

HOMEMAKERS' CHAT

JUNE 7, 1940

(FOR BROADCAST USE ONLY)

SUBJECT: "BUILDING TEETH AND BONES." Information from the Bureau of Home Economics U. S. Department of Agriculture.

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The other day I saw a picture of two children walking across a plowed field. The picture might have shown two happy, healthy children. But instead, it was rather pitiful. For the little boy--he was about three or four years old--had bow legs....the bones in his legs were so misformed that he could hardly walk.

Years ago, we might have said that the boy had bow legs because he started to walk too early--before his bones were strong enough. But now nutritionists explain that bow legs are caused by rickets....a disease that often results from a diet lacking in the materials needed for building strong bones.

Rickets is often due to a lack of calcium--a mineral that is needed in building the bony structure of the body. In fact, the Federal Bureau of Home Economics recently made a diet study of city families all over the country..... and found that less than half the families they surveyed were getting as much calcium as they could use to good advantage.

Yet, when the family can afford a quart of milk for each child--their daily supply of calcium is assured. Most children like to drink milk, but some of the day's quota can also be used in cooked foods. By the way, evaporated milk or dried milk can be used in place of fluid milk--and will furnish the calcium just as well.

For growing children, the supply of calcium is especially important--because their bones are being built at such a rapid rate. Even before a child is born--his bones and teeth are forming. Then during infancy and early childhood--these soft structures are becoming hard, firm bones. And, of course, calcium must



be deposited in the bones to make them firm. Then too, the child's bones become longer and thicker as he grows.

But even after a person has stopped growing--he needs calcium to keep his bony structure in good condition. Grown folks don't need as much calcium as a child--but a pint of milk a day should be included in their meals.

The green leafy vegetables also contain calcium. But--unless a person gets some milk--it's almost impossible to get enough of this mineral.

And the expectant or nursing mother--has a very special need for a good supply of calcium. Everybody's heard the old saying that "each child costs his mother a tooth." But today we know the reason why a mother's teeth became soft and decayed. The mother's teeth suffer when she doesn't get enough calcium to build the child's bony structure--and keep her own bones and teeth in good condition at the same time. So doctors now recommend that the expectant mother drink at least a quart of milk a day--and keep on all the while the child is nursing.

Naturally, it isn't calcium alone that builds bones. There's another mineral--called phosphorus--that also goes into the structure of bones. But fortunately--this mineral is found in many of our everyday foods, and most diets have a fairly good supply. Phosphorus is found in most of the calcium-rich foods, and also in many other common foods. The child gets phosphorus from the egg yolks and cereals that are added to his diet at an early age. And then for the older child and for adults--lean meats and fish, of all kinds, are also important sources of phosphorus.

But besides the two minerals that are used to build bones--there's a third element that must also be present. It is vitamin D. The vitamin D does not actually go into the structure of the bones. But it must be present to aid the body in making use of the calcium and phosphorus. Vitamin D is a coordinator-- so to speak--that brings the two minerals together and helps them to combine in the formation of bones and teeth.



Many mothers feel that if they give their children plenty of milk to drink-- they've done all they can to make sure the children will have sound teeth and bones. It's true that the milk is needed to supply calcium and phosphorus. But that's only part of the story. Children also need vitamin D. And they can get it by playing in the sun--wearing brief little sunsuits. For when the ultra-violet rays in the sun shine directly on the skin, they form a substance that later becomes vitamin D. So the body can actually manufacture vitamin D through sun baths.

But during the winter--especially in cold climates--it isn't possible for children to get vitamin D from sunshine. However, there are foods rich in this vitamin, and they will serve as a dependable source all the year round. Fish-liver oils are the foods most commonly used as a source of vitamin D.

So as a simple guide, remember the rule--- a quart of milk a day for children and a pint a day for adults. Add vitamin D---from direct sunlight or fish-liver oils, or both. Don't forget that sun shining through window glass is not the direct sunshine. The glass cuts off the ultra-violet rays. And don't forget that a general well-balanced diet is needed for building bones, and also for other body functions.

Now let's go back to the bow-legged baby in the picture I was describing. From now on, we hope he'll have a chance to be out-of-doors in the sunlight, so he'll get the vitamin D he needs. And if he can have plenty of milk to supply calcium and phosphorus--his legs will straighten out some. But they never will be as straight and strong, as if he'd had the right start.

Cases of rickets, like his, are all too common. But even more numerous are the borderline cases .... people whose bones are soft, and whose teeth decay easily.

This material about calcium, phosphorus, and vitamin D has been taken from the 1939 Yearbook of Agriculture. A reprint of the part of the book that deals with the problems of human nutrition is just off the press. You can get a copy for forty cents--by writing to the Superintendent of Documents in Washington, D. C.

