannot take hold of his mind; there is no way for it to impress him unless he have the implicit faith in what other people believe that is about as rare as it is dangerous. But the frequent drill at home or at school in prevention and resuscitation impresses him with the real existence of danger, not as a vague fear, but as one of the common every-day facts of life, which he accepts sensibly and provides for.

In many public schools, children are already given instruction in the injurious effects of alcohol upon the body. They usually show a great interest in this study, and there is no indication that it produces any morbid or hypochondriac effects.

It frequently happens in river towns, where the boys spend much of their vacation leisure in the water, that a plainly preventable death occurs through their ignorance. In a typical case, five boys, from ten to fourteen years of age, were swimming in the Ohio River. Probably every boy of them had "run away," and had a more or less uneasy conscience. Charlie, who was one of the older boys, was seized with "cramps," cried out for help, and sank instantly. He was in the midst of the party and not far from shore; within call were a house-boat and a number of teamsters hauling gravel. At Charlie's cry all of the other boys made for the shore in a panic; each snatched his clothing, hid himself in the willows until he was dressed, then ran away from the river as fast as he could. Perhaps in all their minds there was no other thought than the fear of being caught near it. Twenty minutes later they came together in a near-by park and discussed the accident in whispers. Reason dawned in them at last, and they rushed down the levee and told the teamsters that Charlie was drowned. The body was easily found, but by this time half an hour or more had passed, and life could not be restored. Had Charlie's companions been instructed in the methods of restoring the drowned, they might have been cool enough to rescue him, and to call help; and, failing to get it, would have been capable themselves of resuscitating him, for, as in many other unexplored branches of knowledge, the first aid to the injured is simple enough to be understood and practised even by children.

Broken arms, sprained ankles, and cuts that cause dangerous bleeding, are common to boys. They usually occur when there are no grown people about, and nine times in ten, serious consequences are entirely due to the ignorance or mishandling of boy-companions. A boy falling from a tree and breaking his arm may have at first only what is known as a simple fracture, that is the bone alone is broken,

but this is not visible on the outside, the child is helped home by his playmates, and in doing so the jagged edges of the bone are driven into and lacerate the surrounding tissues, and the simple fracture becomes compound, much more painful and difficult to heal.

But suppose this same party of boys to have had some instruction in fractures, and to have been drilled for just such an emergency. They will lay the injured child flat upon the grass, knowing that a broken limb is a common result of such a fall, and that any movement of one so injured may greatly increase the trouble, and, also, that the break does not always show on the outside, they will first examine their comrade gently to find where he is hurt. If it be found that a limb is broken, they have been taught to cut away the clothing from it, and how to construct temporary splints from two pieces of board, or even of fishing rods or boughs from a tree, padded softly with handkerchiefs or underclothing and bound on each side of the injured limb, so that it may not be jarred in removing him to the nearest house. They will know, too, that wet handkerchiefs laid on the injury will soothe a little, and how to make a stretcher of a board or shutter, or even of boughs. There is a regulation drill for the United States Hospital Corps which might be easily adapted to classes of children, and any American boy or girl will be delighted to drill with stretcher and bandage in imitation of the army they love so well.

It is true that here and there a boy or girl might go through a life of average length without having occasion to use the knowledge thus gained, but such a case would be exceptional. As we do not educate our children for the emergencies of childhood only, but to meet all possible accidents and conditions of an entire life, we could hardly give them too much knowledge of the structure of the body and its requirements, how to preserve it in health, and how to repair injuries. Certain it is that this knowledge is of first importance to mothers, and seems quite as necessary to the proper education of girls as is arithmetic, domestic science, or psychology. In neighborhoods where there are mothers' clubs, it would be easy to give the children this kind of training.

Any physician will generously instruct the mothers what to do in case of accident. This does not mean that the whole art of surgery is to be imparted in a lecture, but that in the many cases of injury it is of value to know just what to do before the surgeon can arrive. The child that has fallen from a tree and broken his arm, or has been bitten by his dog, or has cut an artery or a vein, or has inhaled carbonic acid gas, or has got a button up his nostril, or has eaten rat poison, has seldom any time to lose if he is to be relieved of suffering. In all of these cases there are perfectly simple things to do that will soothe pain, lessen the injury, and in some cases save life, but they must be done instantly,—prior to the com-

ing of the doctor. The adjustment of a bandage about a sprained ankle is a matter simple enough for any child to learn, yet not one which many persons are likely to understand by intuition, but having once seen it properly done by a physician, any mother in any neighborhood could gather the children together and teach them to bandage their dollies or each other, and the knowledge would last.

In many cases of shock from injury, in "sunstroke," or as we call it now, heat prostration, in acute poisoning, in asphyxiation, in severe fright, and any accident which brings long unconsciousness, the artificial respiration is quite as useful as in drowning. Any one who has once seen Sylvester's method could apply it successfully in an emergency. A little book called "Accidents, Emergencies, Illnesses," published gratuitously by The New York Mutual Life Insurance Company, gives the following directions for resuscitating the drowning: As soon as the person is recovered from the water, turn the face and head downward for a moment, thrusting the finger backward in the mouth, pressing the tongue slightly forward in order to remove a small quantity of water or mucus which collects at the base of the tongue, and tends to obstruct the passage of air into the windpipe (trachea). It used to be the practice to hang the patient head downward, or to roll him over a barrel, in order to "expel the water from the lungs," but it has been proven that no water gets into the lungs, hence these practices are useless, and certainly barbarous. Drowned persons die from want of air, therefore to restore the breathing is the first duty. Strip and roll rapidly in dry blankets, lay flat and rub extremities with the hand. Since there are numerous accidents of this kind at places where blankets are not immediately procured, children should be taught to think of all possible substitutes, as the dry coats or skirts of the rescuers.

The tongue of the patient should be pulled forward and held by the tip with a handkerchief, allowed to slip gently backward when the breath is expelled. This holding of the tongue is an extremely delicate and difficult operation in some cases, and probably could often not be done at all by one who has never practised it. The little book quoted remarks that "it is sometimes necessary to thrust a hat pin or needle threaded with coarse thread through the tip to hold it by," since unless it be drawn forward it may shut off the air from the "windpipe."

The mode of producing artificial respiration is as follows: Draw the arms away from the sides of the body and upward so as to meet over the head, which will raise the ribs and expand the chest, creating a vacuum in the lungs and purifying the blood by driving the impure gases out of it, and supplying it with oxygen. Bring the arms down to the sides and make the elbows almost meet over the stomach, thus contracting the walls of the chest and expelling impure air from the lungs. These two



movements cause an act of respiration; they should be made at the rate of about sixteen to the minute — four seconds to each complete movement — and persisted in until breathing takes place naturally, or the surgeon arrives. A little brandy in water — a teaspoonful every minute until five or six are taken — may be given to stimulate; or better, some beef-tea, or hot milk; with these there should be constant effort to warm the body and extremities by hot applications or rubbing. A class of children would take the drill in producing respiration as an interesting physical exercise. If they could have with it some instruction in how drowning produces death, they would probably gain from it a certainty of dangers which they cannot otherwise believe in. This knowledge has nothing whatever to do with fear, but is only such a reasonable view of indisputable facts as every grown person gains by experience. Boys risk drowning because they have had no experience to prove the reality of the danger.

In the same way children should understand the first aid in case of accidental wounds. They should be taught to judge something of the seriousness of such an injury by the color and character of the bleeding which follows; the blood from the capillaries and small vessels is bright in color and comes freely, but soon ceases. Blood from the veins is purple, and flows evenly without force, while arterial blood is bright red, flows in jets or pulsations, and quickly drains away the life force. It is generally possible to tell by these indications the character of the vessels injured. Nature stops the mouths of broken blood vessels with little clots of blood formed round their edges. A sharp instrument makes a clean cut through the blood vessels, and there are no little shreds and projections where clots can gather, hence these wounds bleed most freely. In the case of a small wound (such as a cut finger), elevate the part above the head and press upon the wound firmly with a cloth wet in cold water, for a few minutes. If this is not enough to stop the bleeding, use a piece of ice wrapped in cloth, or water as hot as can be borne. Heat or cold will contract the blood vessels and pressure will obstruct them. In cases of more severe wounds, roll a cloth or handkerchief into a hard wad, wet thoroughly in cold water, and bind closely over the wound; the pressure should suffice to completely stop the bleeding, and may be kept on for several hours.

As arterial bleeding is very fast, quickness is necessary in order to save life. This fact should be impressed upon the minds of children receiving "First Aid to the Injured" drills, and mothers who are themselves making a study of it. This impression made in moments of calmness will be uppermost in the emergency, and, having fixed itself upon the reason, will have its effect in sobering and calming. It would be a most incapable and ungoverned mother, who, having once apprehended the nature and consequences of certain injuries, and learned by

practice how to treat them, would "lose her head" and allow her child to suffer or die while she is indulging in nervousness and fright.

• In cases of arterial hemorrhage from the upper extremities, compress the large artery, along the side of the upper arm. It may be located by the pulsations which are easily felt. The pressure should be applied upon it outward, and slightly backward, against the bone just below the shoulder and armpit. It may be done temporarily by the finger and thumb firmly pressed upon it. In the meantime a piece of stone, a round piece of wood, or even a watch may be tightly tied in a cloth, or a number of knots made in a handkerchief and all tied into a bunch will answer, and laid over the artery right by the fingers, and tied round the arm by the ends of the handkerchief, or by another; tie a smooth stick in the knot, and by twisting it the bandage may be tightened until the bleeding has stopped entirely, — but no tighter. This contrivance is called the Spanish Windlass. If the wound is in the forearm, compress the artery just above the elbow; if high up in the arm it may be necessary to compress the subclavicular artery — under the collar bone — by thrusting the fingers or handle of a large key firmly down behind the collar bone and pressing the artery against the first rib. In the lower extremity, the artery reaches the thigh just where it joins the abdomen and may be felt pulsating about the middle of the groin. It then passes down the inner side of the thigh, gradually turning backward until it can be felt throbbing between the cords under the knee. If the wound is below the knee, the "Spanish Windlass" can be applied under this artery, which is called the popliteal. Where this is difficult to reach, it may be applied on the femoral artery, at the inner side, near the top of the thigh.

In connection with this, both mothers and children should be taught something of the dressing of wounds and the use of antiseptics. In drilling children, they should be required to scrub the hands with a nail brush and soap, before beginning, and should secure as absolute cleanliness as a competent surgeon invariably demands. All this will enlighten them as to the presence of germs in the air, and the mischief these may work, and will be an added incentive toward general cleanliness of person and habits. If this course of instruction is attempted by mothers for the children of a neighborhood, the little book distributed by the New York Mutual Life Insurance Company, and freely quoted here, would prove an excellent text-book.

Another argument in favor of such a course of instruction for school children lies in the probability that it would prove an excellent assistant in preventing and curing secret injurious habits — as well as other unhygienic practices. When a child can look upon his body as a wonderfully planned yet very delicate machine, put into his care, and can get practical ideas of how to care for it, he has a defense

against the temptation of self-indulgence, more active for him than prohibitions or precepts.

The family medicine chest has gone out of fashion, but might be revived in a modernized form to the benefit of most households. A drawer which is easily reached, and which everybody knows where to find, should be kept for the things likely to be needed in emergencies, and none of these should be lacking at any time, fresh ones being supplied as fast as needed. There should be a variety of narrow muslin bandages, torn lengthwise of the cloth, rolled tightly and pinned; a package of absorbent cotton; a quantity of old cloths, linen or muslin, that have been boiled a long time in clean water and smoothly ironed; a small soft sponge that has also been well boiled; a cake of Castile soap; a package of baking soda; and a box of beef-extract—the soda as an antidote to acid poisons, and the beef for beef-tea, in cases of injury where the strength is rapidly exhausted.

Boric acid is now much used as an antiseptic; it is a white powder easily dissolved in water; wounds and their surrounding surface are washed in a solution formed by putting a heaping teaspoonful in a glass of warm water. By mixing one teaspoonful of boric acid with three of bismuth, one can make an excellent drying powder for wounds, burns, and like injuries. This powder may be made and kept in a close box. It is also well to have carbolic acid, but to remember that it should never be used stronger than one part to thirty of water—that is, one table-spoonful to a pint of water.

This drawer might also contain a pair of small, blunt-pointed, sharp, and always clean scissors, for clipping the skin of blisters (do not cut the skin away, clip and leave to protect the burned flesh).

Collodion is a solution of gun-cotton in alcohol, with castor oil to make it flexible; with it keep a small clean brush. It makes an excellent coating for a burn; is "painted" on in three or four layers, one layer being allowed to dry before the other is put on. It is much better for small cuts than plaster. There should be a supply of adhesive plaster for larger wounds, which, after the wound and its surrounding surfaces have been well washed, should be put on in strips set close along the line of the wound, holding its edges together, after which it should be dusted well with the boric acid and bismuth powder, or iodoform, covered with several layers of lint or clean old linen or muslin kept in place by a light bandage.

Other medicines for this drawer are aromatic spirits of ammonia, excellent as a stimulant in cases of shock resulting from many kinds of injuries, and brandy, which is a good stimulant at this time, because its aromatic quality prevents it from producing nausea as other alcoholic liquors are likely to do.



The dose of aromatic spirits of ammonia for an adult is about twenty drops in a wineglassful of water. Any druggist will write on the label the dose for a child of a given age. This drawer can hardly contain the little pieces of ice, which, swallowed whole, will relieve nausea, nor the snow with which to rub frosted feet, or frozen chilblains, nor the rug with which fire may be smothered out of their burning clothing, but the provision for other accidents may help us to remember these when the time comes. A large-handled key, or a hairpin, bent into a hook, might be there to fish things out of the top of the throat, or (the key) to lay in cold water or on the ice, to get cold, so that it may be held on the back of the neck to stop nose bleeding. Remember, in this connection, that the child should not hold his head down, nor put it into a bowl of cold water, this will only increase the trouble. Another thing, Nature's only means of stopping a hemorrhage from a blood vessel is by plugging it up with a clot: do not then allow the child to "blow" his nose, and so destroy what she is doing for him.

There is a long list of poisonous substances which are now and then used in housekeeping, and which children occasionally eat, to their great injury. In all such cases it is of course best to send for a physician, but the poison will too often do its fatal work before he can arrive. When the poison is one which may be ejected, the first step is to give an emetic. Carbolic acid, lime, and kindred substances destroy the tissues so quickly that it is necessary to dilute and neutralize them first. Flaxseed should be kept in the drawer; tea made of it is good for all corrosive poisons; while it is being made, the whites of eggs, milk, flour and water, and similar substances may be used. In the case of lime poisoning, or any other alkali, use vinegar or lemon juice diluted in water. A list of poisons and their antidotes, arranged alphabetically, should be kept in the drawer, with such of the antidotes as will keep in sealed bottles.

When poisons are kept in the house in any form there is always the danger that they may be taken by small children. The preventive of such deplorable accidents lies in common sense and training. *All* medicines should be labeled, and be kept in a certain place, out of reach of children. Rat and insect poisons, and other household drugs, not used for medicines, should be put in a different place equally inaccessible to the little ones. Having enforced these precautions the mother should train her children not to "meddle" with the property of others, for moral reasons. Experience shows this to be quite possible. There are many mothers who may safely trust even their smaller children, who never lock up the dainties, hide the fruit, or put things of the kind out of reach, and whose children respect their wishes in regard to them. Such mothers not only save themselves trouble but give their little ones excellent drill in self-control and honor.

Fastidious habits are useful in these cases. A child who has them is not likely to taste anything which he does not know all about. Cultivation of the sense of taste makes it much more acute, and little children should never be forced to eat anything which they dislike; by doing so their delicacy of taste and their dependence upon it are weakened. It is now possible to give many medicines in capsules or sugared globules, and it is due to children to give them all the advantage possible in this direction. There is some subtle connection between delicacy of the sense of taste and refinement of habits and character; perhaps it is because Nature is fond of symmetry and makes constant efforts to establish it in the three-fold nature of man. Where there is purity, strength, and beauty in one of the three parts of it she exerts herself to produce them in the others.

Nature has done much for mothers. Besides the abiding blessings of motherhood, she bestows upon us much instinctive wisdom and develops for us many hidden virtues. But it is a mistake to suppose that she is capable, unassisted, of making ideal mothers of ordinary women—she expects considerable and continuous effort upon our part to supplement all she gives and all she does.

We must expect to carry into the blessed estate of motherhood the same faults of character and deficiencies of education that would hamper us in undertaking any other profession. We should not depend upon our own instincts and the experience and traditional love of older women; surely investigation, thought, and study are as applicable to child-training as to chemistry or engineering. True, many people hold that motherliness comes by gift of nature, and laugh at the idea of improving this gift by study. Perhaps this is the reason why it is such a delicate task to write upon this subject—one goes at it timidly. Since the world began there has been in it but one perfect man, but from the dawn of history there have been teachers of morality, and few of them have been ridiculed because they were not themselves capable of that perfection of conduct which they taught.

The world recognizes that such teachers were only clearing the way and surveying, as it were, ahead of their fellows. Morality has always been recognized as a perfect thing of itself, not subject to personalities. The proper training of children is a thing which is unattainable in its perfection, just as proper conduct is, but this does not affect the obligation to strive toward it; and she who lays down rules and discusses methods should be judged by the value of them, not silenced by the fact that she herself may have human limitations and might not be able to practise successfully all that she may preach helpfully. The writer of this article has striven to say the things which will be of real use to her sisters; she has no wish to be a discoverer of theories

or an apostle of new ideas. She has gathered what seemed to her the best, from observation, from personal experience, and from many writers, both American and European; and to the best of her wisdom, she has selected, combined, and deduced the methods herein suggested. Her hope is that no mother may find them formidable and give up the effort to improve herself as hopeless.

It is impossible to describe at length, any action, and the reasons for it, without making it appear disproportionately complicated. Were an anatomist to describe in a book the whole process of quenching the thirst, or even that of drawing a breath, it would take many words and much space and make the act seem an exertion. Many of the plans suggested here are as natural and simple as drinking or breathing — though they may appear difficult because one sees them in print. Discouragement is a sad and troublesome guest, imposing, in the long run, much more effort than enthusiasm ever does. No matter how sincerely a mother may feel that all this study and improvement are impossible to her, and that she cannot keep up with her neighbors, she must still take care of her children, and if she will not go on struggling for the best ways, she must still suffer a penalty for mistakes and failures.

Such thoughts should not be encouraged; human children have human mothers, hence they are subject to much mistaken management and worthless teaching, — but they can survive a great deal of it, and grow up to be useful men and women in spite of it. If only the mother will untiringly do her best, rising each day to higher things, climbing upon her mistakes and failures, *she* will develop with her children.

Conversely, it should be remembered that human mothers have human children, and there is no reason to expect perfect children even from perfect theories of training. “Be to their faults a little blind and to their virtues very kind” is a charitable old couplet applicable to both mothers and children, and not inappropriate to the case of one who has honestly striven to do a little thinking and reading for earnest and busy mothers.

## CHILDREN'S OCCUPATIONS

TO THOSE familiar with kindergarten work, the meaning of “Froebel's Occupations” is well known; but to others the term will suggest but little unless it is explained that in the kindergarten system devised by that lover of children, Friedrich Froebel, certain kinds of work adapted to children's capabilities and called by all kindergartners “occupations,” are given to the children to do, and are used as a basis for in-



structive plays, games, stories, and songs. These occupations can easily be adapted to home use, and will afford suggestions for a great variety of plays and employments to keep children busy and happy. The materials used are simple and easily procurable, and with the exercise of a little ingenuity and patience, a mother can interest her children in childish work that will prove beneficial, in more ways than one. The best materials for use in all of these occupations can be purchased at any kindergarten supply store, but readily-improvised substitutes will be mentioned in connection with each one.

Paper-mat weaving is one of the favorite kindergarten occupations. The materials for this purpose are easily procured and the work admits of much variation. Strawberry baskets split up into small slats make good weaving material, or flexible slats of all sizes and colors may be bought, with which a child can make a variety of forms, such as stars, gates, fans, trellises, etc. Wide grasses and rushes can be braided into mats, and ribbons, and strips of cloth are easily woven into iron-holders and similar articles. Mats cut from morocco, leatherette, cardboard, or ivorine, and woven with strips of silk, velvet, or ribbon, can be made into calendars, blotters, handkerchief cases, and lamp-mats.

Another favorite occupation is clay modeling, which can be made more profitable and fully as interesting as the mud-pie baking that all children love. The clay for modeling can be obtained at art-material stores or it may be dug from a convenient clay bank; the former is preferable, however, as it can be used repeatedly without moistening. Clay should be used, as are other kindergarten materials, as a means of expression. Suggest to the child, as subjects for modeling, objects in his surroundings, or those connected with whatever he is most interested in at the time. Fruits, furniture, animals, a firecracker before the Fourth, or a full stocking before Christmas, make good subjects for modeling.

This kindergarten principle of selecting the object to be modeled, drawn, sewed, or painted, with reference to the child's surroundings or to his predominant ideas at the time, should be followed in all the employments for children. Such objects possess a more definite meaning than does anything selected at random, and are consequently more interesting. Work should never be done merely for the sake of doing it. Let the children have some aim as an incentive in making things, so that they may feel that they are really accomplishing something, and they will take more interest in the work, and will consequently, do it better. The products of their fingers may be utilized as gifts to friends, play-



things for baby, or as ornaments for the Christmas tree; while the best of the clay or any other work may be put away for papa's approval. As an example of both of these principles, suggest to the child that he may tell with clay the story of his ride or walk of the day, with the object of making papa read the story when he comes home in the evening.

Every mother must use her own discretion in allowing the child the use of all materials. She must decide whether he shall have free access to them, or whether they are to be brought out only at certain times, according to circumstances. Let one piece of work be finished before another is begun, or half the things will never reach completion. Teach care and neatness in all work, and let nothing be carelessly or hurriedly done. This is important, for the habits early formed often cling through life.

To return to the clay, *repoussé* work is an attractive occupation. Make a ball of clay and flatten it into a disk a quarter of an inch thick. Upon this press a leaf, rough side down. With a wooden toothpick gently stipple the exposed surface of the clay, and then remove the leaf. Its impression will remain in the midst of the rough surface.

With a stout darning needle set in a wooden handle, pieces of card or Bristol board, a cushion of felt, and blotting paper, or several thicknesses of heavy cloth, you have the material for another of Froebel's occupations—perforating or pricking. Any stationer will for a small sum, cut cardboard into pieces of the desired size, or, if economy is a consideration, old visiting cards and invitations can be used. A hat pin may take the place of the wooden-handled needle, though less comfortable to hold. An object is drawn or traced in outline on a piece of the cardboard, which is then laid upon the cushion and the design pricked through. Be sure to push the needle through straight or the rough side, which is the right side, will be uneven. Fruit, leaves, flowers, vegetables, birds, animals, houses, furniture, as well as geometrical designs, are good subjects for pricking.

If one is unable to draw these outlines, they can be traced from pictures, and transferred to the cardboard; or the paper on which they are traced may simply be held firmly on the cardboard and pricked through. If a kindergarten supply store is accessible, picture cards especially prepared for the purpose can be procured, selections being made from a catalogue of designs.

These pricked cards may be mounted on colored paper, made into window transparencies, letter-pockets, calendars, etc., or pasted into a scrapbook, which should be a part of every nursery outfit.

Pricking is seldom used in kindergartens, because it is believed to be a strain on the eyes and a task on the smaller muscles. It should not

be given to children under five years of age; but for older ones, if they are not allowed to work in a poor light, or on dark days, or too long at a time, there is no objection to it. This occupation is profitable in that it trains the eye to see with exactness, and to judge distances; it also impresses forms upon the mind.

Sewing in various forms has been practised since the earliest ages. Children readily take it up, partly through instinct and partly through imitation, and a blunt needle, with coarse thread, and a piece of soft cloth, will often keep a child happy for hours. As a kindergarten occupation, sewing is not new. As adapted by Froebel to young children, it consists of sewing, with worsted, patterns or pictures perforated in cards. The materials are a blunt, pointed worsted-needle, zephyrs of all colors, and cardboard of any size or color.

The pattern for sewing is drawn upon the card and perforated, or if more than one of the same design is to be made, it may be drawn first upon paper, which is folded over the card, perforated, and then used again. For the use of very young children, make the perforations one inch apart. Teach the child to sew objects in their natural colors as far as is possible; to work carefully, and to make the wrong side neat as well as the right side. Do not correct mistakes for him in this or any other work; let him correct them himself and he will be more careful next time. This occupation teaches manual dexterity, sense of color and its harmonious arrangement, and symmetry of design. For young children, there is the same objection to it as the case of pricking, unless large materials are used.

Objects furnishing suitable designs for pricking are equally good for sewing, those especially being chosen, as in all other cases, which are prominent in the child's thought at the time. For the child's first sewing lesson nothing is better than the six kindergarten balls of red, blue, yellow, orange, green, and purple; and after this a series consisting of a red apple, blue ball, yellow lemon, orange, green pear, and purple plum. The kindergarten supply catalogues contain illustrations of picture-sewing cards, which may be bought and copied, or used suggestively, when designs are needed.

This occupation, like all others, must be used in some way as a stimulus to interest and an incentive to further work. Early in the year a box may be set up in which all good work of all kinds may be kept, and with a very little additional work, converted into Christmas, birthday, or other gifts, which will be greatly appreciated by relatives and friends because the children made them.

The picture-sewing leads at last to other sewing, and nearly all little girls, as soon as they are old enough, enjoy sewing on doll clothes, or outlining simple designs in fancy work. They also like to do old-



fashioned spool knitting on four pins and a spool. Spools for this purpose can be bought, or they can be made by driving smooth, slender nails into a large spool, leaving about half an inch of each nail exposed. Shaded or different-colored worsteds are used. This work can be made into reins for playing horses, and into various kinds of mats and holders.

A "wonder ball" pleases a child who learns to knit in this way. A number of trifles are rolled into the ball of worsted which is to be used, and as the knitter works, and unrolls the worsted, the gifts drop out.

As a rule little boys, as well as girls, like to sew, and there is no reason why they should be deprived of the pleasure. It is often a great advantage to a man to know how to sew on a button or to do a bit of mending.

Paper-folding is an occupation which, if learned at kindergarten, the children can practise by themselves at home; if they do not attend kindergarten, the mother can learn the "school of folding" from any kindergarten teacher, who will be glad to give any assistance that is really wanted. Written directions for this work are long, tedious, and unsatisfactory. The work to be learned must be actually performed under instruction. Boats, animals, chickens, furniture, and many other things, can be made of paper in this way.

With paste and scissors, an almost unlimited field of amusements is opened up. The scissors should be blunt-pointed and of medium size. Newspaper, wrapping paper, colored paper, kindergarten folding paper, and gold and silver papers, can all be pressed into service. The best paste for such purposes is made of gum tragacanth and water. Ten or fifteen cents' worth of gum tragacanth will last a long time. Drop half a dozen pieces into a cup or bottle of water, and you have a paste that will not stick to the fingers, will leave no spots on clothes or carpets, and that can be kept so thick that it will not run when the bottle is upset. A small quantity should be made every two or three weeks, as it sours if kept too long. The thinnest of the kindergarten slats make good and inexpensive paste brushes.

From magazines, illustrated papers, circulars, and advertising cards, let the children cut out pictures. They love to cut, but to hold their interest and to induce them to cut carefully, let there be some object in view. Put all neatly-cut pictures into a box, and tell the children that when there are enough you will show them how to make something pretty.

When a quantity of the pictures has been collected, look them over and show the children how to sort them into different groups — pictures of dogs, pictures of cats, pictures of boys, pictures of girls, pictures of the country, pictures of the city, etc., each in its own group. Make scrapbooks of cambric or strong paper and put the classified pictures in them, making animal books, children books, outdoor books, etc.

Then let the children themselves present them to baby relations, to poor children, free kindergartens, or hospital wards, and the pleasure of giving, and of seeing the results of their work made useful to others, will encourage them to begin all over again.

Upon the tops and bottoms of large pasteboard boxes can be mounted groups of classified pictures, to be hung up by ribbon or cord. Large pictures pasted on cardboard and cut up into puzzles make welcome gifts for little invalids.

The paper circles, squares and triangles, used in kindergarten work, can be employed to make all manner of designs and borders, which may be pasted into a scrapbook kept for the purpose. The child may lay out the design, but before he begins to paste, suggestions for corrections or alterations should be made to him.

Children delight to paste together the links for making paper chains such as are made in kindergartens. Material can be made by cutting colored paper into short strips of the size desired for the links and the chains can be varied according to the length and width of the strip. These chains are most interesting to make when the nursery or other room is to be decorated for some event. They also make fine military trappings.

Free-hand cutting possesses many possibilities for amusement if the children can attain any degree of skill in it. It is more difficult, however, and the beginnings will be crude; but led on by appreciation, and by some definite aim, many children learn to use their scissors very deftly. The most successful attempts may be preserved in a scrapbook, though for a time it will probably be necessary to label them in order to distinguish a cat from a horse. Charts also can be made, similar to those previously described under the cutting and pasting of pictures.

A clothesline of string can be filled with the family washing made in this way. A shop can be stocked with many kinds of merchandise cut out of paper, and the goods should be paid for in home-made paper money, kept in folded paper pocketbooks. All children love to "play store," and this is a delightful way of doing it.

The making of paper banners, shields, and flags, is attractive, especially to boys of martial spirit; and colored pictures excellent for copying will be found in any unabridged dictionary. The manufacture, and the dressing of paper dolls afford a wide scope for invention. This work is more fully described in another chapter. A soldier cap adorned with a feather from a feather duster, or festoons of paper chains, a baker's cap, apron, and cuffs, and a great variety of things for the children to "dress up in" are easily made with paper and paste.

Drawing is one of the most important of the occupations. Children naturally love to scribble, as defaced books and wall paper often testify. Give them better materials and opportunity to indulge in this pastime, and you furnish them with a fascinating and profitable employment. They should begin with outline drawing. Draw, trace, or paste, a picture on cardboard, and then cut it out. Provide the child with good pencil paper, or, better still, with a blank book, and a well-sharpened pencil, and let him draw around the outline of the cardboard pattern. The finishing touches, such as the cat's whiskers, are put in free hand. The outlines of all simple forms of birds, flowers, animals, geometrical plane figures, etc., can be used for outline patterns. The last named are easily converted into familiar objects by the addition of a line or two,—the right isosceles triangle can be changed into a cocked hat by adding a plume; the equilateral triangle into a tent by drawing a line to indicate where the flap opens; the pentagon makes a house, and the circle becomes a wheel or clock. There are many other things which the imagination of the child, once started, can invent. Only a little change is required to transform a circle into a fluffy chicken, a long-eared rabbit, or a sleepy puss.

Leaves also can be outlined, and colored with crayons or water colors. With tissue paper and pictures of clear outlines, the children can themselves do the tracing. Teach them care and exactness in outline drawing.

Then try free-hand drawing. Let the children draw direct from the model, and, in simple outline, fruit, flowers, and other objects. A blank book for their sketches, and soft, sharp pencils, will be an incentive to careful work, and the book will contain a record of their improvement. After the children have had some practice in drawing from objects, or when they tire of it, suggest that they illustrate some familiar story, some past experience, or an anticipated pleasure. This will prove an absorbing pastime, and will give free play to the imagination and the invention.

Pencil drawing may be varied by the use of a blackboard and white and colored crayons. It is a good plan to allow the children free use of the white chalk only; and when a piece of especially good work has been accomplished with this, to let them have the other crayons with which to color it. In this way, their interest in the work is sustained for a longer time.

Then let them have water colors (the non-poisonous kind) with which to color the pictures in their scrapbooks, their own drawings, sewing cards, or paper dolls. Show them how to mix colors together, and let them learn by experience that blue and yellow make green, red and yellow, orange, etc.



Drawing is of great benefit to the children, as it educates the eye, trains the hand and mind, and cultivates a mode of self-expression. It also teaches the habit of observing closely, and, if rightly conducted, conveys a knowledge of the first principles of art.

A kindergarten occupation which is closely related to drawing, and well adapted to home use, is called the "thread game." Thread, or string, is the basis of many amusements among children of all countries, and the pleasure found in knitting with spool and pins and in making the "cat's cradle" is the first step toward many kinds of work of a more advanced nature, such as knitting, crocheting, tatting, embroidering, etc.

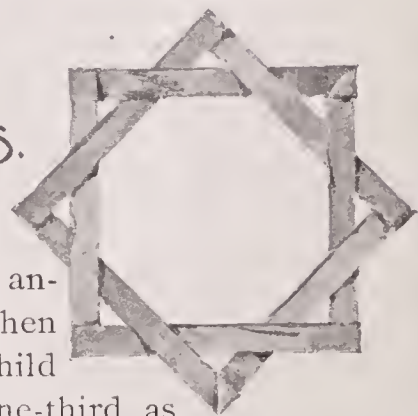
For the thread game, take a piece of bright-colored darning cotton, twelve to eighteen inches long, and tie the ends together in as small a knot as possible. Moisten the thread and lay it out smooth on a large slate, which must also be moist. With a wooden pointer, the size and shape of a slate pencil, the child pushes the thread into different shapes. The slate and thread must be kept moist. Starting with a circle, push the thread out at the top and a pear results; pull down the lower edge and it becomes a leaf; out at the sides and it makes a diamond-shaped window pane. With changes here and there can be formed a heart, toadstool, umbrella, spectacles, and many other shapes.

For the work of paper-interlacing, the material is white or colored paper strips, from a quarter of an inch to an inch in width, and twelve to eighteen inches long, which may be cut by any bookbinder or at a wholesale paper establishment. Glazed paper is the best. The strips are first folded into right angles, then squares and the simple geometrical figures. Then take the half or three-quarters-inch strip and have the child make two lengthwise folds which will make the strip one-third as wide and three times as strong. Form into a square, and in it interlace a square made of a similarly folded strip. A star is the result. By thus interlacing the various geometrical figures, many designs may be made, and by the use of the different colors many effects produced.

The "peas work" of the kindergarten is easily carried on at home. Dried peas, which have been soaked over night and then left for a couple of hours to dry, and toothpicks, are the necessary implements. By thrusting the ends of the toothpicks into the peas, which thus hold the



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sticks in place, furniture, houses, barns, fences, and countless other objects can be formed. With button-molds for wheels, wagons may be constructed.



Bead-stringing is a recognized amusement for children, but for this work only large beads should be used; the small ones are too trying to eyes and nerves. Colored straws cut into short lengths may be bought by the box and used with the beads for stringing. If stout cords of the proper lengths are used, pretty Japanese portières may be made of the beads and straws.

In following out the foregoing suggestions, many other ideas will doubtless present themselves, and the children need never ask in vain "What shall we do?"

## SPECIAL EDUCATION OF GIRLS

### PHYSICAL, INTELLECTUAL, AND MORAL

THE spread of the woman suffrage and coeducational ideas, revolutionary as they once seemed, have not essentially changed the duties of women, nor affected the "eternal feminine" in its relations to the world. Woman's sphere is immensely broadened in extent, and it is all gain; nothing has been lost of the old domain, and the home is still its center.

Mothers still, instinctively, differentiate the girl from the boy baby, at the very threshold of life. The little girl receives one sort of toys, the boy another; the girl is practised in daintiness, and the boy in independence of conventions; the girl is kept indoors, and assumed to be less robust, the boy is encouraged to rough it, and to gather strength. A young mother will say, "I keep the children in the house in bad weather; only, of course, I have to bundle Johnnie up and let him go outside to run about in the fresh air once in a while; boys like the outdoors, and it makes them strong, you know." This is the beginning of that physical delicacy which has long been counted a feminine charm, and is one of the inherited notions which are as strong as prejudice. At the very root of it is the thought that if Johnnie likes a thing he should have it, because he is a boy; if Jennie likes a thing she must learn to give it up, because she is a girl.

And here, in a nutshell, is the principle which has been filling the world with self-indulgent men and weak and foolish women, and all due

to the ignorance and incapacity of mothers! If we should take all that is reasonable and natural in the popular methods of boy-training—all that develops natural instincts sensibly, and makes for strength in body and mind, and should add to it from the training of girls all that develops patience, self-control, and prudence, we should have a very good working foundation for a system which might be impartially applied to both. Having done this, the thinking mother would still find an opportunity for special training for each. Both children should have a grounding in all the virtues, but some should be developed a little further in one case, and some in another. Both need courage, and should be educated in it, but the boy will the more readily attain moral courage through physical bravery, while the girl will learn to be brave because she has developed moral courage. Or the girl will learn order and neatness to the point of delicate fastidiousness without injury, while in the boy it should go no further than a wholesome cleanliness. The girl may be trained to find beauty in the smallest and least significant things, while the boy should be educated to see it broadly, because the sense of form and color in little things will make the girl the artist of a home, beautiful and harmonious in spite of circumstances, while the same feeling, developed too far in her brother, would make him fretful, overnice, and petty. It used to be supposed that boys should be taught frankness and girls finesse; that boys should speak out their sentiments boldly and girls cloak theirs in feminine humility; that boys should learn to resist, girls to bear uncomplainingly; boys to scorn fear, girls to cultivate timidity; boys to love independence, girls to ape servility.

The only reason that the influence of this system has not resulted in fixing weakness, deceit, and hypocrisy indelibly in the character of women is that mothers are not so potent as they think. In all the history of the race, girls have persisted in inheriting from fathers, so that they come into the world with the instincts supposed to belong by nature to boys, and sometimes no amount of repressive training can crush them; just as it often happens that a boy is born with natural tendencies to follow feminine ideals, which are as hard to train out of him. This goes to prove that there is no sex in intellect, and should be none in morals. The object of special training, then, is not to make girls and boys differ in the essentials of character, but to fit each for special duties. In considering how educational methods apply to them, we come upon a formidable accumulation of ideas which are labeled "things for boys to think," "things that girls must think"; and we realize that when they are put into the minds of children they go far to settle the question of methods for us. These ideas grow out of social usages and conventions, and are generally considered of such importance that they are given earlier and with much more industry than morals themselves. We will



assume that Johnnie and Jennie are twins and have reached the creeping stage. Previous to this they have probably heard a great deal about what little boys may do and what little girls must not do, so that they may be, in a measure, prepared for differences of treatment. Johnnie is allowed to wallow on the floor, to stretch and work his limbs—to find himself, but Jennie's liberty to do these things is much curtailed. About how early in life do parents begin to teach little girls that they must not lie on the floor,—where brother lives,—must not roll, and tumble, or be noisy, or “kick up their heels”?

Observation will prove that no little girl's natural instinct gets ahead of the admonition. Then comes Johnnie's introduction to the idea that “ladies must drink first,” and have first choice of good things, where his unselfishness is cultivated at Jennie's expense, for she soon learns to demand the sacrifice because she is a girl. Jennie must not muss her hair, nor kick things; Johnnie should not care about the color of his neckties, nor cry when he is hurt.

These are but random samples of the things which mothers instinctively teach their children. They have a feeling that society demands it of them, and that they are absolutely indispensable to Johnnie's future as a man, and Jennie's as a woman. Upon investigation we find that some of them can substantiate the claim to importance; others turn out to be hindrances to modern educational ideas, and nothing more. But the distinction should be very clear to the mind of the mother ere she condemn any of them. It is possible to advance too rapidly, and to destroy some very good things just because they are old fashioned and, in some respects, mistaken. All genuine progress consists in preserving every good thing which has gone before, and incorporating it with the new; not producing the latter, as scientists might say, sporadically, but evolving it from the experience of our predecessors.

There is a general belief that mothers cannot begin too early that sort of training which, for want of a better word, we shall call training in modesty.

Experience proves this an artificial virtue; no child is ever born with a natural sense of that kind of shame. It comes to them, as to our first parents in the Garden of Eden, with knowledge. When you begin to train Jennie to hide herself, and point out to her that certain acts are wrong, it is from your own knowledge of evil in the world, and, guard it as you may, the secret will peep out in your tone, or your look, and Jennie will catch sight of it. For a long time she may have only the dim sense of mystery, but experience will develop it, and by and by the thought is unfolding. The question is, is early training in habits of modesty of sufficient importance to children to justify us in destroying primal innocence for the sake of it?

Herbert Spencer tells us that this innocence consists entirely of ignorance; that every child brings with him into the world natural tendencies which begin to act as soon as this ignorance, which is their sole check, is removed. There is no denying that a great many admonitions, frowns, and shocked looks, coupled with the training which they enforce, do bring a premature knowledge of evil.

All that can be of any present benefit to small children might be accomplished without these things. Little brothers and sisters should never remember a time when they were bathed and dressed together; that is, it should not be necessary to separate them at these times all at once, so as to excite their wonder. Let it be a matter of course that each individual shall bathe and dress in private, and children will take it so.

Let Jennie be dressed modestly and let her play with Johnnie; why should she not romp and "kick up her heels" as he does? Is there any reason beyond that which lies in the evil consciousness of grown people? And here is another opportunity to point out the influence of suggestion, and it should be with greater emphasis than ever before, for here, in the realm of forbidden thoughts, it is more powerful than in any other. The evil thought leaps from mind to mind; it but passed through your own consciousness, without your will, but the sharp eyes of the child caught a glimpse of it and his plastic mind has taken its impress.

If there is a question of this truth, let any of us go back over the records of memory; scarcely one will be unable to recall an instant when the evil in another mind struck suddenly upon her own like a blow. Perhaps the injunction to "become as a little child" involves also child-like purity of thought; and the power of corrupting children with suggestion, may be the real object of "And whosoever shall offend one of these little ones that believe in me, it is better for him that a millstone were hanged about his neck, and he were cast into the sea."

The whole question of enlightening children upon questions of sex, and of training them accordingly, is a most delicate and difficult one. No general rules can be laid down because children differ, and mothers differ, and circumstances differ, also. What one child can take in as interesting information, turn over in the mind, and leave there for future reference, another child will drink in with morbid avidity, brood upon, and be corrupted. What one mother can present as a simple natural fact like any other, another mother will invest with a mysterious interest, and is sure to plant more tares than wheat. And what the circumstances of life have ripened one child to receive with profit, may be dangerous to another. The only possible general rule is, wait, preserve ignorance as long as you can; keep the young mind filled with innocent and happy thoughts. Then, when the time is certainly come, tell the truth as briefly as possible and as

indifferently as you can, don't dwell upon it, don't recur to it. Many writers upon this subject suggest some very beautiful little allegories in which mothers are to convey the secrets of life to their children, but why? Are they not likely to have seduction enough in themselves without adding that of esthetic appeal?

And if the poetry and imagery are, as some assert, purposely intended to mystify the young mind on these subjects, what folly to give them at all! If your object is merely to answer the child's questions without really enlightening him, as mothers sometimes think it right to do, read him technical terms out of a medical book. But why anything but with the simple and single purpose of giving necessary knowledge? Some parents argue that this sort of information should be given so early that the child will never know where it came from. This course is open to the objection that knowledge which is possessed so long before it is needed, atrophies, like unused muscles, so that nothing is gained by it. Another thing to which mothers are urged from all sides is to secure the confidence of their children, and they, too, generally take this to apply almost wholly to prurient secrets. They do not build up the habit of sympathizing in all the interests of children from which confidences of all kinds would naturally flow, but confine themselves to a sort of feverish curiosity as to the development of this particular class of ideas in the child's mind.

When you come to think of it, what could be so unmotherly as the attempt to drag from the child those thoughts which nature prompts him to secrete, and in doing so to restamp them upon his mind? Confidences of this kind are unsafe; they themselves destroy modesty; they violate the child's natural reticence, and worse than all, they exalt these subjects to a most dangerous importance.

Guard your children as carefully as possible from evil communications, but when you are sure that they have reached them, make the mischief as light as possible. Crowd out with livelier interests the thoughts they awaken. Train indirectly for reticence and modesty of speech; keep children constantly and happily employed; look well to their companionships; and continuously practise them in self-control and helpfulness. In other words, strengthen mind and character, arm them against evil, so that when you may no longer protect them they can meet it and vanquish it.

Under such training and such happy circumstances, Jennie may have a long period of ignorance of her special, and dangerous, and glorious place in the economy of nature, and may play unchecked with Johnnie, and learn the same lessons and get the same sturdiness of body, and some of the open, frank, ready independence of mind which is as fine in a woman as in a man.



Meanwhile, she should have domestic training. Do not make the mistake of thinking that she will need no more than will be provided in the public schools, where she is practised in the latest fashion for housemaids, or sits,—as in a recent magazine illustration of a class in a certain western city,—“learning the useful art of beating eggs,” with a patent egg whip!

In the present stage of educational evolution she will probably have to go through with this as the instrument of glory for some “progressive educator,” but don't rely upon it for important results. The girl who gets genuine domestic training is she whose mother takes her with her into every department of housekeeping, who puts upon her a certain responsibility, and in addition requires of her certain regular work.

This does not mean that Susie and Jennie, in addition to school work and music, must be burdened by house cares, as girls very commonly were in our own childhood. There is no time for that; besides, we are determined that our little ones shall enjoy youth, and we shall prolong its freedom from care, and its zest for play, as far into maturity as possible.

But there are ways to teach domestic science as a part of their recreation. To begin with, it is perhaps as well to formulate just what it is we are going to teach. Is it methods? or principles? is it ways of doing things? or is it the right things to do? If it is principles, we shall throw overboard all the old-fashioned notions of the necessity for little girls to wash dishes, and scour knives, and sew carpet rags, through a long and dreary apprenticeship. Oh, the back-stitching (and back-aching), the chain-stitching, the overcasting, the herringbone, the crocheting, the tatting, the knitting of our childhood! And to what end? We have never needed those laborious arts, and we have suffered for want of a hundred kinds of useful knowledge which we might have gained while we learned them! Let us assume that the finger practice begun in the kindergarten, and kept up in the domestic training of the schools, and in the study of music and of art, ought to relieve our little girls of any more of this sort of work than comes naturally into their lives. Some mothers require the schoolgirls to do their own mending, but it is hard to see where there is time for it. The majority of girls make their own bows and ties and little accessories of dress, and do more or less fancy work. In most cases this will suffice for skill. The effort then must be concentrated upon the judgment. As soon as Jennie and Susie are old enough to have a room of their own, allow them to arrange it according to their own taste, and when anything new is to be bought for it, they should choose it. The towels and bed linen belonging to it should be in their care, and though they may not themselves be required to mend, or replace them, they must report the necessity. If there is a seamstress to do this, let the little girls oversee

her work. Expect them to look after the laundering of it, and of their own clothing, permitting them to criticise occasionally, rather than to be indifferent. Let them always take a part in the purchasing, designing, and making of their own clothing. Limit the amount to be spent in a season and give them a long time to discuss and "figure out" what they can buy with it.

Mothers often object that girls have not the judgment necessary to these responsibilities; if the mother has, they may learn it if she will join their discussions, not as dictator, but as friend and confidante. Surely she can guide, without appearing to do so, until their judgment is developed. Expect them to think over their purchases carefully before making them; and it is an excellent plan for each to make a drawing of a new dress some time before ordering it. If the first drafts are a little exaggerated in style, gently and tactfully influence them to see it; the design will get more and more sensible as the judgment gets opportunity to act upon it. Girls must think of their personal appearance (and so should boys for that matter), and they should understand the importance, the suitability, and the economy of dress.

And in this connection it may be well to discuss a little more fully the question of personal appearance. If Jennie or Susie, or both, have the gift of beauty, let us waste no time in the effort to conceal the knowledge of it from them, or to depreciate its value. Let us freely acknowledge that it is good fortune to be beautiful, and that we, as loving parents, are grateful that it has befallen them. This is a radical view, but is it not time that we were discarding some of our old ideas upon the subject? The world has long taught that the power of beauty is but vanity, and little girls have been drilled to hold the gift lightly, and have never been trained to use it wisely. What sort of preparation for life would it be to carefully teach the heir to great wealth that money is worthless, that the possession of it is a detriment, and "perhaps what he has may turn out counterfeit, anyway"? What a foolish spendthrift we should have in the beginning, and what a selfish and greedy tyrant of wealth, when he had learned the awful power of money!

But this is what too often happens to beautiful women. They are brought up to depreciate the gift, or they are taught to see only its value for the gratification of vanity, and know not how to use it, either for their own good or that of others. And the history of humanity is full of pictures of

"Beauty and anguish walking hand in hand,  
The downward slope to death,"

while in private life we have broken hearts, disappointed lives, and every form of selfishness and many forms of sorrow growing out of the misused gift of beauty.

The untaught girl will often take admiration to be the chief end of beauty, just as the spendthrift takes self-indulgence to be the chief end of wealth. The child's conception of the use of beauty will certainly be modeled upon the ideas of her parents. Acknowledge it as a source of power, not as a claim to admiration and envy. This need not be done repeatedly, nor ever definitely done at all; simply do not hide or deny Jennie's beauty any more than her musical gift, or her domestic talents—all are powers which she must learn to use to the best advantage. If she is admired, you will never be able to hide the fact from her, nor to prevent her from enjoying it. Do not try; enjoy it with her; rejoice in her power of giving happiness in this way; divest your own mind completely of rivalries and comparisons, then carefully protect her from similar ideas.

Teach her to feel and acknowledge the beauty of others, and to find unselfish pleasure in it. When you have done this, when she knows that it is good to be beautiful, train her to enhance the gift and to preserve it, not by childish devices of creams, and veils, and affectations, but by pure thoughts, generous feelings, and noble conduct. Show her that the beauty is incomplete and futile which goes but skin deep. There should be a virtue to correspond with each charm of person or manner, and there must be if beauty is to have any beneficent power, for herself or for others.

This brings us back to the question of dress. Every girl should have liberty to express her character in her dress—that is if she be retiring in disposition, she should not be forced to wear conspicuous clothing, and if she likes brilliancy she should have it, within the limits which a tactful mother can easily suggest, without dictating. Why not acknowledge another obvious truth which we are always dodging. We dress to please the eye. This point settled, all questions of suitability, becomingness and morals in dress are more easily disposed of. The consciousness of such ends gives a sort of stability, or continuity, to one's efforts which must work for refinement. And it is the more easy to understand that extravagance is actually a drawback to being well dressed, for it robs our daily and familiar appearance for some momentary triumph which cannot satisfy.

The mother has this advantage: she does not teach dress alone, at any given period of her daughters' lives, but always at the same time when they are learning music and art, and imbibing the knowledge of schools. All sources of human happiness are opening before them at once, and all their own powers are unfolding together, so that she can show the relative value of each. If she is careful to do this, there is no danger that dress and appearance will not always remain subservient to more valuable things. These questions have been treated as a part of



domestic science. A correlative training in the principles of house management should begin in the habits of personal neatness and the care of personal belongings, and as soon as the little girls are old enough, in household finances and household economics.

The first step here is always to settle the amount of money to be spent, then to consider each article carefully, and set them down in their order of importance so as to divide the amount between them. This is the only logical way to practise economy, and little girls may begin the formation of the habit very early; they will take a keen delight in the serious preparatory discussions as to how they shall make their pennies serve their needs. When it can be done, it is an excellent idea to make them responsible for a part of the marketing, say the Saturday and Sunday dinners. At first, of course, there must be careful preliminary discussion and preparation, and some advice as to the comparative freshness and cost of foods. The question of expenditure is the most formidable one which home-makers have to solve, and there is absolutely no other in which so much can be learned from the experience of others. Mothers should freely bestow theirs upon their daughters, and so save them the mortifying and expensive mistakes which gnaw at the happiness of so many young households.

Some quaint old writer, having given a recipe to a housewife, added, after the list of ingredients, "mix with plenty of judgment, and season with common sense, if you wish this dish to be a success." Experience teaches us that this formula should be attached to every recipe, and applied to every other branch of housekeeping. Instruction, practice, anxiety to do well, are all thrown away without that sort of quick, facile, exact, and always active quality which we call "faculty," in housekeeping.

One woman will take certain materials and produce an uneatable meal, another will make them into a feast. One will spend a certain income and her family will live in want and squalor, another will make it provide a bounteous and beautiful home. It is simply a question of judgment. The mother who has it can give it to her daughter by example, by general training of the reason, by practising her in economy, and by training her to weigh domestic problems carefully. But there is no way so good as to take her daughters into her confidence in the management of the home, to ask help of them occasionally, to trust them with responsibilities; in short, to let them see how housekeeping is carried on, what a versatility of talent it requires, and how highly it should rank as a profession.

Current fiction has found a new motive in the struggle between the Woman (with a capital), and the domestic and maternal duties of woman (with a small letter). The gifted and highly educated heroine

gives up a "brilliant career" for marriage, and with maternity begins the long struggle between her gifts, culture, and ambitions, on the one hand, and wifely love and motherly devotion on the other. And, since society is still on the side of husband and home and children, the Woman, with all her gifts and aspirations making ineffectual protest for her, must go down before the obligations of the merc woman. The blame always seems to lie somehow upon the husband and the children. What, are they to dispute precedence with a career? No doubt there are many such cases,—hundreds of gifted and cultured women who think themselves cruelly hampered by their home obligations,—women who suffer from disappointed ambitions and the restlessness of unused talents. Surely not because they made a mistake in becoming wives and mothers? Nor yet because their parents were wrong in educating them, and nature cruel in bestowing intellectual gifts upon them? Does not the fault all lie in the fact that there is no vital relation between the gifts, the education, and the duties?

What vocation can provide exercise for such a variety of talents as motherhood? What education has ever yet provided more knowledge and more intellectual power than an enthusiastic mother can make use of? What "aspiration" is higher than a mother's ambitions? What "career" so worthy as that of the home-maker and race-molder? These questions have always been answered in favor of home duties, but never so truthfully as they may be now, for the world—in spite of the empty courtesies of poets—has never before realized the dignity of motherhood, and has never before left women so free to make the most of it.

As this idea grows, women will extend their influence farther and farther beyond the house doors, and will follow their children through them into the world, insisting upon making it fit for them to live in. This should be a broad enough career to embrace all the Woman's aspirations and ambitions and to absorbingly engage all her powers.

No education can be too broad for this, if only it be *for* this. There is no reason why the girl should be deprived of any study in her brother's curriculum, provided, always, that she has exhausted the list of those which have a bearing upon her special duties. And it is time that mothers were dictating to all schools and colleges; our daughters must have an education which shall fit them for life. There must be time for domestic science and domestic economy, the home-making arts, practical knowledge of the laws of health, of the child-mind, of the care and rearing of children, in the course of common education; and when they may pursue the university course, the science of education must be the thread upon which all other branches and all accomplishments are strung. And nobody need fear that this

will not be comprehensive enough; all sciences, all languages, and all arts are relevant here.

And having enforced these demands, mothers must see that the relation between the studies and the girl's destiny of motherhood are kept vital. And here we confront again that old hydra-headed monster of "feminine delicacy," which has kept us as foolish and timid as children ever since it made poor Eve shrink behind her first apron. "How is it possible to educate girls for wifehood and motherhood without offending modest people?"

It is not possible. We have all become saturated with the false doctrines of delicacy, and every step of progress shocks and troubles us. Still, the world must go on, in spite of the energy with which each generation struggles to hold it back, by its own particular forms of prejudice. In our own time, educational questions are driving impetuously toward certain reforms to which we must bow, and one of them is the fitting of women for their special duties. If we want our daughters to profit by this advantage, we must humbly yield some of the ideas in which we were brought up. And this should not be so difficult when we consider that many of the fences are down already; not because mothers have been wise enough to make way for the changing ideas, but because the popular novels and the stage have leveled them. When we stop to think what our daughters read, what they see at every picture store, on every poster, in the Sunday papers, at the theater, we know that ignorance of "indelicate" things is impossible; why keep up the show of it, then, in the only place where wisdom is a real benefit? What we permit to the publisher and the actor, we should not deny to the educator, whose only object is to benefit.

It is somewhat of a mystery that a delicate world permits little girls to play with dolls—they are so suggestive of womanly duties which should not be "spoken of." This is only one more instance in which the world has saved itself by its inconsistencies: the doll baby has been for a long while absolutely the only preparation for the duties of motherhood. If we were wise we should follow up the tenderness, the care, and the self-devotion which the doll develops in the child by a whole course of training to the same end.

For the indirect knowledge of physiology which the little girl gets in her brother's class, and the instruction in mental science and psychology which is given those who expect to become professional teachers, we should have a definite course in these and all other branches which bear upon the mother's duties in caring for and rearing children.

There is no doubt that we may have such a course as soon as we are ready to throw away our prejudices and openly acknowledge that wifehood and motherhood are the natural vocation of woman and



worthy of serious preparation; no longer to be surrounded with prurient suggestion, but to be exalted as noble and desirable. In the meantime, the mother is wholly responsible for the training of girls in all the knowledge necessary to these duties. The task is formidable, for she, having had no education in this line, is herself but an apprentice, learning her profession through the experiences and mistakes of each day. It is to be hoped that by the time her daughters have come near to maturity, she will have some insight into the principles, some rules of which she is sure, some methods of which she can foresee the results. But she should have begun her preparation of the little girl's mind for special knowledge as long ago as the first doll.

The imitative faculty and a succession of dolls, reinforced by mother's sympathy in all the trials of infancy, will very naturally and easily impress the rudiments of maternal knowledge. In addition to this, the little girls should take a part in the care of younger children — not to be responsible for them, not to be converted into "little mothers," weary, unchild-like drudges! — but they may take a pleasant share in mother's duties. They may amuse baby while he is being bathed, hand the articles of clothing in their order, teach him the little games of pat-a-cake, and to "blow kisses," show him how to use the first kindergarten gifts, be told about his little illnesses and how to help mamma to keep him well. In short they may be led to sympathize with baby's unfolding life, just as mother sympathizes with their own, and will be all their lives the happier and better for developing the power.

As the daughter grows older, she should be constantly influenced to take the girl's place in the household, which is a sort of understudy to the mother. There are certain things which she should do for father and the brothers "because she is a girl." One of these is to help make home beautiful; another is to welcome them with sweetness; another, to serve them in many little ways, as to warm father's slippers, or to tie John's necktie. And she should be always neat, should make herself as attractive as possible for father and the boys. The boys have their obligations and should be trained to serve their sisters in all the many ways which are possible to them as boys.

The special training in the home-making arts suggested here is not meant to apply only to girls of domestic tastes, but to the geniuses as well. Parents sometimes think that the possession of great talents should relieve their children from the common obligations of life. But they cannot do so; gifted people cannot escape the duty of helping and blessing the companions of daily life, which belongs to us all. Genius is even more dependent upon surroundings than is mediocrity, and should have the power of creating a happy atmosphere about itself. No matter what Jennie's training has been, nor how successfully the

mother has turned her from them in her childhood, there will come a time when the thoughts that have knocked persistently at the door of consciousness will at last find it open and will enter her mind.

Not because Jennie is coarse or low minded, but because the time has come; nature keeps her appointments, and she should not be an unwelcome guest. Jennie's mother should reflect: "This is maturity, and it is my duty to guide, not to repress. I must make these thoughts work together for good to my child; if I cannot, I abandon her to a mighty force and I take the chance of her being able to resist its mastery."

Mothers make a great bugbear of this period in the lives of their daughters, and in answer to their appealing "What shall I do now?" mothers' clubs and writers are betrayed into a great deal of unhelpful discussion and advice.

There is no special thing to do. Mothers know that this time must come, and in anticipation of it should have been getting nearer and nearer to their daughters' hearts. The only way to do this is to make themselves one with them, to share their pleasures, tastes, and views as nearly as possible. This is not hard for her who has constantly sympathized with her children from babyhood. If one has not done this, there is no question that it is difficult to throw off the cares of maturity and to enter into the spirit of childish interests; but there is absolutely no other way to keep close to the hearts of children and to know what is going on in their minds. When the time has come for questions of sex to be of absorbing interest to Jennie, it is of vital importance to know just how much her thought dwells upon them. Mothers make the mistake of thinking that curiosity and novelty are the sources of this interest, and believe that when their girls once "know all about it," their thoughts will turn to other things. The absurdity of this ought to be plain to any one who will think upon the cases of acquaintances who pursue the evil ways of passion, and to whom the stimulant of curiosity has long been impossible. No, we must see that here is an appetite like any other, to be controlled and made useful; to be indulged and made destructive. No doubt the strong inclination to think and to talk upon these subjects at the approach of maturity is nature's device for developing, rather suddenly, one of her instruments, which the time is coming to use, but which was too dangerous for long, and slow, and open evolution.

Doubtless no human power could wholly prevent Jennie from pondering these questions; the most that her mother can do is to keep her from thinking too much about them,—giving them undue importance, and undermining intellect and morals with them.

She may choose her own methods of instructing Jennie as to her bodily functions. The physical changes slowly taking place, and the

necessity for special care of the health at this time, should make it easy to state scientific facts briefly and naturally. It is not in the knowledge of these that the danger lies — nor wholly in the ignorance of them, either. It is a matter of the mind and of the spirit, and all remedies should be applied to them.

The physical training should, by this time, have established Jennie in good health; regularity, cleanliness, and sweet temper, should be well-grounded habits. The first two are of even less importance than the last, necessary as they are, because there is a strain somewhere at this time, a tendency to irritability, moodiness, and fitful temper. Only the long habit of cheerfulness and self-control can overcome it. Help the child by making life as happy and as smooth as possible, and above all as busy; not full of care or unpleasant effort, but full of interests and innocent pleasures, to take up the time, and engage the thoughts.

This is a formative period in every sense, and Jennie will never be so subject to the influence of others, she will never receive such deep impressions, as now. She grows by leaps and bounds, childish traits and habits drop off like the chestnut burs, new ideas enter her mind with a rush and take possession of her; she is an untried ship with an untried pilot, and nobody can be sure of the behavior of either in a season of tempests.

At this time of ferment a great many hitherto unsuspected tendencies come to the surface. Girls, like boys, become suddenly interested in new and radical ideas, but in their case these must wage unceasing war with the love of conventions, which springs from awakening social ambitions. A great many girls manage to reconcile holding the most *outré* views of life, reading the most "advanced" books, delighting in outraging many time-honored sentiments, yet preserving to a great extent — and almost invariably, the emptiest, of society conventions.

The emotions and the sentiments are more active than ever before. The girls seem to long for all varieties of feeling; will lash themselves to artificial rages, will seek the saddest books for their vicarious sufferings, will have the desire to make monstrous sacrifices, and will cherish imaginary wrongs, and an insincere self-pity.

They have religious fervors, and practise numbers of atavistic superstitions; they love parents, teachers, and companions with a torturing intensity, and they often secrete some hero of the imagination in their inmost hearts and worship him madly. And from all these chaotic and antagonistic elements, and many more, must be formed the woman balanced, sane, patient, devoted, controlled — a creature of sentiment and sense, of culture and tact, of insight and charity, whose life is designed by ideals and molded by severest activities, and the mother should help the child in the struggle to evolve her womanhood.



It is difficult to say, explicitly, how, because every girl presents all these elements in a different combination. As the mother's chief duty is to guide, her course must depend very largely upon her daughters' individualities. These she must study, and they must determine all her special lessons; but there is a set of general rules which may apply to all cases, the first of which is sympathy. No mother who stands at a distance, the amused, or critical, or scornful spectator of what is going on in her daughter's being, can do what is necessary. The sympathy should have behind it all the judgment which the mother's experience has developed — she should recognize the instant when any new idea or feeling has gone far enough to warp the character, and she should exert herself to crowd it out with something better.

Girls gather the ideas of this period from two sources — books and companions; their ideals come from two — books and examples. It is easier to control the selection of books than that of companions or examples. In her search for the latter, a girl will sometimes select a masculine hero, in literature, or in the flesh, will worship him secretly, and will strive to model herself upon what she conceives to be his ideal of womanly character. Or she will conceive a passionate admiration for a woman, whom she endows with all the graces and the virtues, and will endure all things in the effort to be like her. A healthy growing girl with a natural appetite conceived such an admiration for one of her teachers (this was in the last generation, at a boarding school). The lady in question was a vegetarian, and had the delicate appetite which used to rate highly as a feminine charm. In her talks with her pupils she spoke most contemptuously of the necessity for taking food, and asserted that as for herself she scorned eating, and only did so in order to live. Of all her pupils, none were quite so impressed as this poor child, who refused meat altogether, and took only so much of other foods as she could not resist. She was unable to sleep for the gnawings of hunger, she fell off in her studies, got into a condition of low spirits, brought on indigestion, and nobody knew the cause of the change in her, nor ever dreamed that she was striving to live up to an ideal.

This is no doubt an exaggerated case, but it arose out of a common tendency, and shows how easily much worse sentiments than this teacher's morbid delicacy may take hold upon a girl through the example of some one whom she adores. The question of companionship is still more difficult to settle. Whatever girls have in their minds at this time they discuss with other girls, so that their thoughts are being constantly augmented or modified by the ideas which their companions bring into the general store. Outside of the supervision of the choice of companions, which will depend entirely upon the mother's power to influence, she can only control this source of evil indirectly; that is, she can so fill

up the daughter's time as to leave it little opportunity. It is not always easy to say just which of her companions can do Jennie or Susie most harm at this period, for the injury is sure to be insidious, and you may not recognize it at all. It should be remembered that companionship of some kind is necessary, so do not try to escape possible contamination from it by preventing it. The only way is to make it as general as possible. If you will notice, you will learn that the girl with many friends and no absorbing intimacies, the popular girl, who is interested in everybody, who is sympathetic, generous, and merry, fond of outdoor sports, used to the companionship of brothers and capable of unsentimental friendships with other boys, gets most safely through the dangers of adolescence. If our daughters are not of this disposition, it will still be possible to influence them to lead the life which belongs to it.

This is the time to keep the house lively with young company, boys as well as girls. Try to resuscitate enough of your own youth to be in and out on these occasions (easily and without the appearance of watchfulness), so that you may entertain your guests with lively and innocent pleasures. When the company consists entirely of girls, do not allow it to become too confidential. There is no preventive of or antidote for evil communications equal to "good times"; liveliness, movement, and humor keep vicious thoughts at a distance.

Mothers should make every effort to supply each child with a separate bed, especially as the period of adolescence approaches. It will be thus much easier to inculcate the habits of personal delicacy, and the love of privacy, which will be helpful. Such training will do away at once with objections to companions who, for any reason, are staying in the house. It also makes the whole subject of personal modesty much simpler, and absolves the mother from that much speaking, which is in itself a danger.

There are mothers who, discovering that the interest in dress and society becomes very keen at this time, feel it their duty to weed out such frivolous tendencies at once, and to implant more serious views of life. And others, recognizing that the girl's mind must be filled with something, hail the natural development of these thoughts at this particular moment as a source of help in their efforts to keep the forbidden subjects in check. This is, emphatically, not a time for too much seriousness. The tendency to morbidness and exaggeration is much too strong, and the mind too restless and too disturbed to profit by soberness.

It is, perhaps, as well to give frivolity the rein; she may be able to carry the girl lightly and swiftly over some dangerous places. Most things in this world can harm chiefly through our ideas: in this case the mother should be able to let her girls see that she looks upon this

pleasure in dress and society as an indulgence, the permitted taste of new experiences which, while they have their place in life, she by no means considers of prime importance. Wherever one finds a girl who is throwing her soul into social frivolities, one is likely also to find a mother who is absorbingly interested in them.

And after all our strictures upon the society life, does not every woman need a certain amount of social knowledge, which comes best from experience? And isn't girlhood the best possible time to get it, before the obligations with which it too often interferes are assumed? Of course, it is not meant that a girl at the age under discussion should have, or is likely to have, experience of "society" in the general sense, but she will, doubtless, have plenty of opportunities and temptations to take part in a social circle of her own companions. And as soon as she does so, the mother is confronted with another difficulty. What can she do to prevent the relations between Susie or Jennie and their boy friends from becoming too sentimental? For one thing, she should not permit her girls to come to this age with any illusions about boys; if they have no brothers or cousins, they should know other boys pretty well. Just as John will be protected from premature "falling in love" by association with sisters, so will a knowledge of boys in general keep the girls from making heroes of particular ones.

The taste for romance, which is often so strong at this age, may be utilized by a tactful mother. If she can encourage her daughter to a clear conception of the virility of Richard the Lion-hearted, or the noble manliness and gentleness of Sir Philip Sidney, she may not so readily fall a victim to the charms of Tommy Green, and she may make the happier choice when the time comes, by the help of her high ideals. It sometimes happens that mothers, having devoted themselves to their children in infancy and childhood, think themselves justified in relaxing their vigilance a little after boys and girls are in their teens. Yet this is of all periods the most momentous in their lives. Whatever may have gone before can be overthrown by the rebellious impulses of this time. It is generally acknowledged that it is the decisive moment for boys, the planting time for vices and the growing time for evil inheritance. And it is quite as full of danger to girls— not that so many of them start openly for ruin, as is the case with boys, but evil influences attack them vigorously, scruples are destroyed, and ideals lowered, and many a promising character is led astray by them, because the girl is weak and the mother has relaxed her care.

Of the physical care necessary to carry girls safely through the period of adolescence (from twelve to twenty years), mothers are almost universally informed, but few writers upon the subject have dwelt at any length upon the training necessary to develop the character of the



woman out of the chaotic sentiments and emotions which spring into such active and influential life at this time. The early training, comprehensive as it may have been, could not possibly prepare the child for the special feelings and activities which belong entirely to womanhood.

The ignorance, the innocence, the dependence of the little girl, melt away, but the creature who takes her place is quite as unfit to dispense with a mother's care and guidance. All that the little girl has learned of truth and reverence, industry, unselfishness, prudence, and all the sister virtues, will help the developing woman to find herself; but they can only apply in general ways to the new dangers and temptations which beset her.

Fathers have a special duty to their daughters at this time which they too often overlook. They cannot take as definite a part as the mother may in the evolution of the woman, but they can follow it with sympathy and watchfulness. Nothing so quickly dispels the morbid and false notions that girls get of the other sex as the tender, happy companionship of father. He should make it a point to go about with them if possible. If there is no other time for a walk, let him ask them to walk down to the office with him in the morning, or to meet him in the evening. If there are letters which the girls can write, why not ask them? And what could be better or wiser than a little discussion, growing gradually fuller and deeper, of his own business interests, and politics? He can thus broaden the minds of his daughters, giving them some preparation for practical life, and can establish such a confidence in his love and wisdom as will help him mightily in the very probable event, that he may need to interfere in one of those cases where a young girl's fancy and her ignorance unite to make a crowned monarch of some foolish Bottom. How many a disappointed father grieves because all his love and authority combined cannot save his daughter from an unpromising marriage, as he might have done so easily had he only taken the pains to make friends with her and to win her confidence, before exerting his futile authority!

The frequent necessity for girls to become bread-winners seems to require some special preparation for meeting the world. Many persons think that it should consist in giving them a minute knowledge of the vices of wicked people. Surely this is not necessary. Will not any girl, well-grounded in self-respect, self-control, prudence and strength of character, be able to protect herself with these without suffering the pollution of this kind of knowledge? She will know that there is plenty of evil in the world; she cannot fail to understand that much of it arises from impurity — need she have specific knowledge of just how the moral diseases work, and all their loathsome symptoms and effects, in order to avoid the contagion? If such contaminating thoughts are necessary to her defense, it is because her character training has been weak in other respects.

We all think and talk and read too much about this particular class of evils; we exaggerate their importance by choosing special seasons in which to talk seriously of them. It would be better to speak of them truthfully and naturally when occasion arises, and then to drop them as indifferently as we do other subjects; in this way they will lose both the mystery and the solemnity with which we are likely to excite a too lively interest in them. Girls in business life are bound to be coarsened by their contact with the world, if they keep their minds sensitive to its wickedness. They are sure to find that quality wherever they seek it, and are in danger of becoming calloused by thinking too much about it. It were surely better to teach them to look rather for whatsoever is pure and of good report, and to let the evil slip by unnoticed.

## SOME PHYSICAL ASPECTS OF THE SPECIAL EDUCATION OF GIRLS

WHATEVER intellectual equipment we may be able to provide our daughters for the special duties of home-making and motherhood, it cannot be one-half so essential as good health. Fortunately the fashion of physical delicacy for women has gone out, and where, twenty years ago, any company of women, however small, was sure to make its chronic diseases and the suffering they entailed a sort of boast to one another, it is now considered much more desirable to be strong and well. The social instinct is so powerful in us all that we bow to fashions in ideals, as in material things; and let us hope that we shall never fall back to admiration of the small-waisted, tiny-footed, fainting, sensitive woman who was so recently the model for feminine charms. And let us make the most of our opportunity to mold our daughters to a more sensible pattern.

A physician of Chicago who had long made a specialty of treating the diseases of children, was made a member of the city school board and succeeded in bringing about a system of experiments which follow the physical development of the child, and provide teachers with accurate information as to physical conditions. It was developed that children who are dull and backward are hampered by physical defects, and even that the seemingly vicious ones are generally so from the same cause. A number of backward, obstinate, and troublesome children were examined with the following results, as set forth in a recent magazine article by Arthur Henry:—

“Some were found to be victims of insufficient nutrition [probably, from not having enough food in some cases, and the wrong kind, in others];

being partially starved it was impossible for them to do the regular school work. Others were short in lung capacity, and close investigation showed that the nasal passages of most of those suffering from this defect were too small to allow normal breathing. . . . Sixty per cent were below normal in hearing. Other backward children were pronounced one sided in their physical development, and various other causes of intellectual slowness were brought out."

The experiments made to test endurance showed that "the endurance of girls does not increase in the same proportion with the age as the endurance of boys, from which it is suggested that, after a certain age, boys and girls should not be educated together, nor should girls bear the same school burdens as boys do after that age. In lung capacity, also, the boy increases much faster than the girl after nine, though until that age they are about on an equality in this respect. At sixteen and seventeen there is a wide difference in favor of the boy."

It should be remembered that these conclusions only establish the results of existing conditions, and do not prove that nature ordains that there should be such differences in the development of girls and boys if the conditions were the same. After the age of nine, girls are kept more indoors than boys; they do not have nearly so much nor such violent exercise, and the ideals of education separate them more and more in their pursuits. If girls played the same games, tried to live up to the same ideals of physical prowess, and were as much in the open air as boys, they might develop as boys do.

These experiments establish another fact, and that is that as a rule the children of the best normal physical development have also the best intellectual faculties. Many mothers and teachers believe that the nervous, delicate, bright-eyed, undersized pupils are the brighter ones, but this seems to be true only in isolated cases. This fact once established, and accepted by mothers, we should soon have a revolution in home training, the physical nature would at once take its proper rank, and many a child who is growing toward a frail and suffering manhood would be taken in hand and made strong and well at any cost. And we should all be amazed to see how often it could be successfully done. It is universally expected that a mother will train her children toward the highest moral standards, and that her intellectual ambitions for them will be equally exalted, but we do not realize that it is quite as possible for her to secure for them a corresponding physical perfection. Most mothers do have an ideal of physical manhood to which they hope to see their sons grow, but outside of the wish for beauty in their daughters, they do not think so much of their bodies as of their minds and morals. Fortunately, the public schools are more progressive than the homes, and girls get physical training there which is of inestimable benefit to them.



But if the mother would keep her own place as the director of the education of her children, she should always supplement whatever is done at school in a general way, by the same sort of training given individually at home. This does not mean that she is to line up the children and put them through calisthenic exercises, but that she should understand the spirit and purpose of this training and should supplement the work. Susie will not learn to carry herself properly by means of the school exercises alone; her mother should see that she takes the proper position at table, at her reading, and at the piano; she should accustom her to sleeping upon a very small pillow, or none at all; should see that she walks properly and breathes properly. The only successful way to accomplish this is to erect an ideal of womanly beauty for Susie to admire, which shall have all the graces of health and strength. The Gibson pictures, and others of the same type, are an inestimable benefit in this respect. Hang Susie's room with them, and you will scarce need to encourage her to build herself after their pattern of wholesome and sincere beauty.

If mothers would only look upon the body, not as the child himself, but as the possession of the child, they might be able to throw off a great many prejudices and sentimentalities that obscure this subject, and might proceed single-mindedly to make these bodies what they should be. With all that has been written and said of late upon the importance of a proper diet for children, it is still a delicate subject of discussion. Mothers shrink from robbing the family of favorite dishes, even when they are sure of their injuriousness; and they, very justly, hesitate to deprive the children of foods of which the adults eat freely in their presence. Now it is the housewife's duty to provide, not only palatable but wholesome food for every individual who sits at her table; she should consistently refuse to allow any unwholesome food served to any person whatever. This sweeps away at once all the difficulties in restraining children so far as the kinds of food are concerned.

And it ought not to add to the mother's cares, because it is rather hard than otherwise to find the dishes which, if properly prepared and eaten at the proper time, are injurious to health. Meats, fruits, vegetables, cereals, are in infinite variety and all wholesome in themselves. As a general thing, the simpler the mode of preparation the more nutritious and digestible the food. Spices and condiments are irritating to the delicate lining of the stomach when used to excess. It will be found that children are not likely to be fond of them naturally, and even in the case of the jaded appetites of adults, it does not take a long time to restore the zest for simple foods, if one consistently tries to do so. Girls, for various reasons, show fitfulness of appetite; and mothers, in the effort to tempt them to eat, create a taste for delicacies and the habit of

refusing common and wholesome foods. It is much wiser to find the cause of want of appetite, and to remove it.

Poorly ventilated sleeping-rooms, heavy bedclothing, and a high pillow, prevent refreshing sleep, and destroy the appetite for breakfast. Late hours, exciting social pleasures, overweariness at piano practice, long home study, and indoor life have similar results in destroying sleep and appetite. In a little while the practice of tempting the child with unwholesome dainties in order to persuade her to eat, results in actual disease of the stomach. One writer upon the subject of diet assures us that the mucous membrane of the stomach is very like that of the eye, and suggests that the effect of certain irritating foods upon the lining of the stomach might be tested by introducing a little into the eye! We are unlikely to adopt this practice, but the idea may serve to impress upon us the injury done by highly-spiced and overseasoned foods.

As a general thing, children do not get enough of fruit in its natural state as a food. Mothers would benefit greatly by the substitution of fruit and nuts for made desserts. At the approach of maturity, when a girl's whole being seems to be in a state of ferment, it is sometimes difficult to preserve the regularity of digestive functions; fruit is much better in these cases than medicine. Indeed, the whole subject of diet is of prime importance at this time. Without suitable food, and some regularity in eating, it is very difficult to establish the health of the maturing girl. The fitful appetite may also spring from improper clothing, from insufficient outdoor exercise, and from irritability of the nerves, and most of these causes react upon one another so as to produce a sort of endless round; want of exercise, appetite, self-control, and sleep all acting together to "put the nerves on edge," and the unnatural nerve strain producing all the other evils.

If the girls have not been brought up to the habit of the daily bath, it should certainly be begun now. Some persons find a stimulant in the cold bath, others are most benefited by a warmer one. It is purely a matter of individuality, and mothers should be guided by the natural preference of the child. But there should be a daily bath of some kind, it should be taken on rising and followed by rapid dressing and a few moments of exercise. The practice will soon prove its worth in soothing the nerves, invigorating the system, producing appetite, and helping the child to begin the day in cheerful spirits.

To preserve this cheerfulness is sometimes difficult and almost impossible if the girl—analyzing all her varying physical sensations, the frequent headaches, the restlessness, and fitful appetite—should begin to look upon herself as an invalid and to fall into a state of despondency.

This is not to be considered a diseased condition, but the result of bad management at a critical transitional period. Still, it is the seeding

time of many sorts of disease, and of the physical weakness from which diseases develop. In this connection it is well to bear in mind the conclusions drawn from the experiments mentioned in the article quoted.

It seems that after the age of nine years, the lungs and the powers of endurance develop much more rapidly in proportion to the age in boys than in girls, so that by the ages of sixteen and seventeen, boys are relatively much stronger in these respects than girls. And it is certainly wise to take these facts into consideration in settling the school course. Girls may go along easily with their brothers up to the age of fourteen or fifteen, but then comes a flagging in physical power; they may be able, and often are, to keep up, or even ahead, intellectually, but with manifest effort. Girls of this age get fretfully ambitious; they lash themselves to work; they are nervous over their lessons; they are haunted with the fear of failure; they are oversensitive to criticism, and when they do fail, they suffer intensely. All this shows a falling off in physical power, a loss of poise. What a boy of this age cannot do comfortably is apt to go undone; his physical powers are still so healthful that he acts from natural motives only, while his sister's have given way to nervous stimulations.

Should we not accept Nature as our guide here, and believe her when she tells us that we have come to the parting of the ways? As the boy develops manhood, provide him with a man's training. As the girl becomes a woman, begin to give her the education which a woman can use. This does not restrict the curriculum of either; they may both be as broad as possible and they may be in many respects the same, but they should certainly be given differently.

At the beginning of the period of adolescence, there should be a general letting up all along the line of the girl's training. Her physical development is for the moment of the first importance; Nature concentrates her efforts here, and in the very excitability and instability of the girl's mind warns us that this is not the time for too heavy mental effort. Our school authorities should consider this and adjust their courses accordingly, expecting much less in mathematics and in all the studies which require severe application, and substituting a little more of lighter studies, which occupy and please the mind without taxing it severely. Whatever is lost in these few years of transition, may be quickly regained by the stronger powers of maturity, when the balance is once more established between mind and body. Under our present treatment, girls pass this period under the worst possible conditions; they must go regularly to school, without regard to the weather and the usual danger in exposure, and they must perform a certain amount of intellectual labor without regard to their fitness for it. Every mother of a girl in the high school, in every community in the land, sees her child compel herself to study at



times when her mind almost refuses to act,— or, as happens according to individual temperament, when her thoughts are overactive and exhaust her with their cruel force — sees her irritated at nothing, restless, or languid, giving in some way the evidence of a disturbed condition which is Nature's demand for calm, and sympathy, and cheerfulness in her surroundings. "I have work," she says, "of far greater importance than standing and examinations; I have enough for the child to do, and this which you put upon her interferes with me."

There are no schools, not even those conducted especially for girls, which take into consideration the actual injury of too intense mental application in times of physical depression, to girls who are not yet healthfully established in the functions of womanhood. Mothers have been strangely remiss in failing to require a thing which they almost universally understand to be necessary to the health of growing girls.

We may conclude, then, that some provision for physical and mental differences of boys and girls in school work, plenty of outdoor life, healthful home surroundings and nutritious food, a variety of simple pleasures, social and intellectual, a home atmosphere which will encourage a sincere, wholesome, normal view of life, with sympathetic and cheerful management, should take girls safely from childhood to a vigorous, competent, earnest, and noble womanhood.

## DUTIES OF THE PARENT TOWARD THE SCHOOL

IN MAKING a study of the philosophy and the educational system of Froebel, we are deeply impressed with the value of continuity in methods of child-training. We are constantly coming upon it as a basic principle; each step must rise out of the one which lies below it, and lead to the one which is above it. The mother-songs and mother-play lead directly to the kindergarten. It was Froebel's ideal that the home should be as much like it as possible, and he provided that the kindergarten should be an ideal home. As soon as the child passes the first of the primary grades in the public schools, the similarity between the home and the school life fades rapidly away, and it is not long until he is leading two wholly distinct existences. In the home he is an individual; in the school, he is a part of a great whole. At home, his personal characteristics, his individual temperament, the faults and the gifts which nature has bestowed upon him, his eccentricities, tastes, and humors, are developed; at school, these are repressed, and in their stead those qualities which are average, which are common to all, are culti-

vated, because the school must work for the greatest good of the greatest number. It is possible for the home to give almost unlimited freedom to the individuality of children, while the schools are obliged to restrain it in order to reach all children with equal advantage.

In the home, there need be no limit to the activity which is so natural and so delightful, while in the school, there must necessarily be much irksome physical restraint. In the home, activity may go before instruction, and a child may want knowledge before he gets it, and he may put it into immediate use, while at school he is obliged to take in laboriously much which seems to have no relation to his life, and which he accordingly does not care for.

The advantage in the best conditions of child-training lies with the home rather than with the school, and, were the average mother as well prepared for her work as is the average teacher, the best results would lie with her. As it is, in spite of many things which seem unnatural and useless in the ordinary public school, it is the source of the only genuine training which many children ever get, and to some the few hours spent in the school room are the happiest of the day, because there alone are they understood, treated with sympathy, and believed in. The average teacher knows something of what a child is, and is ambitious for each of her pupils; she is therefore more just and more inspiring than many mothers, for we do not all study childhood in our children.

Too many of us are blinded and made deaf by a mixture of ignorance, self-conceit, and prejudice, relying upon a store of natural instincts and what we fondly call "mother-wit," and believing that there is nothing for us to learn upon the subject. What should we think of a teacher who would refuse to attend lectures, or to read works upon education on the ground that she "did not teach her children by theory"? Yet many a mother will refuse the help of books upon home-training, or of mothers' clubs, or mothers' and teachers' meetings, with the flippant remark that she "does not raise her children by theory."

There is much which the mother might copy with benefit from the teacher — thoroughness of preparation, continued interest in everything bearing upon her work, zeal for her profession, and pride in it, being the most important; but there is nothing to be gained by adopting school methods into the home. The child's life should be more consistent; there should be no gaping chasm between that of home and that of school. The training should be continuous and symmetrical, but the change must come from making the school more like the ideal home, not by importing the present school methods into the home.

The tendency of educational progress is in this direction, but it will take stupendous changes in public opinion to bring our schools near to perfection in this respect. The first real step must be the multiplication

of teachers. So long as one teacher must have charge of more than twenty-five pupils, it is folly to ask for more freedom and more individual care for children. An eminent psychologist, Dr. John Dewey, of Chicago, in his lecture on "The School and Society," says something like this, of our public schools: "Everything is arranged for handling as large a number of children as possible, for dealing with them, as it were, *en masse*. Desks are set close together, with only room for certain necessary belongings, and none for moving about or doing anything. Children are chiefly expected to listen while occupying them." Uniformity of material and method, economy of space and time, and the necessity of fitting a certain amount of instruction to a large number, render it out of the question to permit individual children to manifest themselves in voluntary action. They must accept knowledge and cannot be left free to seek, to find, or to choose that which they need. At home the child is free to *live*; at school he may only be permitted to learn. The mother may develop his individuality; the teacher must constantly press him into the general mold.

When mothers understand what true education is, and realize what a power for good every good teacher is in the life of a child, and set themselves to secure the one and to preserve the other, public opinion and school officials will be with them. Then we shall have schools that are homes, where children live, each free to unfold himself, through his activities, and each teacher has leisure to study every pupil and to choose the methods which appeal to his temperament and fit his intellectual gifts. But the first step in bringing the home and the school together must consist in the closer relations of mothers and teachers. It is strange that, though allies in the most important work of the world, they only occasionally understand and appreciate each other as co-workers. There is generally a wall between them, of professional pride on one side, and of ignorance, indifference, and misappreciation on the other. The teacher has studied her profession, and respects it, but she sometimes loses sight of the child in the system. She finds that mothers almost invariably take a personal view of educational methods, and are prone to pronounce them good or bad, according to their effect upon a particular child, without considering that the teacher must provide for the general good. They see but one side of their children, that which is presented in the home-life, and cannot be brought to consider that they may naturally show very different traits in the wholly different atmosphere of the school; so that it happens that when Bennie Brown's mother and teacher are discussing him they are talking of two boys with very few points of resemblance.

The teacher does not stop to consider how different Bennie's home surroundings are from those of the school, but sets his mother down as



ignorant of his real nature, and the other, catching this thought from manner or expression, resents it, partly because every mother feels herself the supreme authority as to her child, and also because each in her secret heart knows that the teacher has the advantage of having been educated for her work.

The school-training is built upon system, the home-training is too often entirely without it. Mothers do not understand the "system"; it is a bugbear to them, and they are universally filled with the desire to break it down and sweep it out of the way. The feeling has a natural rise in the mother's knowledge of the instinctive aversion which their children bear to a cut-and-dried line of conduct.

Whenever parents freely criticise schools, one hears the expression "too much red tape." This complaint is really the protest against things which the parent does not understand; nobody but a professional pedagogue ever will understand all the benefits of a "system."

While the interest of parents in the schools is almost universal, it is exceedingly fitful, and not to be built upon. The mother starts her little one into the schools, firmly determined to follow its progress and keep in personal touch with the teacher. She makes a number of visits, and, while she is much entertained and pleased to see how differently school is taught since she herself was a child, she somehow does not get a clear idea of the aims of the primary teacher; she cannot understand the general plan as she understood the kindergarten.

If the mother be visiting the first grade in a progressive school, she will be quite carried away by the life, the activity, the interest, of teacher and pupils. She enjoys all the devices which make learning a delight to the children, and she is astounded to find how much of general science and history the little creatures are taking in unconsciously. But—alas! even the best of the new methods comes, sooner or later, to that limiting monosyllable—it generally comes into the mother's mind near the close of her visit, when some flagging of interest reminds her that she is very tired, and she says to herself, "If this sort of thing is too exciting for me, how must it affect little children?"

This over-intensity in schools of the progressive kind arises probably from the fact that it is always the enthusiastic teachers who are first to take up new ideas, and it is natural that they should be very zealous in working them out. Mothers, themselves, are not wholly blameless in this matter. Many of them, feeling that the new methods are rational and natural, praise them indiscriminatingly, and by their attitude force superintendents and teachers to an extreme in operating them. It is natural, too, for a new idea to be exaggerated by its first advocates.

It happened in a town with "advanced" schools that a mother and an aunt one day visited the primary room where Minnie, aged six and a

half, was having her first experience as a pupil. The teacher was famous in the community for her success in advancing pupils, and in making them very happy in the process. Everybody was busy, interested, cheerful, and the exercises went on delightfully, the visitors sighing once in a while with envy of the modern child who gets so much information in such happy ways.

The teacher, in compliment to her visitors, varied her program so as to bring Minnie's class first. The child was a-quiver with delight, her eyes shone and her cheeks were flushed; she twisted her fingers, shifted her feet, and could not wait to be called upon, so eager was she to recite. But her excitement was too great, the words would not come, and the lesson flew out of her mind like a bird. The kindly teacher tried to help and soothe her, the anxiety of mother and aunt was written on their faces, but it was a painful experience for Minnie, and for the others. Later came the number work. "Minnie is very good in this," remarked the teacher, and the dejected child was stimulated by the encouragement and was all a-quiver as before, but only to fail again, with double humiliation. The mother was much impressed by the incident and remained to discuss it with the teacher. She learned, to begin with, that the occurrence was not unusual, though almost always happening when visitors were present. "But they are always eager to recite well," Miss Bell explained, "and even when we are alone they feel very badly when they fail. Minnie is quite excitable, but not more so than many others; she lacks self-control as yet."

In the course of the talk, this teacher frankly said that she thought the children of the first grade were kept in school too many hours each day, and was confident she could accomplish more with them if they spent but half the time in the schoolroom. "They get tired and their minds do not act, and the things which they learn in the afternoon, while worn out and listless, are not retained." "But" said Minnie's mother, "why do school authorities permit children to remain at school all day, when teachers know that it is not good for them?" Miss Bell was polite, but she was truthful, so she answered more boldly than teachers are wont to do, "Because most mothers prefer to have the little things out of their way more hours in a day; they know they are safe at school."

Both ladies had inwardly resolved to gently criticise the intensity of Miss Bell's methods, and to intimate that they must be over-exciting for such young children, but they went away humbly silent. It seemed hardly fair to expect perfection in a woman who must be teacher, friend, and nurse-maid, to thirty-five or forty little children at a salary of a little more than a dollar a month for each—especially, so long as she showed a much more intelligent and unselfish care for their welfare than their own mothers.

So long as school-teachers are mere mortal women, mothers should not expect ideal perfection from any one of them, but should reserve their condemnation of surface faults until they are acquainted with the whole character, and can make sure that there are no strong and noble traits which will outweigh the influence of such faults. The first and greatest test of the teacher should lie in her power to make the children love her. The love of grown people may be won by cringing, by flattery, and other deceitful qualities, but they have little weight with children; the latter are attracted by frankness, simplicity, heartiness, and genuine kindness; they like sincere traits, which they are able to find out in the character of people who may be, in other respects, far from perfect. If they can find any of these in a teacher, they will love her, and if they love her they will profit by all the good that is in her; and, in many cases, her faultiness escapes their notice, or they are little affected by it. Faults which come from warmth and impetuosity of disposition are especially harmless to normal children. Those which arise from coldness of heart,—pride, selfishness, or cruelty,—the disposition to discourage children, and to be sarcastic,—are much more serious in their bearing upon the character of pupils.

It would be well for mothers to remember that teachers have their private cares, their griefs, their disappointments, and their illnesses, and to cultivate a little womanly charity and sympathy. It too often happens, after years of faithful service in the schools of a community, that a teacher who is beginning to "break down" is pounced upon by critical mothers and her dismissal demanded on the ground that "she is too nervous and peevish to know how to treat the children properly." It would always be wise to reject the old teachers at the first sign of weakness, if there were not some qualifications for successful teaching which are far more valuable than youth, or health, or even good humor, and, except in the rarest cases, these are gained only by long association with children and long experience in educational methods.

Mothers should be inexorable as to teachers with catarrhal or tubercular troubles, as these may be communicated to children in close school-rooms; and no person suffering from them should be permitted to teach. But, in the case of incommunicable forms of ill health, they should be quick to see and to sympathize; by influencing the children to be especially tender and helpful because "teacher is not well," they would help to remove the cause of much irritation. The kindness of her pupils will assist any teacher in her struggle with physical suffering, and the practice of giving such help is invaluable character training for children. This is almost invariably proven in households where there is an invalid; if there is the constant practice of sympathetic kindness, the whole family is tenderer and less selfish because of it. It should always be



remembered that though peevishness and injustice are seriously objectionable in a teacher, they do not have so lasting an effect upon the characters of children as may be made by the mistakes of an inexperienced teacher.

This is especially true as children approach the age of adolescence; the instability of character, and the impressibility which mark it, require for the best results the steady qualities and settled convictions of the older teachers. The enthusiasm and elasticity of young men and women are likely to exaggerate the excited, irrational state of the mind at this period; calmness, judgment, and poise, are needed in the character which is to guide and to restrain; and these qualities are, naturally, not often found in healthy, normal, young men and women; and no amount of study of pedagogy can produce them without the help of years and experience. While there are only a few communities in which mothers have the official right to choose teachers, there are none in which they may not have an indirect influence upon the choice made by others. They should consider well the growing tendency to fill up the teaching corps of high schools with young men and women fresh from college.

The worship of youth seems to be a national cult, perhaps because enthusiasm and a belief in the possible is a national characteristic; and it follows that in many professions, and especially in that of teaching, we are always eager to throw away the ripe fruits of experience for the promising flowers of a new generation. This indicates the instability of our culture; learning is so new to us that we are in a constant alarm lest we have not the latest fashion of it.

Some physicians put the period of adolescence—the growing from childhood to maturity—between the ages of fourteen to thirty, in the male sex, and twelve to twenty-one, or even twenty-five, in the female. If this be true, it hardly seems wise to put children at this critical time under the care of teachers who have themselves scarcely passed it. Young teachers in the grades are, of course, much more mature in comparison with their pupils, and may do excellent work for them, their very enthusiasm and elasticity being useful in the methods best adapted to little children.

At the age of adolescence the course of education should broaden and deepen, should become calmer and stronger, because it is time for the character to take on these qualities. And the teacher should have lived long enough, and have learned the lessons of life so thoroughly, that he or she can offer the child some ideal for the maturity toward which he is striving. The young man or woman, however talented, and however filled with the new wine of advanced theories, is too near the high school pupil in age, feelings, and experience, to be his best guide, and

dangerously near in the thoughts, the pleasures, and tendencies of youth. We have become so inured to co-education, that it is out of date to discuss its dangers; however, all the arguments which were ever urged against it, and some of which have proven just, may be logically applied to the case of the young girl pupils who are under the care of young men teachers, and of the boys taught by women who are still young girls. Sentimental thoughts are as natural to the minds of boys and girls of high school age, as the color is to a flower; and normal young men and women have not yet outgrown them. The young man, by his very youth, and the masculinity to which a girl can no more be indifferent than to the sunshine, must disturb the thoughts of girl pupils; and the woman teacher, still young enough to receive masculine admiration, can no more help distracting the thoughts of boy pupils than she can help being feminine — and if she could, nature would attract the boys in spite of her.

While these thoughts are natural, and necessary to the development of men and women, it is certainly unwise to subject children to the constant influence of them in the daily life of the school; they inevitably interfere with mental culture, and prematurely develop emotions which are dangerous. What mother, having reared her children to the ages of fourteen to twenty, would be willing, if it were possible, to throw off the development which the years have brought to her and to be again the young woman at the beginning of the career of motherhood, and from that vantage ground continue the education of her children? Every one knows instinctively that her youth would be against her, that the children must suffer from the immaturity of her character, and, however much she might herself enjoy being young with them, she would refuse the gift of youth for their sakes. The relation of teacher should be as much as possible like that of mother, and there would be nothing illogical in a rule which should say that no teacher shall have charge of a child who is not old enough to be that child's father or mother.

There is no presumption in the recommendation to mothers to set to work to influence the selection of teachers for the public schools; it is a duty. They should prepare themselves by thoroughly canvassing the whole question; should work conscientiously, from the highest motives; should lose sight of personal interests, and keep constantly before them the thought that the schools are for all of the children, and that while they should do the greatest possible good to each individual child, the interests of the many should never be sacrificed to the few.

The mother's social obligations to the teacher should be delicately spoken of, as well as delicately treated. Yet the question is of importance in the search for the things which shall bring about a closer sympathy between them. There can seldom be any question of the average

teacher's fitness for the most refined social circles, but she is a woman who does not make marriage—which will give her leisure for social obligations, and a home from which to dispense them—a part of her scheme of life. The consequence is that the teacher is becoming more and more a social recluse—she is missing the brightening and broadening effect of society, and society is missing the influence of the most cultured and advanced women of every community. Mothers should exert themselves to change this, not as a favor patronizingly extended to teachers, but as one sought for their own culture, for the good of society and, last, but most important, for the benefit of their children. For, as these children are to be fitted by them for a life in the world, it is best for them if their teachers enter as heartily and intelligently as their duties will permit into warm, human, contact with it.

The various associations of mothers and teachers should be of value in uniting them; not “mothers' meetings” where mothers sit to hear teachers talk psychologic mysteries, or to hear present school systems lauded; nor mothers' clubs where teachers listen to papers on whooping cough and infant diet; but those meetings, under either, or any name, which bring them close to one another in the genuine exchange of views and interchange of knowledge about children. The mother, under the influence of these sympathetic talks, begins to see in the teacher another mother, and the teacher to believe that mothers are also teachers. After this point of view is reached, the visits to the schools may occur daily, and always with benefit; the wall between school and home will melt away and mother and teacher will go hand in hand to the work of furthering their mutual interests.

The awakened interest in child-study and home-training that is spreading so rapidly among the mothers of our time, must lead them to an interest in education in general, and to see, sooner or later, that this is a matter, not only of vital importance to them, but one in which they have a natural right, and a pressing duty, to take active interest. They can never again confine their sense of responsibility and their efforts to the home-training, and leave all questions of further education to school authorities and teachers. The spirit of the time—as represented by school men, philosophers, and the purveyors of current literature, all unite to feed this new interest of mothers, and there are few of them who do not find plenty of material in books, magazines, and newspapers, for their enlightenment as to the latest educational ideas. All of these authorities agree that the past ten years have been most momentous ones in the history of educational progress. Indeed, the public schools seem to have been, and still are, in a state of ferment, in which they have certainly thrown off an immense amount of sediment and worked wondrous changes in their own constitution.



All this progress, all of these changes, seem to be in harmony with child-nature and its tendencies. We see the school-life daily become more interesting, and the process of gaining knowledge constantly more delightful, so that it is not likely that any mother will object to educational progress as long as its results are so agreeable. Still, the mother must always look upon these matters from a different point of view than does the teacher. To the teacher a mistaken method is no great thing, in a time of rapid changes when the profession of pedagogy is feverishly active, and everybody forging ahead under the stimulus of enthusiasm and the delight of novelty, it is natural that, now and then, some zealous educator should offer, fully believing in it, a spurious method, and even possible that it may be adopted into the system and practised for some time before its worthlessness is detected and it is thrown aside. Perfectly confident that the hour of its rejection is bound to come, the teacher even consents herself to practise it, without revolt, in the meantime. But to the mother, every change in educational methods, and especially every mistaken change, is of burning importance. She finds no comfort in the certainty that the school system will finally purge itself, and even be a little better for the experience, because the short space of time in which the wrong method was in practice may have been the only time for her child,—the one passing period of his school-life when he could be subjected to teaching in that particular branch at all,—and he has had the wrong kind!

Such considerations make mothers a rather uncomfortable factor in questions of educational reform, and the effect will doubtless be to check a little, their recent headlong progress. No thinking mother will wish to discourage school men, but it is perhaps as well that they should have a restraining consciousness of force which will call them to account, not so much for what they may do for education in general, as for the effects they may work upon individual children. These men may awake to the fact that this great power can be called to their help in their efforts for education, when they have won its confidence through efforts concentrated upon reaching and benefiting the children, as individual child, and future citizen, rather than upon the perfection of an educational system.

Mothers must do their part by restraining both the praise and the blame of new methods until they are proven by time and results. The chorus of praise which greets any change that happens to strike the popular fancy has been the temptation of many an honest school man, and the faithless way in which this same uncertain opinion will turn and rend him without reason has been the ruin of many a progressive superintendent—and sometimes his downfall has come from his wisest and most beneficial reforms.

The mother must look through all of these shifting and exciting scenes of new methods, and their success and failure, to the well-being of the child. This, and this alone, is what she has to consider, and because of it she should be rational and prudent toward educational questions, not moved by popular clamor, one way or the other, but trying to get at the real merits of teachers and methods, and to be faithful to those which seem to have intrinsic worth, to be best fitted to the natural child, and to promise most for the development of his character.

## HABIT FORMING

THE whole process of child-training may be summed up as the formation of the right habits of thinking and doing. "A habit is the tendency and desire to do that which we have frequently done before." Obedience, truthfulness, self-control, are habits which result from right thoughts and their corresponding acts; cruelty, impurity, inability, are habits which result from wrong thoughts and acts. Whatever a man knows, or feels, or is, comes out in his character; character is built of habits. Reason and conscience are developed in the process of forming proper habits, but in its earlier stages the child must be prompted to right action by the will of the parent. This will should be removed at the instant the child can be trusted to his own impulses. It is the choice of good which makes strength of character. The necessity for directing the child's actions in infancy and early childhood makes obedience the first of habits to be formed, since it is necessary to all the others.

Many mothers shrink from requiring obedience because they do not understand its importance to the happiness of children. They have the mistaken idea that it can be taught only by harsh and unsympathetic methods, and that an obedient child is one who has had all of the will and spontaneity crushed out of him. The true meaning of obedience is a willing and reverent submission to righteous law. It protects the child from physical and spiritual dangers and is absolutely necessary to his future usefulness, as well as to his present happiness. The child who must govern himself by the light of his own desires has a responsibility far beyond his years and strength. To yield himself to the calm, sweet will of a tender mother is his privilege and happiness. The mother, on her side, should cultivate her worthiness of trust, endeavoring to grow constantly in justice, consistency, and sympathy.

As soon as the baby is old enough to cry for what he wants it is time to begin the training for obedience and self-control. Food, comfort, and love should be his without asking; anticipate his legitimate wants, but

do not train him to cry for things by giving them to him when he takes that method of asking for them. A baby is a helpless and tender thing, and nature has strung the mother's heart with cords that vibrate to his every appeal, so that to deny this earliest one requires all of her resolution; but if she yields this point she finds, later, that the little bad habit has as great powers of growth as baby himself. It will make of him a tyrant in infancy, a wilful and irritable child, and will imbitter all of his life with unreasonable grief at disappointment.

The process is this: Baby cries for some one to "walk" him up and down the room. Every time the crying brings the indulgence the habit is strengthened. If one thing is to be had by crying why not all things? is baby's reasoning. A ball, a bell, or some other attraction will make him forget the thing he wanted. There is no way to compel him to obey at this early age; he must simply unlearn his habit as he learned it — by experience. If crying brings no result he will cease to cry when he learns the fact. The distraction of his attention simply weakens the impulse to get his way by that method. A single lapse undoes all that has been accomplished in child-training; it is inconsistency, not firmness, that is cruel.

When baby begins to creep he finds himself in a world full of forbidden things. If he is attracted to the books on the bottom shelf of the table, some one says "No, no, Baby musn't touch them!" Even while his hands are still stinging from punishment,—such little, helpless hands! — the desire returns as long as the books are in his reach. Is it just to him that they should be there? When he is old enough to realize that you trust him, nothing should be put out of his reach, or locked up, or hidden from him, but for the present, his impulses are far too strong for his uncultivated powers of self-control. Why should not the low shelf hold toys, or something which he may handle? The home should be arranged for the few months of his infancy so that prohibitions and temptations may be as few as possible.

There is a difference between wilful destruction and the accidental kind which comes from handling things which he should not have. In this case, perhaps, the hands should sting a little; but the instant the connection between the ideas of naughtiness and the resultant punishment is made in his mind, turn his thought to something pleasant, don't leave him to cry and be wretched, life will give him training enough in regret and remorse, it cannot profit him now. Childish faults should be forgiven as soon as corrected; they should not be recalled, nor referred to in the presence of others. Nothing is so dangerous to the child's self-respect as this too common humiliation.

All of those habits which are necessary to the preservation of life, health, and society, are based upon experience, and the child, having



had so little, must be guided in their formation by parental authority. Parents have authority simply because maturer judgment and longer experience give them an understanding of the laws of life, and enable them to interpret them to their children. When the parent makes exactions from caprice or love of power he is exercising an unwarranted authority; his obligation is to teach and to enforce righteous laws.

The best method of instructing the child how to avoid the dangers he meets in the ordinary course of daily life is a patient and oft-repeated drill. When baby crawls toward the fire take him up, at the instant of starting, say gravely, "The fire will burn you," and offer a counter-attraction. The most you can do for a creeping baby is to divert the impulse and prevent the formation of a habit. Repeat the drill constantly, but don't test it by leaving baby alone with the grate. This difficulty, like many others, will pass. When old enough to go about, the child should be drilled in crossing the street. Point out the cars, vehicles, and other sources of danger, teach him to calculate their distance and to cross quickly; but be careful to develop neither nervousness nor fear. He should have similar drill in mounting public stairs, getting on and off cars, and in meeting all of the emergencies that may be foreseen.

Boys and girls of a venturesome disposition, to whom it is difficult to teach prudence for the sake of their own safety, may learn it when made responsible for younger children. This pride of responsibility is a recognized educational force; teachers use it freely, putting the bad boy in charge of the others, with the result of making him eager to rise to the level of their trust. It is probable that children drink much oftener at school than at home, and that the unfiltered water, and common drinking cup, spread contagious diseases among them. Each child should be provided with boiled or filtered water in a bottle. A normal boy, by his own choice, conquered for himself the habit of thirst at school. He was obedient, and when it was suggested that he should drink as little as possible, he controlled the desire; he had also been taught to be fastidious, and shrank from drinking from the cup used by all of the pupils, and he understood the danger of contagion. In a very little while he lost all desire to drink at school. If the early training in obedience has been carefully given, self-control is learned, for the child, in order to submit to the will of another must first control his own impulses.

Courage and fortitude are necessary to self-control. The first is not only a virtue but a blessing. What is more pitiable than a fearful, hesitating, uncertain man or woman? Such persons anticipate a thousand blows which never fall, and multiply the pangs of those they must bear; fear makes them shrink from noble acts, and drives them to craven ones; holds them hesitating while opportunity and happiness pass by, and so enslaves them that "all their lives are found in shallows and in miseries."

No one should be permitted to awaken or cultivate the fear of a child. Fear of storms, of a fire, of a burglar, of a mouse, is appallingly common among adult women; many of them by example and discussion cultivate the same weaknesses in their children. If these fears are genuine, and cannot be controlled, one would think the mother, who suffers so much from them, would hesitate to afflict her children in the same way. The reflection that God "rides upon the storm," and looks after the sparrows, should calm the fears of a Christian woman.

All fears weaken — in teaching children to avoid danger make common sense your incentive, not fear. Do not attempt to cure a child, who is afraid of the dark, by leaving him alone in it. Nurse him through this affliction as tenderly as if it were the measles. Let him have a light, or better, sit with him in the dark; don't refer to his fears, the only cure is to crowd out the injurious impressions of fear by calm and pleasant thoughts. The process will be long, the cure difficult, the ounce of prevention should have been administered instead.

Fortitude strengthens courage. When children are hurt or ill, meet their suffering with instant sympathy, and with such remedies as you know, then treat the pain as a natural thing which the child must bear alone, since no one can share it, and complaining makes others unhappy.

Truthfulness would not be a rare virtue in children, if grown people had more of it. If parents always faithfully kept their promises, if children's questions were always truthfully answered, if nobody put them off with unreasonable excuses, if elder brothers and facetious visitors could realize that "fooling" children is fool's wit, the habit of truthfulness would be easy to form. Children are clear-sighted and single-minded by nature, and few of them are capable of embellishing or misrepresenting things without some help from example and suggestion.

The power to see things as they are, and to describe them faithfully, makes a sincere, practical, dependable character. Accuracy is a high and useful form of truthfulness, and children should be trained to so describe that which they have seen, from the time they are able to express themselves. Courage and self-control help a child to tell the truth, and self-respect will make him scorn to lie. The highest form of truthfulness, that which comes out in act as well as word, cannot be preached into the character, it must be built in, and it is well for the parent to reflect that example is about his only effective tool. Scientists assert that children arrive, sooner or later, at a period of "story telling." It may be the sudden fruition of all the lies that grown people have told and acted in their presence; it may be a step in the development of the imagination. In either case its appearance should not drive the parents to deal with the child as if he were the first of reprobates. Truth is so

noble a virtue, and so rare, that one can afford to spend years of patient effort in developing it in the character of a child.

When the tendency to falsehood appears, apply to it the first rule for the correction of faults — no discussion; keep quiet as to your task and your methods, then take the second which is: Correct a bad habit by leading children to repeated actions of the opposite tendency. In this case the drill in accuracy may be given. Don't "set a day" to cure the child, simply influence him by suggestion and example to tell you the truth. Don't set traps to catch a lie, set them for the truth. When you can forestall a falsehood by turning the conversation and the thoughts, you have helped a little. These suggestions are general because there are no tangible methods; the cure of falsehood, is a matter of influence and spiritual suggestion. Let the child feel that you love him, and are true yourself; he cannot resist the desire to reach your standard.

Honesty is a part of truthfulness, and needs as long a drill; it must be supplemented by respect for the rights of others, and this habit, in its turn, by self-respect. And because they are all akin, self-respect is the strongest of incentives to both honesty and truthfulness. Children have their ideals of character, help them to make the standard high. Nothing helps a youth to resist temptation so much as the feeling that vice is beneath him.

Some of the physical virtues rank with the three under discussion. Cleanliness has ties of relationship with honesty and self-respect as close as those with godliness. A child easily sees the connection between moral and physical purity. A hatred of filth is armor against vice. Very little children should be drilled in washing themselves long before they can do it successfully. The love of "paddling in water" is one of nature's gifts to mothers—if they will utilize it as a help in training children in habits of cleanliness. This virtue may be inculcated by suggestion; it is easy to express the disgust excited by uncleanness, and children are quick to imitate it. Let honesty have its perfect work; don't allow the child to get surface habits of neatness. Preserve purity of thought, not by the dangerous process of pointing out the evil to be shunned, but by filling the mind with other and nobler subjects.

Surroundings and companions put limitations on the mother's power to keep her child from the knowledge of evil. She cannot follow him into the child world where good training and bad is shared in common; nor can she keep him from spending much of his existence there. Perhaps it is as well; a childhood passed wholly in a perfect home might be celestially innocent, but could it produce a strong manhood? Is virtue a virtue till it has met and conquered temptation? Children may be told,



“ You will hear bad language, but you will not want to be like the people who use it. You will see rude people, but you will not want to learn their ways.” It is the power of choosing the right which gives strength to character.

This is the moral side of self-reliance; the practical is more easily and sensibly developed by manual training than in any other way. This does not mean the technical training, but simply training in the habit of using the hands. Give children plenty to do, let them have something on hand, always, something making, in which you are interested too; suggest sparingly, lead them to find a better way, but let plan and execution be their own. Encourage the work for its own sake, however crude the product. The obedient, truthful, courageous, and resourceful child is seldom unhappy. If he is morbid or discontented there may be physical reasons, which a fruit diet or more fresh air will remove.

The habit of taking “ short views of life ” will be as useful to the morbid child as it was to Sidney Smith; don't encourage him to anticipate future difficulties.

Cultivate the love of humor. Take the child's attempts at wit at his own valuation and encourage them with appreciation.

Comic toys in babyhood, and comic pictures and humorous stories later, will give him a taste for the bright side of life, which will carry him over the rough places. Teach him to laugh out, honestly, heartily, and you give him a panacea for mental and physical ills.

Courtesy, like cheerfulness and contentment, is a phase of unselfishness. The child should be instructed as to the reasons for all social usages, and should understand that one's social standing depends largely upon their observance; but he should be urged to courtesy from the higher motive of kindness. The atmosphere of the home will determine the child's manners, if the family reserves, politeness for the parlor, the child will be difficult to train.

The first and simplest lesson of courtesy—the acknowledgment of favors—should be given as soon as baby is old enough to offer anything to mother. She should never fail to say “ thank you,” with a tone and a smile to impress her sense of happiness in his conduct. The training in courtesy should never be intermitted, it should be given quietly without discussion, and chiefly by example. The child who is himself treated with unvarying politeness needs little further instruction. And why should not every child be treated so? is rudeness ever so inexcusable as when shown to a child?

Avoid criticism of manners at table, it violates the spirit of the law of politeness which you would teach. The keen young appetites of healthy children make it difficult to impress the necessary calmness and courtesy upon them, but example and suggestion will do it in time.

“In honor preferring one another,” is the divine meaning of courtesy, and the child can be made to feel its beauty. There are certain privileges which should be accorded to the obedient and self-controlled child, for instance, he may go to skate because he can be trusted not to sit in the snow to “cool off.” Or he may go to see the parade because he will return when he promises to do so; he may see the fire because he will remain at a distance agreed upon; he may invite a friend to dinner because he obeys you in the choice of companions. Such acknowledgment of his virtues develops the self-respect which is the spur to all noble conduct.

Do not, however, allow this suggestion to lead to overpraise of a good child. When moral self-consciousness develops, growth ceases. Meekness is necessary to improvement, because it keeps the mind open to new truths.

Every habit fixed in the conduct leads to the formation of another; all good habits are blood relations and thrive happily together. Suggestion, example, and encouragement develop them; harsh criticism, sarcasm, and prohibitions, all close the child’s mind to improvement. Little has been said here of methods of destroying bad habits — it were far better to forestall them. When this has not been done, influence the child to much practice of opposing virtues. The selfish child should be led to do unselfish acts, and the cruel one must be trained constantly in acts of kindness.

There is much still to be discovered in the secrets of mental suggestion, and mothers should be able to furnish scientists with valuable information as to its results, for they feel its power every day. Some subtle bond between them and their children makes the mother’s moods, and especially her anxieties, a matter of great import in the education of her little ones.

Her fears affect them, her aspirations and standards are communicated without words. She soon learns the necessity for keeping her own mind swept and garnished; training of a child is a liberal education for the mother.

Let her take it humbly — “and a little child shall lead” her.

CHILD'S ATTITUDE TOWARD SOME  
PRACTICAL QUESTIONS

*By KATE E. BLAKE*

THE child's attitude toward any question must arise primarily from the opinions of his parents and companions, and from what he is taught at school; of these influences the opinion and conversation of parents far outweighs every other. The student of human nature might almost certainly predicate the intellectual status and moral standards of parents by the tendencies of their children; and this notwithstanding the efforts made by the majority of parents to start their offspring upon a little higher plane of life than they themselves have been able to reach.

A circus visited a small western town and pitched its tents upon a common near the home of a little boy of seven, who felt a boy's natural joy in all the excitement and novelty which accompanied it; but nothing was more fascinating to him than the merry-go-round which was located on the corner nearest his home. It seemed to him that there could be nothing in all human experience so delightful as to sit in the cushioned saddle and ride one of those plunging wooden ponies, round and round, to that beautiful music. When he was finally given permission to have his heart's desire, he pointed out the particular pony which careful inspection in the morning had decided him to select, and was lifted to its back by his father, who put a "nickel" into his hand, that he might have the pleasure of paying his own fare. The child held the coin tightly, but without thinking of it, his whole mind on the pony and the coming ride. For some reason, the collector missed him in his rounds, the music started up, and the ride began; the boy realized what had happened, and knew that he would now not be asked to pay for the ride. The thought filled him with delight, and he said, "I'm getting this for nothing." He did not listen to the music, and was perfectly indifferent to his plunging steed; he only longed to share his good fortune with his father and therefore found that the ride outlasted his patience. The instant he was set down he ran to his parents in wild excitement, "O papa, I got that ride for nothing! Here's the nickel! here's the nickel!" When he had returned home he was full of glory in his experience, not of pleasure in the music, and the motion, and the pony, but of triumph that he had not been obliged to pay for it. Poor little fellow! he had heard so much of money, had been so used to devices for saving it, and to laments at parting with it, that it outranked all other possessions in his mind. And what chance has such a child for any real happiness in the future? As was the case with the ride on the merry-go-round, all the good things



of life will be estimated by him in terms of money, and there will be few things which will so absorb him as to make him careless of the price; few things that will seem as desirable as the money which they might cost. It is probable that so marked a case as this one, resulted from a long inheritance from money-saving forebears, but it seems a pity that he might not have been rescued from such a narrow and unhappy view, and one which is so certain to deprive him of all the really desirable gifts of life.

Two little boys were playing "store." They had made a quantity of "poke-berry ink," bottled it, and were selling it to two other children for so many pins per bottle. After a while the little partners quarreled and John indignantly threw all the bottles down on the bricks and broke them. Upon investigation it was learned that Lucy, a purchaser, had complained of the size of her bottle. "But" said John, "that's all the bigger bottle anybody gets for two pins." "I think you might give me a little more than you do other people, and, if you don't, I won't buy things of you," Lucy answered. So Fred, who was an obliging lad, found a small bottle and proposed to fill it also for Lucy. John objected that there was no "extra" ink, and Fred solved the problem by taking some from each bottle on the shelf, filling them up with water, and sending Lucy off in great satisfaction. John, who had been in the garden, while the final arrangements were made, came back just in time to discover that Fred had adulterated the whole stock of ink, whereat he called him a cheat, refused to be "partners" any longer, and finally in the heat of righteous indignation broke all the bottles. And here in the small child-world was a perfect reflection in miniature of common events in the larger one. Who does not know numbers of persons of Lucy's type who solemnly insist upon having more than their share, at any cost to the rest of the world? The housewife who will buy nothing but "bargains," who always gets her work done for a little less than the regular price, who in every transaction must always have something "thrown in" is a common example of the kind. Fred represents the suave merchant who is also a sharper, and John one of those rigorously honest souls who feel called upon to expose and punish the sins of their neighbors even at the risk of committing one themselves, which sin, as was the case with John and the ink, they either cannot realize, or think should be readily excused on account of the violence of their virtuous feelings. Trivial as this little occurrence was, it was a most reliable index of the character of the three children, and would lead the investigator without a turn to the exact influences which surround them in their respective homes. Lucy heard just such bargaining boasted of every time her mother went shopping. Fred had become so inured to the idea of deceit in trade by the way the matter was discussed in his own home, that he had no thought of dishonesty in connection with it; and John was so accustomed to the

association with superior persons who were wide awake to the faults of their neighbors, that his action was quite as natural as that of either of the others.

Two little girls dancing up and down in a bric-à-brac-littered parlor knocked over a small table and broke a costly vase; without saying a word they slipped out of the house, and in a few moments were merrily romping upon the lawn. When questioned about the broken vase Fanny hung her head and looked guilty, but Emily said, "I guess may be it was a mouse." It did not transpire that, in Fanny's experience, punishment always followed the consequence without regard to the motive of an act, or that Emily was accustomed to hear somebody else blamed with all the shortcomings of an incompetent mother's housekeeping and often as irrationally as she had blamed the mouse.

Grace, who was ten years old, while waiting in the sitting-room of a neighbor to whom she had been sent on an errand, picked up and read a letter lying upon the table. The letter happened to contain some very private information; Grace had heard much gossip upon the subject, and, being quite excited by what she had read, told it to other children through whom it reached a wide circulation and caused great unhappiness. Few of the persons who suffered from the child's conduct stopped to reflect that she was being brought up by a prying, gossiping, uncharitable woman, and that she heard the private affairs of other people constantly discussed. We have here a rather startling array of sins for such small sinners. Niggardliness and grasping, sharp trading, cheating, and self-righteousness, deceit and lying, prying and gossip. Hateful sins! aren't they? And yet such innocent sinners have to suffer for them—while the real culprits, parents who preach these vices in daily acts and conversation, who are guilty of constant immorality of this kind, or worse things, go unpunished. But this will not always be the case, when we have gone a little further into the study of child-nature, and investigate a little more carefully the sources of character, we shall begin to hold parents accountable for the outcome of their training; we shall give less sympathy to those whose wicked sons have brought their "gray hairs in sorrow to the grave," and pity the sons for having had incompetent parents. What is the sorrow of any father or mother whose son has gone to ruin, compared to the piteous fate of the boy?

And experience is beginning to prove to us that bad sons are hardly likely to have had "good" parents in all that the word implies. While we do not expect the thistle to bring forth figs, we see no reason for believing that fig-trees will produce thistles. An attempt to call parents to such a rigid accounting for the results of their efforts is unpopular. It smacks of disloyalty to all who have gone before, nevertheless, the time must come when fathers and mothers will be judged by their children,

the home influence by the characters it produces, the inner life of parents by the conduct of children,—not only by the final product of years and education, alone, but by the ideals and points of view of the little ones, as revealed in child-life.

It is a little strange that the world has managed to be so lenient to parents, as history and observation will prove that it has always been. In every other relation of life we know men by their fruits; a failure in the results of any other duty is accepted as condemnation of the character and conduct of him who failed. But there is a widespread popular opinion that most excellent parents may have, and often do have, wicked and worthless children. Either we parents cling together with a sort of class fidelity and shield each other against the truth, or the obligation of parenthood is a myth, and the whole course of parental training a matter of chance. We do not believe that a manufacturer who understands his business will turn out inferior goods, we do not call that man a good carpenter who builds poor houses; when teachers turn out uneducated pupils we refuse to call them good teachers, why should we hear so often of the "good mother" or the "good father" of wicked sons? True, a good man may be a failure as a parent, but since parenthood is his highest destiny and most solemn duty, it should avail him little that he is a good man in minor relations so long as he fails in this paramount trust. We may assume these duties ignorantly and carelessly, but if we remain ignorant and careless, and so fail in discharging them properly, the penalty should be upon our heads, and the open shame, which might warn others that God and man require a parent to make himself fit for the work and to do it well.

While all parents have fitful glimpses of the importance of their obligations, and most of them would be willing to make a stupendous effort at great sacrifice, at any given moment, it is hard to make them see that the only way to do their duty is to take advantage of every event and every moment to influence their children for good. This involves a careful and upright life on the part of parents, and requires that the home where children are growing up should have an atmosphere of purity and virtue. And not only should it be kept sacred for the higher moralities, but unceasing effort should be made to shut out of it all the little meannesses,—unreason and selfishness and uncharitableness which do a great deal more mischief in the world than the bigger vices. And nothing is more essential than an open-eyed, clear-sighted view of life as it is, which means that we are neither to confine our investigations to the dark places and filth heaps, nor to look only at the show places through a mist of sentimental optimism. And in forming the views of children it is especially necessary that we should not impress them with exaggerated evils, or a belief in goodness which does not exist.



We have had a deal of excitement in this country over a play which good people everywhere wished to shut off of the stage. The play originated in a book, which one of the greatest authors of France wrote for, and dedicated to, his sons of twenty; it was clearly the effort of a father to concentrate all the power of his genius upon a warning to his sons and the young men of his country against the danger which every young man meets upon the threshold of life, and by which many a promising career is ruined. According to our ideals the presentation of such a play, or the general circulation of such a book is extremely dangerous to public morals, yet Alphonse Daudet was not altogether wrong in painting his powerful picture of the helplessness of the average young man in the toils of a wicked woman. The Bible itself warns against her "whose steps go down to hell," and describes the young man in her toils as helpless as a bird in a snare, and it would seem that parents should find some means—if they will not take Daudet's—of making young men realize this danger before it has overtaken them.

There is a widespread belief that nothing is so good for a young man as to be "sent into the world" and "thrown upon his own responsibility"; and a very widespread ignorance among ordinary fathers and mothers of quiet communities, of the dangers which beset their sons who are thus removed from the restraints of familiar conditions. No middle-aged father in a moral community can quite realize the exact conditions of the present life in cities. The world has changed greatly in a few years, and wickedness is never old-fashioned. As for the mother, how can she know what is going on in the great, restless, fermenting life of cities? The general practice is to throw the boy into the mad current and to trust that he will develop an instinctive power of swimming. On the other hand, the girl is hedged in by conventions and warnings; she learns to be on the lookout for the men who prey upon innocence, and the ordinary well-educated, "wide-awake" American girl is much more able to protect herself than is her brother.

It is very difficult for the average mother to realize that the world is as full of women who prey upon innocence, as of men, and that her boy is actually in greater danger of ruin than her girl. The statistics show an alarming number of open temptresses of men, and only He who can endure the awful knowledge, can estimate the number who live unsuspected in the shelter of homes, and the protection of marriage. Boarding-houses, hotels, Sunday resorts, and all places where single men live, are infested with adventuresses and impure women. It is a certain effort for any woman to call attention to the prevalence of viciousness in her own sex, but mothers of sons forget loyalty to sex and sentimental considerations of all kinds when circumstances rend the veil between the home-life and the dangers into which the boys go from its pure shelter.

Let us inform ourselves at any cost to our pride in woman, or to our own shuddering distaste of such subjects, so that we may not send our innocent sons unwarned and helpless into life to be the prey of vile women. Let us at least protect them as carefully as we protect our daughters. The danger is very great, and its results horrible — are we not often told that few men preserve their purity beyond the age of twenty-five? If that be anywhere near the truth, our boys are very much more helpless than our girls, or they are subjected to many more, and irresistible, temptations against which their parents have failed to arm them. Let us awake to a realization of our duty to our sons.

It is the very general practice of American husbands to make the wife the confidante in business affairs and politics which are discussed in the family circle. In this way children get an early insight into the conditions and difficulties of adult life. They have the advantage of knowledge and form very definite ideals of conduct from what they hear in the home talk, and probably are greatly benefited by it, provided the parents themselves take the right views of life and are actuated by the right motives. But there is always the danger in the unceasing and selfish struggles of men for place and money, that the scruples of both father and mother may be broken down and they may choose the wrong course. They do so, very often, in fear for the future of their children, and when the ordinary father of a family must choose between a compromise with circumstances, or ruin (or thinks he must do so), it is small wonder that he often makes the compromise. But the greatest injury to his children does not lie in his failure to keep to his standard of morals, so much as in the universal impulse to make the standard adjust itself to the altered conduct. It would be vastly nobler of the man who has found circumstances too strong for his character, to accept the fact of his fall than to glaze it over with sophistries. It would be better for children to believe that father did wrong because he was afraid to do right, than to be taught that what was manifestly wrong before becomes right because father did it.

This effort to justify our failure to be true to our ideals, by remodeling the ideal, is one of the commonest of human weaknesses, and it seems to belong to the practice of giving children a very high moral standard and much knowledge of moral abstractions and no practical instruction as to their application to life. We get somehow the idea that we cannot fail, and yet be true to our highest aspirations. Our children are not taught to take the other facts of life on trust, and their restless impulse to prove and harmonize their experiences must lead them to new views of moral conduct; and there is always the danger that finding the standard which we have furnished difficult to adjust to the general scheme of things, they will cast it aside and try to get along without

one. Experience seems to argue that we should revolutionize our way of teaching morals; that we should sacrifice our belief in the power of any man to reach superhuman ideals of virtue, and begin to teach our children that the real excellence lies in the unceasing struggle; that failure is a part of the scheme of things; that the best man falls, and the only difference between him and the worst is in his always struggling to rise again and fight his way upward; that it is not falling into the dirt, but lying there, that marks the moral failure. If we could evolve some such method of moral training, it would certainly be easier to instruct our sons how to steer a virtuous way in the temptations and the struggle of interests through which business life leads every man, and perhaps the general average of human goodness might be greatly raised by such a practical treatment of it.

This kind of moral training should be easy for those parents who study their children. Scientists tell us that the course of development from birth to maturity is irregular and fitful. Nature works a while on one set of organs, then turns her attention to another; now the body seems almost to leap forward, she builds it so rapidly, and now, while the physical development is scarcely shown at all, the mind grows and strengthens. In this shifting of vital activities, it must happen that many of our lessons are lost from having been given at a wrong time, and things are constantly coming out in the child's conduct which do not belong to his nature; as he passes from one phase of growth to another there must be much that is only temporary. For this reason we should not risk making his faults permanent by dwelling upon them. Child-students have discovered a period when most children are untruthful; it is a sort of violent breaking out of falseness in the character which passes away—unless the mistaken treatment "drives it in," as a cold does measles. May there not be other faults which come out "in the course of nature" and which call for the same lenient and hopeful treatment?

At a certain age a boy who is growing very rapidly will fall into a slouching gait and a "flabby" carriage of his whole body, because he is not forming cartilage and gathering muscular strength quite so fast as he is getting weight and height. We do not feel that such a child is hopelessly ruined in his carriage; we know that he is as likely to be erect and well-proportioned in manhood as any other. We treat a great many habits and undesirable physical faults very lightly because we believe that the child will "outgrow them"; why not take the same view of faults of conduct which we are not sure are fixed in the character? The only treatment that the majority of childish sins require is what might be called the "training of opposites," which consists in simply and constantly crowding out the impulses which may produce



bad habits by the good ones which oppose them — selfishness with kindness, indolence with pleasant activities, bitterness with charity, and every other evil to which the human spirit is prone by its corresponding virtue; and say as little as possible about the process; the wise physician never tells all the secrets of his treatment to the patient. One of the things too often left to chance and circumstances is the child's attitude toward money. We act as if this were a question of minor importance, while if we will think about it, every one of us will see that every man's reputation and his relations to his fellows depend upon his conduct in money matters.

Between the miser who loses all human feelings in the passion for hoarding money, to the spendthrift who forfeits them all for the pleasure of spending it, there are innumerable shades of conduct in which money is the governing influence. Men whose virtues are proof against every other temptation yield to that of money. In a very broad sense it is true that money does make the man. Is there any more important question of education than this of giving the child a proper estimate of the value of money? The first thing to determine is the real value, and the conscientious parent must not study it from the poets, and the moralists, and the sentimentalists, but from the actual conditions of life in the world. To teach a child to despise it as "filthy lucre" is to start him out in life with a fearful handicap, but is perhaps not quite as dangerous as the opposite mistake of teaching him that love of it which may be the root of all evil for him. Between two such dangers parents should steer carefully, and their better plan will be to study the course well beforehand, as every trustworthy pilot should do. It is probable that he who carefully studied the lives and characters of our multi-millionaires might be able to cast an average of qualities in which he could train his sons, so that they would reach the same sort of success; but few of us are likely to do so — possibly because we are not certain that we desire our children to get just this out of life. Most of us will think it wisest to train them for a moderate financial success, and who would want this to involve the sacrifice of happiness or principle? We must see that this is the universal danger, the risk of sacrificing one or the other, and oftenest both these good things for financial success. For it is certain that no man of average sensibilities does barter his sense of right for this sort of gain without feeling, sooner or later, that he has paid too much for it.

A young man who was making a brilliant success in politics was suddenly confronted by a great temptation; all that he had worked for, all that he hoped to gain by long and anxious effort, was offered him, at the price of a simple breach of faith. No doubt he was allured, but he was clear-sighted, and he understood himself. "What is offered me," he

decided "would bring me the greatest happiness — if it came in the right way — but if I am to pay for it with my self-respect, I shall never enjoy one moment of it." Time does not always "make up" to us in any outward way, for such sacrifices to principle, but we are nevertheless repaid an hundredfold by the secret satisfaction in our moral nature. This, then, should be the logical basis for our teaching in regard to money; children should be led to judge its value in comparison with other things. Their power to learn this depends somewhat upon the training we have given their emotions. A normal child has no intenser, more disagreeable feeling, while it lasts, than that of "being sorry" for his own conduct. While too much cultivation of this emotion will produce morbid conscience, a little may result in a wholesome sensitiveness. When there is reason to believe that John or Susie is suffering a healthy remorse for a fault, concentrate their thoughts upon that suffering, remind them that it isn't pleasant to do wrong and lead them to compare whatever pleasure the sin brought with the "bad feelings," which have followed it, and so judge whether it was worth while. In the case of the young politician referred to, the power of analyzing his own character and weighing the suffering which his conscience was capable of inflicting upon him was salvation. Not to "pay more for a thing than it is worth" is even a better rule for morals than for business. Children should have constant practice in comparing values. Teach them to consider well how they may spend their pennies to the best advantage. Five will buy ice-cream soda, a game like "snap," a ball, a tablet, an unmounted photograph, a fishing line, a street-car ride — so many delightful and desirable things, that it is folly to spend upon the first which comes into the mind.

Account books are a great help in learning the value of money. Expect the child to keep an itemized account of all the money he receives, and all he spends; go over it with him once a month and have him add up the whole; and certain items, so much spent for candy, soda, peanuts and like indulgences, form a better argument for self-denial than you can make, if the child sees that these things have deprived him of other things which were more to be desired. Every boy wants a gun, a dog, a pony, or something of the kind that is too costly for the family income. If there is a possibility that he may have any one of these things some day, propose that he help to buy it by self-denial. Let him have constant practice in deciding whether he will spend his money a little at a time in small pleasures, or save it for a greater and more lasting one.

It is right that both boys and girls after the twelfth year should know something of the cost of their living. They should keep account of every article of clothing purchased for them, with its entire cost, the amount of "spending money," and the cost of books, journeys, illnesses — every item of personal expense outside of food and shelter. Have a

quarterly accounting, when each member of the family presents his personal report, and the mother her estimate of household expense. Comparison of the whole with the family income will show truths which everybody is the better for understanding. When our children are given so much liberty to spend this income, they should also be made to feel a share in the responsibility of preserving it—that is, of making it do the best possible service for every member of the family, both in the provision for the present and that for the future. If children learn to think of money only as a “medium of exchange,” and to value its possession only for what it may procure, and not in the least for the pride of having it, they should the more easily learn to compare the things for which it may be exchanged, and to judge of real values.

The mother of a family gets a great deal of this kind of mental exercise in the purchase of the daily supplies, and she could easily share the responsibility and the practice with her children. Let them decide between varieties of meats, vegetables, and desserts, comparing prices and nutriment and consulting the tastes of various members of the family. The conclusions may always be directed by the superior wisdom of the mother, and such training should develop the judgment. In questions of practical life, as in those of morals, everything depends upon the power of choosing wisely. Every normal young man desires to succeed in life, and is willing to make an effort to do so; the success of this effort depends wholly upon his wisdom in choosing the right course of action, and this depends upon his power to weigh and compare, to determine values, to recognize essentials. He who has this will never sell his birthright for a mess of pottage; will never break faith for a reward, which his conscience will not allow him to enjoy; will never give health for money; will never “waste” in dissipation what he may exchange for lasting benefits.

Much of our morality in this world depends upon our sensitiveness to the good opinion of others; this weakness might be utilized to check extravagance in dress. The child who longs to make a show and stir up envy by fine clothes, should have it pointed out to him that people have a miraculous insight into the extravagance of others, and that their admiration for costly clothing will turn into contempt for the wearer, the instant that it is suspected to be beyond his means. “Advice” upon child-training is always subject to misconception, for which reason it so seldom does any good to the world. A suggestion like the above, is generally taken in the narrowest and most literal sense; to “point out” to the child is merely supposed to mean that somebody is to “tell” him how the world detects and despises extravagance. Yet who does not know that facts like these told to children have no more weight than when told to grown people? There is but one way to point out things



to a child; that consists in seeing them clearly yourself, and leading the way to them. Any truth, thoroughly believed in by the parent and expressing itself in conduct, as well as in words, will impress and affect his children.

This is the only reliable means of teaching them, or forming their opinions, and in every case where the phrases, "lead them to feel," or "to see," "point out to them," "impress them," or "teach them," are used in this volume in suggesting what should be done for children, they should be taken in this broader meaning. The life and character of the parent is the object lesson of the child.

## MANNER

"GIVE a boy address and accomplishments," says Emerson, "and you give him the mastery of palaces and fortunes wherever he goes; he has not the trouble of earning or owning them; they solicit him to enter and possess."

Politeness has been defined as "benevolence in small things"; true politeness respects not only the rights, but the individuality of others, their tastes, beliefs, motives, idiosyncrasies.

True politeness ignores or forgets differences of wealth or station, and in its presence the humble and the ignorant are as equals; the effect is not to humiliate them by reminding them of their differences, but to awaken aspiration because they admire, rather than resent, the superior nature.

Most children have heard the story of how the obscure young Walter Raleigh spread his embroidered cloak in the mud before his queen. Many of them, for want of a wise interpreter, have missed the significance of the act. It was the impulse of a chivalrous nature, and, doubtless, an uncalculating one—the highest tribute that could appeal to a woman and a queen. He little dreamed that the velvet path would lead to a great queen's favor, to honors, wealth, and preferment. The act was characteristic of the man; throughout his life he spread the rich cloak of courtesy over all the paths he trod. His graces gave his talents a hearing and were not the least of his claims to live in the memory.

There are many such stories of the value of courtesy. Why is the name of Sir Philip Sidney still sweet among men? Because of his talents as a statesman, or his genius as a writer, or his courage as a soldier? No, because "upon the field of Zutphen he pushed away the cup of cold water from his own fevered and parching lips, and held it out to the dying soldier at his side."

It was said of the Duke of Marlborough that men received a refusal from him more gladly than a favor from another man.

When you would teach your boy the value of courtesy, tell him the story of this brave and talented Englishman, of what he achieved in battle and in diplomacy, and how men honored him. Then add that a great writer said, "His address was so exquisitely fascinating as to dissolve fierce jealousies and animosities, lull suspicion, and beguile the subtlest diplomacy of its arts." And remind them of the heroic character, the brilliant wit, and the tenderness of Sidney Smith, of whom men said, "He treated rich and poor, his own servants, the noblemen, and his guests alike, and alike courteously, cheerfully, considerately, affectionately, so leaving a blessing, and reaping a blessing wherever he went." Perhaps it may interest the boys, too, to know that this great and learned man, in the midst of many cares and stupendous intellectual labors, harassed by debt, dogged by disappointments, tortured by physical pain, yet found time to invent a series of swinging poles, fixed near the farm gate, so hung that every animal, great or small, on the premises could scratch his back on them! Was not that as truly the flower of courtesy as the cloak spread before the queen?

The moral of these and similar stories lies in this: the heart must be the source of all real grace or charm. Train it to love; to sympathy and generosity; to reverence and purity; and they will find their expression in a beautiful manner.

It is not irreverent to say that all true and useful social forms are built upon the golden rule. Many of them may be taught by daily drill, many more by example. It is not possible to train a child successfully until he has formed an ideal, a pattern, by which he wishes to grow; in most cases the parents become that pattern.

This fact brings us back to the universal starting point for all methods of child training; the parent must train himself with the child, conquering deficiencies of education and habit, continually striving to bring his own character near the ideal which he has set for his child. God is merciful to parents, he hangs a mist of love between them and the eyes of their children. A very small and mean man is permitted to appear a hero to his little son; and rare indeed, is the man, who, by his own showing had not a good mother.

This blessed blindness makes it unnecessary for fathers and mothers to waste time in lamenting their unworthiness, but common honesty should nerve them to an effort to deserve the good opinion of their loving little judges.

Every man and woman knows the power of a pleasant manner; and children yield to grace and charm as readily as do their elders. But let no one undertake to cultivate courtesy for himself or for his child from

the sordid reason that it is a help to worldly success. He who misses the truth that courtesy is of the heart, and its truest benefits are the perfecting of character and the spread of one's influence for good, runs the risk of losing both its practical and spiritual results. It is like teaching honesty because it is the best policy.

There are many pleasant little daily virtues which are the very substance of charm of manner. Of these affectionateness is chief. Encourage the baby to express his affection, and his pleasure as well. To respond heartily to the advances of others is a secret of engaging manners; so let him laugh and leap when he is pleased, and join him in the expression of pleasure and gratitude.

Responsiveness is cultivated by the "mother chatter" spoken of elsewhere. Baby's pleasure in the rose may not be very great until it has been shown to him by his mother. "See," she says, "how pretty each little soft petal is! How they fold one over the other, how smooth the little green cup underneath! How sweet it smells! How cool it feels!" Or, "How good the cool drink! Aren't we thankful for it?" Such repeated expression of the sweetness of common things helps to train, not only the power of appreciation but that of enjoyment.

The expression of love should be encouraged, partly because it is one of the few bonds between the isolated souls of mortals, and partly because affectionateness sweetens, softens, and broadens the character. Courtesy is the studied expression of love to one's fellow-man, and comes naturally after affectionateness. Love is a much more powerful incentive to good conduct in families where there is a constant interchange of loving words and deeds; but do not trade upon the affections of the children. Do not say, "James, if you love me you will split the kindling." That is not the reason why James should split kindling and he knows it, and he feels that in your careless speech you have cheapened a sweet and sacred thing. Keep love on a pedestal, if you would have the children realize its divine nature.

Often, at twilight, or in the quiet of early morning, or in the midst of the busiest hour of a busy day, draw the child to you for a moment, smile into his eyes, or pat his shoulder and remind him, "You are mine, and I am yours, and we love one another." Sometimes make the caress and its accompanying avowal playful, or even a little whimsical, only let the love be expressed in it.

Avoid evil speaking, criticism, and fault-finding in the home talks. If the habit has been formed, don't try to cure it by preaching. The only remedy is to root it out day by day as it grew, substituting generous and sympathetic thoughts for evil ones.

Drill Alice in seeing the best in her schoolmates. Show her that it requires genius and talent to discover genius and talent in others, while



the shallowest minds are equal to criticism and fault-finding. Make her feel that it is a commendable thing to find out the virtues in the character of others.

When she is inclined to uncharitableness, turn her mind into broader channels by a story of heroism or sacrifice that shall touch her heart; then you may perhaps, make her see the practical side of ill nature by showing her how it costs more in friends, in cheerfulness, in good opinions, and influence, than many a more often reprovèd vice. For it is a vice of small minds and ungenerous natures.

Self-repression is a great virtue when properly applied, but there are people who practise it only upon the sweeter and softer traits of their character, repressing affection, sympathy, and praise as religiously as if they were injurious to mankind.

There is also a large class of honest persons who tell the truth upon all occasions—if it be unpleasant; though they habitually suppress it if it be of a nature to give pleasure.

Susie prides herself upon being "plain spoken," so she hastens to tell Alice that she recognizes the old dress in the new one. She really speaks of it from a sense of duty, and at the same time feels no obligation to express what is equally true: that the dress is both pretty and becoming. When Alice tells you of this, point out Susie's fallacy, and because the fault is a mean and small one ridicule it a little. Be tender with Susie but do not spare her narrow virtues. Another of Susie's fallacies is likely to be the claim that Alice is "deceitful," because you have trained her to be uniformly kind and charitable. The hateful little word has checked many a nature that has begun to broaden toward universal sympathy. Protect Alice from it by inquiring into her intimacy with Susie; if the latter is jealous, exacting, and will admit no others to their friendship it will be well to break it up. These absorbing intimacies to which girls are prone, are too often founded upon selfish vanity, and are kept up by mutual cultivation of conceit and uncharitableness. The mother's duties are like the "thoughts" in the poem of an old schoolbook. They "lie hidden linked in many a chain; Awake but one, and lo! what myriads rise." No sooner does she take up a new one than another unfolds itself, and still others, reaching beyond her own children and her own household, much farther than she dares to follow.

There is always the question whether it were best to break off, at once, all association with the child inferior to her own in character and training, or to trust that the good will predominate and lift them both. If the fault be impurity, she should rescue her own quickly and permanently. If it be rudeness or selfishness, sometimes the nobler nature is strengthened by its efforts to lift the other.

Given the qualities of heart which find their expression in courtesy, there is little to be done in the way of further training. The address of a person, his manner of approaching strangers, and above all, his regard is of importance. Children can be taught to meet others with a frank, respectful, friendly gaze by drilling them to look into the faces of those whom they address. A timid child will naturally look downward when speaking. Remember that timidity is the evidence of sensibility, and try to cure or control it without touching the beautiful trait from which it springs. Such natures are generally noble ones, and it may be sufficient to point out to the child that this defect is to be remedied by courage alone. Show him that there is a relation between looking honestly at a man, and looking honest to him; that having nothing to conceal, he should not bear himself like one who has.

Add to the habit of giving instant and respectful attention, the little gentlemanly habits of the hat removed, the attitude of interest, and the power to listen quietly, without interruption or impatience, and yet to follow the thought of the speaker. These come by drill. To the too forward boy, restraint should be most delicately administered. His self-love may be deeply wounded, and the fault will not justify the pain. It should be sufficient to show him that he is in danger of being misunderstood; you know that he would scorn to presume, but others may take certain actions for presumption. To treat children with courtesy, sympathy, generosity, and chivalry, is the easiest way to cultivate these qualities.

Meekness and reverence are necessary to a beautiful character and a pleasing manner. If there is a grandmother in the household, the training in these virtues and in faith may be left to her. Age is so far round the circle that it is nearer to childhood in its sympathies. The faith of a sweet and sorrow-trying old woman is much the same as the unquestioning trust of a little child.

Train the children to care for her, to help her up the steps, to bring her flowers, to offer her a drink, to move her chair, to carry her umbrella, to serve her gladly in every way; you will never need to appeal to their sympathies in order to make them respect age, they will love it of themselves.

Reverence for religious truths, and for all the things of the spirit can be taught only, like other virtues, in the course of the daily life.

A few simple heartfelt words will suffice to show the child that Christian faith is a reality for you. Let them come in connection with the expression of your own love. If mother should pause in her work, and, putting her arm around James should say, very softly, "I love you! How good God is to give me this little son!" would that not profit James as much as many words? If reverence and faith do not come out in

your own manner toward your children, you are unfit to teach these virtues to them.

The unselfish act of the wounded Sidney, the impulsive chivalry of Sir Walter Raleigh, the exquisite courtesy of Marlborough, the loving kindness of Sidney Smith were but expressions of nobility of character. They were the result of long years of training in sweet and unselfish acts.

They are of the spirit and the teachings of Christ, of whom one said, most reverently: "He was the first gentleman." All who follow in the daily and hourly practice of the simple Christian virtues, of which we all have knowledge, shall partake of his spirit and his bearing.

## EXTRACTS FROM LETTERS FROM MOTHERS' CLUBS

"ALL the members feel stimulated to greater effort at self-control. Some have adopted new methods indicated in 'Child Nature, and can see an improvement in themselves and their children. All have come in contact with good literature that they would not otherwise have seen."

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"I know the study of the 'Mother-Play' has been of the greatest value in the spiritual development of our mothers, and both the spiritual and practical progress of the children. In my own case, I can truthfully say it has been more help to me in training my children than have all other helps combined."

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"We have grown to appreciate our responsibilities as mothers; to try to undo the errors of the past and to plant well for the future; to study our children's needs, and to watch them and prepare them for their coming responsibilities as fathers and mothers by teaching them to know themselves, that they may grow up strong, true, pure men and women; to govern ourselves that we may know how to lead the little ones."

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"Many mothers are more awake to their children's mental and spiritual needs, more patient and sympathetic, and more ready to learn better methods."

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"We circulated petitions, and so secured for the neighborhood public-school manual training for the boys and sewing for the girls. The venti-



lation was found poor in this same school; the fan was not properly placed. It required constant and persistent efforts on the part of the mothers' class to finally succeed in having this difficulty remedied."

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"A pleasant thing we did was to place a library of one hundred volumes in this public school, and each week for three days one or two mothers acted as librarians."

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"A better knowledge of the nature of the child and his requirements, more sympathy with child life, higher ideals in the development of children."

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"We have assisted in securing fourteen kindergartens in connection with the public-school system; have assisted in securing five women members of the board of education. Have labored to secure in other women's clubs a department of child-study."

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"I am a teacher of a primary Sunday School class, and invited the mothers to my home, fifty-six of them. We organized a mothers' club, and since that time so many mothers who were not interested in the class have asked to join that we have opened our doors wide. It was due to the reading of the mothers' congress and its reports that I urged them to form a club."

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"An increase in the interest of all educational affairs, but particularly relating to the home, the school, and the mother."

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"As a mother of a large family, the lessons I have learned in patience, courtesy, kindness, and in understanding better the wants of the individual child cannot be overestimated. The meeting with other mothers, comparing means and methods, receiving and giving valuable hints and suggestions, is a power for good, not perhaps recognized now, but that will be in the years to come."

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"The meetings, especially in the past two years, have been very helpful both to teachers and mothers, and I think the children feel the benefit of the perfect coöperation between the home and school life. There are so many mothers interested in this grand work that we shall succeed in trying to improve our children, and the children of future generations are sure to reap the results of the good work started in Washington in 1897."

"It was through the efforts of the mothers' clubs of this city that the Public-School Union was started, which has for its object the bringing together of the parents and teachers in closer contact, and the interesting of parents more in the work of the schools."

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"Many mothers interested to do more for their children; more visiting in the schools; good books in the library; an effort now in progress to have a curfew law, eight o'clock in winter and nine in summer, for the protection of our boys and girls under sixteen; distribution of good papers among poor families; and many other things are our results. Our class is free to every mother in town."

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"The mothers and teachers of the Jefferson school district are very enthusiastic over the mothers' meetings, and are looking forward to many helps and inspirations at the club gatherings."

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"Closer supervision over the pupils at recess. An awakened interest among mothers to know what influence surrounds their children at school."

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"Oh, how my soul leaps for joy — that I will soon have the privilege to see, meet, and converse with women who have the courage to make known to the whole world that they have at last solved the problem of the earth's greatest needs, 'A better educated motherhood.'"

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"A decided improvement in each individual member, which seems to exert an influence on the children."

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"Our mothers are greatly interested in the welfare of the children, and frequently have child-study topics for discussion. Social evenings for the children are frequent, though not regular, neither is there any special method followed. In my own family of two boys, seventeen and thirteen, and two girls, ten and seven years of age, we choose Friday night, when there is more freedom from school requirements, or Saturday afternoon for the little girls, for I cannot approve night meetings for little folks. I occasionally grant permission for invitations to be extended to the children's companions, when games, stories, and simple refreshments are enjoyed."

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"The most patent result has been a general awakening of the community to the needs of children,—to their rights as human beings in the

most plastic stage of their development. This general interest was but the natural consequence of the special and deep interest which the mothers took in the club work from the very first."

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"We feel that our club is the nucleus of a movement in our community which will work toward advancement, both in the home and educational affairs."

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"The mothers say they have found the meetings very helpful. I would give anything if I had known ten years ago what I have learned the past few months on the subject of child nature."

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"I have so long been interested in all that pertains to child life, and am so delighted that this Congress has been called, for I am sure its helpful influence will be felt far and wide. Will you please send me circulars and programs? Our mothers cannot be there, but we may catch fresh enthusiasm by seeing and knowing what you are doing."

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"First, mothers spend more time with their children; second, feel more responsibility for personal training of children, not delegating the duty to some one else; third, many mothers who have told their children absolute falsehoods concerning the origin of life, have seen the terrible danger and wrong of such a course, and have had the matter presented in such a way through discussion that they are now instructing them in accordance with natural law; fourth, the study of the laws of health, especially as regards dress affecting woman's organism."

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"Increased desire for improvement in all directions."

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"The chief result of our work has been to create a feeling of deep personal friendship between our members. In this way we have found strength in each other's understanding and sympathy. It has also been a source of suggestion and of inspiration, and of intellectual and moral enlargement. Incidentally, one other mothers' club has been started through the effort of one of our members."

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"The mothers have become better acquainted with each other; they have become better acquainted with the teachers, a great increase of interest in all that pertains to the school, a hearty coöperation in questions of discipline, a keener appreciation of the best in music and literature, a broader outlook in life."



"The establishment of a free kindergarten."

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"We hope to take up the subject of the relation of the home and school, thereby to bring parents and teachers in closer touch. We have had a general uplifting and broadening of thought in all directions."

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"The best result directly traceable to our club is the breaking down of social barriers; every woman who is ladylike and anxious to improve is eligible to membership and is received as an equal by all. Also, we have aroused an interest in art, literature, and child-study in many mothers who never gave these things a thought before."

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"Hundreds of children are taught in the principles of temperance, morality, self-help, and benevolence toward others, and receive instructions in propriety in language, purity in life, and reverence for the temple of God, their bodies; as well as a respect for the rights of others, and a laudable emulation in doing good, such as collecting supplies for poor families, guarding the morals of those weaker than themselves, and setting a good example to those younger."

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"In order to enlist the interest of mothers who are in the main indifferent, we have sometimes on our programs singing or recitations by the children. We find it somewhat difficult to reach those who most need help, but meantime our efforts help ourselves."

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"Sewing has been done by the circle for sick mothers, so that their children can be sent to the kindergarten."

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"The call to the Mothers' Congress was to me not only a personal call to more intelligent effort as a mother, but also to more efficient methods as an educator. Up to that time, fifteen hundred girls had shared my anxious care, and more or less successful training; but I had despaired of ever giving them that definiteness of aim which is the dominant influence in every boy's education."

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"Last fall, with your richly suggestive report in my hands as a textbook guide, I called my girls together and said: 'We will consecrate one school period twice a week to the consideration of these great subjects that touch most intimately both your present life and your future welfare.' So at present in my bi-weekly lectures, one hundred young

women—embryonic mothers—notebooks in hand, catch eagerly and record permanently the most momentous truths of their being, intellectual endeavor and character achievement. And best of all, they are gaining through them a delicate and reverential regard for their high destiny as women.”

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“Our aim has been to elevate and assist in all ways, and on one evening of the week to scatter a little light into the lives of those who come to our meeting.”

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“After a heart-to-heart talk on the character of children’s plays as viewed in the streets in the summer, and the growing need of helpful and healthful ones, a few of our mothers agreed to try to start a reform movement in that line; so three ladies who lived on the block where there were the most children, commenced by asking first a few into their backyards and taught them games and plays that brought into action mind and muscle. This they repeated once every week, gradually enlarging the number until they included all. A passport was good behavior and no naughty words. The originators worked hard, and felt amply repaid for it, and it was kept up during the whole vacation time.”

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“Mothers become more capable, and consequently children are better and more easily trained.”

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“Our children grow up purer, sweeter, and better, we hope. They are fonder of their homes and love to stay in them. We are helped as to their literature, what books are best for them to read.”

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“Pleasant intercourse, improved conversational ability, literary education, and intellectual development. It is hard—or rather impossible—to estimate all the results.”

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“Increased interest in child-study, and growth and status of the mother, mentally, morally, and physically.”

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“Mothers spend more time with their children.”

## THE MEDICINE CHEST

IN EVERY household, particularly those containing children, some provision should be made for administering temporary relief in case of sudden illness or accident, to tide over the moments of suffering on the part of the child and of anxiety on the part of the parent till the doctor comes. In the beginning, let it be distinctly and emphatically understood, that under no circumstance should the parent, or even a trained nurse, usurp the position of the physician, by attempting to take his place in prescribing for the child. The medicine chest is not designed as a substitute for the doctor, but it is to be used in emergencies and should contain such remedies and appliances as the physician may need when suddenly called, which he may desire to administer himself, without wasting the precious time that would be consumed in obtaining it from a drug-store or elsewhere. It is true that in cities and towns, doctors and drug-stores are generally within easy reach, and the need of a home medicine chest is thereby lessened; but emergencies often arise when it will be found most convenient and helpful, while to those who live remote from medical aid, it should be considered a necessity.

Many suggestions have been made as to the most desirable methods of keeping a family medicine chest. Some prefer to keep the medicine on a shelf in a closet, in a bureau drawer, in a box, in the bath-room or wherever their fancy or convenience may dictate. Each has its advantages and its disadvantages, but on the whole the plan best suited is a box especially prepared for the purpose. Many styles of medicine chest are to be found in the stores, but if one does not desire to purchase, one can be made at home that will answer every purpose. Any box of suitable size can be utilized, the ordinary wooden cracker box with hinge lid found in any grocery store, being as good as any. The front can be removed and drawers of suitable depth can be inserted; or cleats can be fastened to the sides and small shelves made to slide in and out. The most convenient form, however, and the one adapted to the greatest number of homes, is made as follows:—

Remove the front of the box, and with a saw divide the front into two pieces lengthwise of the board. The part next the lid should be from five to six inches in width. Suppose the narrow or top piece to be six inches wide, replace this piece on the front next the top and fasten cleats the same distance on three sides of the box. A thin board, cut just to fit the inside of the box, is placed on the cleats, dividing the box into two compartments, an upper and a lower. The upper or tray-like part is for the medicines, and the lower or cupboard part for dressings,



bandages, instruments, and other appliances. The remaining piece of the front is now fastened to the bottom by means of hinges, so that both the top and side can be easily raised or let down and the desired article found. The box may be covered with denim or cretonne, and will present a neat appearance in the bedroom. It may be placed in a closet, in a corner out of the way, or, better still, on a small stand. The upper part should be so constructed that it can be readily fastened with lock and key. An ordinary catch will do for the lower part. The variety of designs is limited only by the ingenuity and taste of the household. Any boy with a knowledge and taste for tools can make at trifling cost a medicine chest which for convenience will prove all that can be desired.

Whatever method may be employed in keeping medicines, there are several rules that should and must be observed to avoid the possibility of accident:—

*First*—All medicines must be kept under lock and key to prevent children from having access to them.

*Second*—All bottles must be carefully labeled, to avoid the mistake of getting the wrong medicine.

*Third*—Never put medicine in a bottle which bears the label of its former contents. A well-known druggist once took aconite instead of whiskey, because of a disregard of this rule, and died in consequence.

*Fourth*—Never put medicine in a bottle without first washing it out thoroughly, no matter how well it is supposed to have been cleansed before. Even if it is cleansed of all traces of its former contents, dust and germs of fermentation may have gathered in it.

*Fifth*—Never use a cork that has been used for some other medicine, as it absorbs the fluid and may affect the new liquid.

*Sixth*—Always shake the bottle before pouring out medicine, for even though the label does not so direct, it will do no harm and often does good, as some sediment will frequently form at the bottom of the bottle. It at least assures the thorough mixing of the contents.

*Seventh*—Never administer a dose of medicine in the dark.

*Eighth*—Always read the label before pouring out and be sure that the right medicine is used before it is given to the patient. The exercise of a little care in this direction would have prevented many an accident.

*Ninth*—Always replace the stopper or cork in the bottle immediately after pouring out the liquid, as in many cases the latter deteriorates by coming in contact with the air. All liquids containing alcohol, ether, chloroform, or essential oil are volatile, that is, they quickly evaporate when exposed to the air. This causes the liquid to become concentrated, so that each dose is stronger than the preceding one. A number of cases of fatal poisoning, especially in children, have occurred from this cause. The child took the first few doses with impunity, but the active principle of the drug becoming proportionately stronger with each dose, caused fatal

poisoning with the last dose, because a sufficiently large amount of the drug was taken at that time to cause death.

*Tenth*—In pouring out a dose of medicine always hold the bottle with the label uppermost, to prevent soiling or staining the label. Sometimes the contents of the bottle are of such a character that they obliterate the ink with which the directions upon the label are written. Pour out the desired quantity, read the label carefully again to be sure no mistake has been made and then replace the stopper by bringing in the bottle to the stopper and letting it gently fall into its place. This is done in case of a shallow vessel or spoon, to avoid spilling the contents. Place the bottle back in its accustomed place before giving the medicine to the patient.

*Eleventh*—Always place poisonous substances in colored or peculiar shaped bottles, or have some device so arranged that your attention will be called to the fact that the bottle contains poison.

*Twelfth*—Always replace a bottle in the same spot it occupied, and do so at once. Never wait, as something is liable to distract your attention and the bottle is forgotten.

*Thirteenth*—Every bottle should have its own place and should always be kept there so as to avoid delay in hunting for it; also to avoid accident by mistaking some other bottle for it.

A few things to remember about medicines: —

*First*—That some are damaged by light, dampness, or heat; therefore, they should be kept in a dark, dry, and cool place. A few, like nitrate of silver, must be kept in colored bottles, as the light destroys them very rapidly.

*Second*—That medicines deteriorate with age; therefore, only a small quantity should be purchased at a time and frequently renewed.

*Third*—That so-called cheap drugs are usually stale or damaged, and are therefore inert.

*Fourth*—That liquids evaporate and either lose their strength or become concentrated and hence dangerous.

*Fifth*—That prescriptions are designed for the case in hand and are not applicable to others as a rule, even when a person is suffering from apparently the same disease. Therefore, when the medicine is no longer needed for the person for whom it was prescribed, the remainder should be thrown away.

*Sixth*—That mixtures containing sugar, such as syrups, soon become sour; therefore, they should be frequently examined and if found to be sour, they should be immediately rejected.

*Seventh*—That many remedies used for external purposes contain poisons; therefore, they should be kept separate from those designed to be taken internally.

*Eighth*—That medicines sometimes affect people differently; age, sex, and temperament have much to do with the action of a drug. Persons who are used to taking a certain remedy will probably require more of it to obtain a given effect than one who is unaccustomed to its use. Thus, one who is habitually taking cathartics or narcotics will require a larger dose of the first to move the bowels, and of morphine or opium to relieve pain,

than one who does not take them. Personal peculiarities must also be looked for. It is necessary to know these facts before concluding that the remedy is not doing the work for which it was designed.

*Ninth*—That disease often fortifies the system against the action of remedies, so that the dose has to be increased to obtain perceptible effects. Thus pain or delirium tremens will interfere greatly with the production of narcotism by opium; or spinal disease with purgation. Disease may altogether prevent the action of a remedy. In all these cases two rules should never be lost sight of: First, never give the medicine in such doses as would, in health, cause death; second, always be sure, before giving a large quantity, that the dose will not make matters worse,—as a drastic cathartic in case of obstruction of the bowels.

*Tenth*—That climate, by producing physical habits or tendencies in the patient, often greatly influences the proper selection and dose of remedies. It is only necessary to allude to the great consumption of quinine in malarial regions as an example.

*Eleventh*—That habit, including mode of life, seems to alter the very constitution of an individual. Not only does it give type to disease, by producing habitual plethora, or its opposite, but it also fortifies against the action of single remedies, or whole classes of them. Thus in a person addicted to the opium habit, a dose sufficiently large to kill an ordinary man serves only to gratify the cravings of appetite. Again, a man accustomed to one narcotic, as alcohol or opium, loses to a greater or less degree, his susceptibility to all narcotic influences; and the patient whose bowels require to be moved daily by a cathartic, finds that he responds more and more slowly to medicines of that class. Again, a nervous system blunted by exposures and toil in the open air is far less susceptible to the action of remedies, and requires larger doses, than does a delicate organization, perhaps weakened by indolence and luxury.

*Twelfth*—That temperaments are peculiarities of organization characterizing classes of individuals; idiosyncrasies are peculiarities belonging to single individuals. These idiosyncrasies are numerous, cannot be foreseen, and are often very important; hence the necessity, when prescribing for an unfamiliar patient, of always asking as to his or her peculiarities.

*Thirteenth*—That sex modifies all diseases connected with the organs of generation, but it also does more. A woman is more impressible, less robust, with less power of resisting external agencies, than a man. Consequently, the dose for her should, as a rule, be less.

*Fourteenth*—That age materially modifies the dose. The proportion of an adult dose to be given at various ages during infancy and childhood is clearly set forth in the following rule: The proportionate dose for any age is represented by the number of the following birthday divided by twenty-four. Thus, for one year it is  $\frac{2}{24} = \frac{1}{12}$ ; for two years,  $\frac{3}{24} = \frac{1}{8}$ ; for three years,  $\frac{4}{24} = \frac{1}{6}$ ; for five years,  $\frac{6}{24} = \frac{1}{4}$ ; for eleven years,  $\frac{11}{24} = \frac{1}{2}$ , etc.

*Fifteenth*—That it must always be borne in mind that children do not bear narcotics well, and that the doses of such remedies for them should always be proportionately smaller than for the adult.



*Sixteenth*— That directions must be carefully followed. Medicine should be given exactly at the hour directed, neither before nor after the time. There is a real reason for ordering medicine to be given at certain designated periods. The hours of administration are not taken haphazard, but are definitely fixed because the drugs prescribed take a certain time to develop their physiological effect, and this time differs with the various remedies prescribed. Always ask the attending physician if the medicine is to be taken at night if the patient be sleeping, or whether during the day he should be aroused from sleep to take it. Sleep is the greatest remedy in all of nature's storehouse, and as a rule it is not desirable to arouse a sleeping patient to take either food or medicine. There are some cases, however, when the illness is of such a character as to require the remedy to be given even at the expense of the rest of the patient. An inquiry therefore is always proper and wise, as valuable moments may be lost on account of a misunderstanding.

*Seventeenth*— That medicines act more quickly when taken on an empty stomach, therefore cathartics should be taken the first thing in the morning, at least an hour before breakfast. For the same reason, medicines designed to produce sleep should be given several hours after the evening meal. In this connection it is not amiss to note that with such remedies their action is greatly hastened by being taken with a hot drink of some sort. Medicines requiring considerable dilution, such as corrosive or irritating substances, are best taken after meals, as the food acts as a diluent in addition to the liberal quantity of fluid in which they should always be administered.

*Eighteenth*— That the disagreeable taste of many drugs can be removed or prevented by being taken in the proper vehicle. Lemon or orange juice, essence of wintergreen or peppermint, taken just before and after the dose will, by partially paralyzing or obtunding the nerves of taste, prevent the dose from being disagreeable. Chewing a piece of bread crust is one of the best means of disguising a bad taste.

*Nineteenth*— That when a child refuses to take his medicine, by holding the nose and placing the spoon containing the medicine as far back as possible, it can be administered without any difficulty. Remember in this connection, he cannot choke, and that if the spoon has been placed on the root of the tongue, and the nose held till the child swallows, he cannot spit it up. Most persons in giving medicine in this way let go of the nose too soon and permit the child to spit out the nauseous dose before he has swallowed it. Most children can be coaxed to take medicine; it is not good to have them struggle in taking it, but in some instances the method just described must be employed.

What should a medicine chest contain? This question is answered in a variety of ways, as each person has his individual opinion on the subject, modified in execution by circumstance and the purpose to be subserved. It should be remembered that children need but very little medicine and that of the simplest kind. The medicine chest should contain only such domestic remedies as are well known in their action and are easy of

administration. By this is understood, medicines which the ordinary house-keeper can readily procure and prepare, not those which may be particularly distasteful to a child, for anything bearing the name of medicine is distasteful to a child.

The following list arranged, first alphabetically, and secondly according to therapeutic classification, contains about all the articles usually needed in domestic medicines.

It can be made as elaborate as the desire and ability of the person may dictate. Some may be omitted and others substituted:—

## DRUGS

Aconite	Iron Sulphate
Alcohol	Laudanum
Alum	Sugar of Lead
Ammonia Water	Lime Water
Aromatic Spirits of Ammonia	Morphine
Tincture of Arnica	Mustard
Tincture of Asafetida	Nitroglycerin Tablets $\frac{1}{100}$ gr.
Tincture of Belladonna	Essence of Peppermint
Brandy	Paregoric
Bismuth Subnitrate	Essence of Pepsin
Boracic Acid	Potassium Chlorate
Bromide of Potash	Potassium Permanganate
Bichloride of Mercury	Peroxide Hydrogen
Calomel	Quinine
Spirits of Camphor	Quinine and Dover's Powder
Carbolic Acid	Syrup of Rhubarb
Cascara Sagrada (fluid extract)	Rochelle Salts
Castor Oil	Salicylic Acid
Chloroform	Soda Mint
Chloroform Liniment	Strychnine
Cod-Liver Oil	Sulphur
Copper Sulphate	Syrup of Squills
Creolin	Squibb's Mixture
Tincture of Digitalis	Seidlitz Powder
Epsom Salts	Silver Nitrate
Fluid Extract of Ergot	Sodium Bicarbonate
Ether	Sweet Spirits of Niter
Essence of Ginger	Turpentine
Formalin	Talcum Powder
Flaxseed Meal	Zinc Oxide
Glycerine	Zinc Sulphate
Tincture of Iodine	Whiskey
Iodoform	Syrup White Pine
Syrup of Ipecac	

## EMERGENCY BOX

Mustard plasters, one box	One package of absorbent cotton
Glycerine suppositories, one bottle	Bandages
One box cold cream	One hypodermic needle
One bottle vaseline, plain	One vial of antiseptic ligatures
One bottle vaseline, carbolated	One case of assorted surgeon's needles
One fountain syringe	One pair scissors
One rectal syringe	One package of safety pins
One hot-water bottle	Medicine glass
One roll oil silk	One and two-ounce glass
One roll cloths for poultices	Graduate
Atomizer	Minim graduate

Other things may suggest themselves as desirable, for one never knows when the occasion may arise to demand the immediate use of any of them. As an emergency case the two lists above given will constitute practically all that the average household will be called upon to furnish.

In arranging the medicine and emergency compartments one point must ever be borne in mind and that is, when once a system of arranging the contents has been made, under no circumstances should it be changed. Every article should have its own place, and it must always be returned at once to that position after being used. The arrangement can be either alphabetically; by classification according to medicinal properties; by the size and shape of the bottles or packages, or any other system which may commend itself. In drug stores, the usual method is any arrangement according to the kind of preparation; thus all liquids in one line and solids in another. The syrups are placed together, likewise all tinctures or oils are in a row by themselves. The chief difficulty in classifying them according to their medicinal action is due to the fact that a drug is often used for a number of purposes and is therefore assigned to more than one division. However, the following table is arranged according to the most frequent use of the several drugs in the list above given:—

<i>Anæsthetics</i>	<i>Anodynes</i>	<i>Antacids</i>
Chloroform	Laudanum	Bicarbonate of Soda
Ether	Morphine	Lime Water
	Paregoric	Soda Mint
	Squibb's Mixture	
<i>Antiperiodics</i>	<i>Antipyretics</i>	<i>Antiseptics</i>
Quinine	Cold Water	Boracic Acid
	Phenacetin	Carbolic Acid
	Quinine	Salicylic Acid
	Quinine and Dover's Powder	Iodoform
		Formalin
		Permanganate of Potash
		Bichloride of Mercury



*Antispasmodics*

Asafetida  
Camphor

*Cathartics*

Fluid Cascara Sagrada  
Castor Oil  
Epsom Salts  
Rochelle Salts  
Seidlitz Powders  
Calomel  
Rhubarb Syrup

*Demulcents*

Flaxseed

*Diaphoretics*

Tincture of Aconite  
Quinine and Dover's Powder  
Alcohol in the form of hot drinks

*Expectorants*

Atomization  
Syrup of Ipecac  
Syrup of Squills  
Syrup of White Pine Co.  
Glycerine

*Sedatives*

Tincture of Belladonna  
Bromide of Potash  
Heart Stimulants  
Aromatic Spirits of Ammonia  
Tincture of Digitalis  
Nitroglycerin and Strychnine

*Astringents*

Alum  
Acetate of Lead  
Bismuth Subnitrate  
Potassium Chlorate  
Sulphate of Zinc

*Caustic*

Alum  
Carbolic Acid, pure  
Nitrate of Silver  
Copper Sulphate

*Disinfectants*

All the Antiseptics  
and Copperas or Sulphate  
of Iron, Sulphate of  
Zinc, Creolin, Sulphur

*Emetics*

Syrup Ipecac  
Mustard Water  
Sulphate of Zinc

*Laxatives*

Same as Cathartics,  
only usually given in  
smaller doses

*Stimulants*

Brandy  
Essence of Peppermint  
Whiskey  
Heart Depressants  
Tincture of Aconite

*Carminitives*

Essence of Ginger  
Essence of Peppermint  
Asafetida  
Soda Mint

*Counter-irritants*

Tincture of Arnica  
Tincture of Iodine  
Mustard  
Turpentine  
Aqua Ammonia

*Diuretics*

Tincture of Belladonna  
Tincture of Digitalis  
Sweet Spirits of Niter

*Emollients*

Flaxseed Poultice  
Vaseline  
Lard  
Glycerine  
Talcum Powder  
Oxide Zinc

*Opiates*

Laudanum  
Morphine  
Paregoric

*Tonics*

Strychnine

*Digestants*

Essence of Pepsin

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