liver. muscles - foetal tissues. placenta, testes brain whole carcass

Glycogen $C_6H_{10}O_5$. L. has power of forming it. Gly. portion of liver. B. isolated it & gave it the name. - Origin 1st. from carbo-hydrates. Amount is increased. & is (2) nitrog element. of animal fed on lean meat it is still formed. (3) fats probably not. Salomon's experiments. Rabbits fed on olive oil. To show its existence. Rabbit fed on starchy food. as carrots. quickly killed. and the liver rapidly excised sliced & put into boiling water. It contained no sugar but a white opalescent substance separated which had the reactions of starch. This he called gly. & he found it could readily be converted into sugar by the action of any diastatic ferm

At the T° of the body the gly is readily conv. into glucose & there is effected by ... the blood or a special ferment. B. has isolated it.

2 views 1st. Bernard & his school. The gly. is during life constantly conv. into glucose & passed into the blood of the hep. veins enters the circulation passes thro the lungs & may be used there but more likely goes out the arteries & in the capillaries is fully used part in the muscles during life. They say that the arterial T° always has more S. than venous. & the T° of hepatic veins than that of portal. (2) Dr Pavy & his school. contend that convers. of gly into sugar takes place to very slight extent during life. They hold that the liver cells assimilate sugar & convert it into gly cogen & that it probably is converted into fat. So it is an intermediate step between sugar & fat. They deny that there is an excess of T° in hepatic blood & say the quantity in ven. & art. T° is much the same. Whenever an excess of S. is in blood it passes off in urine = diabetes. is glycos. In diabetes Dr P. holds that the assimil. action of the liver does not take place

The glucose derived from the digestion passes directly through the organs into the blood & appears in the urine: he admits however that some glycogenic action takes place as in the case of patient fed on lean meat. Bernard holds that in diabetes the gly. is too rapidly converted into sugar & be all oxidized & hence appears in the blood. Some think that a lessened consumption of the sugar in the muscles may lead to an accumul. & consequent excretion by kidneys

Inf. of ner. system. Of floor of 4th vent. in Rab. is punctured - area of vaso-motor nerves & mucous. in ner. in a few hours. Acc. depend on feed of animal. Function is under the infl of the medulla. The path of this influence is down the cord. thro the inner cervical gang of sympathetic, thro splanch. & cœliac axis & ex along hep branches. The pneumo-gastric have no direct infl. but if the central end of the cut n. is stimulated gly. as result. This inf. is probably largely one of increased flow of blood in the liver by relax of the vessels, increased amount of ferment. Some think it may be an inf in the cells.

Skin

Uses. (1) Prot. for surf. beneath (2) organ of touch. & of gen. sensation. (3) secretory & excretory office (4) aid in keeping perspiration. by it lack of cond. power. Must distinguish between. proper integument. that are every present & the modified. Skin & its appendages, 2 layers from mult. mesoderm. When cutis spoken of = Epid. & C. vera. Epidermis forms a protection for C vera. Thickness 1/400 - 1/12 for an Thickest when pressure greatest. Corium not a plane surf. but undulat. form, & out there the epid. is modeled & fills up the depressions. 2 layers. Ext. epid. cuticle is surf & rel. macerat. cells of latter fill up deep in corium, deepest layer, are cylinder in form. Underlayer corium cutical. he next 3 mm cells become & more polygonal; Margins fringed. Upper portion be com. fusiform. Nucleat cells also com. Pigment; mm in deep cells. Epidermis in fore section from many times. under clean. unequal polygon flat cells 1/2000 - 1/1000 of an inch. In deeper portions take on a round form more compressed. Where very coarse Corium tough. highly elastic layer. What compressed of f. f. so close that at upper part almost stratified. lower part more open & articulated. Hence distinguish two parts: Elastic fibres connective corpuscles. Surf: attrition transparent & elastic. Furrows of corium, large & small. primary & secondary. fibrillar cells are whole skin. specially on back of hand. Besides these cutis small pores ~~for~~ exist elevation over the cut. papillae. Shape. cir. mostly small divided. Expect about not when seen most perfect on hand. How arranged? In hands in line from curvilinear ridges. & in these in double series. 1/100 in hand 1/300 in f. ... Notches in ridge of cor. seen open of several stalk. Stalk of papillae like the cor.. Cor is vas. & sens. large. & bell. allow distinct in papillae & distinct vas & nerv. papillae. No vascul plexuses. Not every papillae provided with capillaries, as a rule only those with which no nerves enter. Nerves medul & non-medull. Modes of termination. Nerves bad

in tubule corpuscles, in red bulbs & between the cells of the rete mucosa. Pacini bodies. Tubule corp most common bout bases of last phalanges. Of an oval form, near, same length as papillæ, trans, the appearance into each a med & outer, small nerve ends it here ends not known. End bulbs, situated at upper part of papillæ, corpuscle & coiled nerve into this a n. fibre may be traced. Some have based non medullated fibres thro the centre between the layers of the

Sub. cut. conn. directly contin. with corium, composed of connective & elastic fibres, coarse mesh work, fat & sweat glands in, also hair follicles, large & small called P. adipose Lymphatics also distributed. In this are

* Sebac glands, conn with hair follicles, where? hairy parts & orifice of body, absent. P. & soles. In Sub. mucosa, perfect vacuole rarely; when conn with large hair foll 4-6 & arranged round, open at point. Largest at the dorsum hair, & in hair follicles. Fine structure. Sebum itself fluid or semi-, when fresh, dark fatty granules, at deposit a simple fatty secretion, of. magar. Inly. and caseous cells of Pa & Ca a parasite entozoon follicul. In fetal life vernix caseosa. Only matter & debris of cells & Another the ceruminous Gland peat. mistake under sebac gland

~~Sub~~ sweat glands. Small in body 1/6 of a line in diameter cut out cut time, at it. point. with C. vers. Short and ~~of~~ glands? Coil is the gland, long st. part the duct which opens by a widened sinuous oblique orifice. Largest in perineum anal & nipple axilla largest. When uncoiled 1/4 inch. 1/200 in breadth. Coil consists of a basement membrane & a layer of cells somewhat flattened in form. Between the coils. Muscle cells ribbed also. Capillaries. Duct passes up & thro corium straight, enlarges & sinuous between

papillae. then takes a spiral course no. of spirals depending on thickness of fibre. Varies 2-3000 in palm of hands c. 1258 forehead. cheeks 548. Inlet No 2½ in of each unravelled 1/16 inch whole 2⅓ miles. Inlet est 2800 in ☐ inch the body, 7 mill. thick in. & 28 mm

Sweat. a watery fluid. secretion of hot. & induced. sensible & insensible. latter constant. Mechanism of secretion same as in other glands cells the active agents. Sweat. clear colourless acid, peculiar odour. acidity due to volatile acid. acetic butyric & formic with traces of ammonia. In cases investigating only that prescented is acid. Sp gr. 1003-1004 contains 97.5 & 2.5 fixed matter. fatty matters chiefly from sebaceous glands. also urea & organic salts chl of Na. K & Ca. a neut and inorganic or hydrate acid contain pigments. The urine is an imp elem 1/4 of total solids. & much more in Kidney affections. In disease. abt & colour matter also found. Quantity varies, about lbs 2. & about half that amount by lungs. Very circumstances. all also quicken the circulation, as exercise after clothing. Many motions. the depressing influence of temp. temp of air & its hygrometric condition. Sk. uncut cuticle & more recent is separated. Dry air increases it damps air reduces it. Cold decreases. In high temp. & moist recent is stopped, but still goes on. Cold. med. warm drinks & imbibe bath. Local sweating sometimes occurs. Loss in weight very considerable in an hour. 3 lbs in fencing. Hard temp commencing 2-4 lbs by men in gas works in an hour. Local effects and Kidney are supplementary. In cold weather &c. Certain amount of CO_2 given off also about 1/320 effect from lungs, or 1/100 lungs 1/320 - 1/350 In man not so much as in lower animals. Uses of sweat. to get rid of impl water & keep down temp (2) some as med. for chem of effete matter. Taking the amount at 30 oz solids are 1/3 oz being 1/6 of fixed residue. Impert. of skin. shown by fact animal covered. they die. In larger animal only a few sq inches left raw not in smaller. Bar. suffocation death for want of CO_2 in system. but must cut down in temp of body. for of temp. maintained death does

but narrower. Hair & nails. modify of shedding. Shaft & follicle & hair deposits. 1-3 hair long. deeply set extent lower end in big bulb of epithelium. Air after & open. Hair larger for the small epithelium. 2. connect tissue among hair & muscular. 3 structureless cuticle with traces of corpuscles. At bottom of each papilla is projecting connect. made up of connective & nuclei. vessels present. Hair not two investments. (1) epith. not sheath but closely adhere & conforms to the rete mucosum. Stratum cuticle with scale of keratin but does not provide the hollow of follicle. Made up of epithelial cells. (2) not not clear. flattened cells - sh of the cuticle which adhere fast to and a mould upon the surface of the hair. Hair shaft is explained. Outer for cortex or medulla, which is only formed in some hairs. Cortex or outside consists of thin outer cuticle the cuticle of hair. cell or flat & nucleus outer. in the for below upon. in the root this sheath is coffee & turn a muddy sheath. Inner is fibre proper of hair or bulk. Core of fibre fusiform cells long & flat with tangle fibres & mixed with pigment. Reg. varies pit the to tangle fibres & at the in the root the fibre becomes shorter as approaches the papilla & does not medulla only in short stiff hairs of head & not. 1/3 - 1/5 fibre of hair made up of nucleated oblong cells. Fibre contains pigment or air. Pap hair in form of conical pond & melanin. Small muscular fibre from papillary for hair erect of hair. In old age pigment absent. Bleaches. lines as particles. & only keep up moderately for the eyes in the perineum & axilla. Nails. not body of steady root. end in pigment. 1/4 of length. body smooth gh mostly long line behind. Remarks - the matrix, which is the cause mud the cell ego. Cor. rete mucosum & a long larger corny ~~the from rete papillae are in long parallel rows & upon the the nail bed a mould.~~ Mucous or dermis & the larger. Dermis upon & fills up in the rete mucosum & not with the cornu layer in strong. Horny layer - the true nail adhere to rete mucosum. It mucous thicker for before backward. The stratum 1/3 in. In all the other shedding of flatter scales & skin in cloth & in a pit. Growth takes place by cast of cells of cells below & upon & the

Vote.

Abbe WB	a a a a a a a. 1 1	
Blanchard.	1 1 1 1 a 1 1 1 1 1	
Mayo	1 1 a a a a a 1 a	
Lamb.	1 1 1 1 1 1 1 1 1 1	(1) Rel & Phy Lab
Reys	1 1 1 1 1 1 1 1 1 1	(2) Comp intell. & Reasoned
Scott	1 1 1 1 1 1 1 1 1 1	(3) Intell Lab & Memory Reason. Judg.
Whitead	1 a 1 1 1 1 1 1 a	
Baker	1 a 1 a a 1 1 a a	✓
Hoare	1 1 1 a 1 1 1 1 1 a	
Garland	1 1 1 1 1 1 1 1 1 1	✓
Cross	1 1 1 a a 1 1 1 1 1	
Sangster	1 1 1 1 1 1 1 1 1 1 1	
Magir	1 1 a a a a 1 1 1 1	
Dyer.	1 1 1 1 1 1 1 1 1 a	
McCauley	1 1 a a 1 1 a a a a	Wise & Carleton & McCallum
Dearden	1 1 1 a 1 1 1 1 a 1 a	
McLachlan	1 1 1 a 1 1 1 1 1 a 1 a	Grant. QC Wilkins Pourne Grey De Cow
Parker	1 1 s s 1 1 1 1 1 1 1 1	
Davis Pd	1 1 1 1 1 a s 1 1 1 a	McLachlan Dearden McCauley.
Johnson JW	1 1 1 s 1 1 1 1 1 1 a	
Berry JA	1 1 1 1 1 a 1 a 1 1 1	Magir Sangster Garland Parker White A.D.
Fraser JM Pd	1 1 1 1 1 1 1 1 1 1 1	
Ferguson JA Pd	1 1 1 1 1 1 1 1 1 1 1	
Boyd J Pd	1 1 a 1 1 1 1 1 1 1 1	
Gardner AW Pd	1 1 1 1 1 1 1 1 1 1 a	
Hanner Pd	a 1 1 1 1 1 1 1 1 a	

Hautschel pd

Sinclair pd

Scully pd

Norman pd

Aborn pd

Donald pd

Hagg pd

Pomeroy pd

Hall and. pd

Giles

Ross pd

Taylor pd

McDonald D.S. pd

Williams pd

McKinnon pd

Richardson pd

Ferguson W.O. pd

Dorick pd

Kelly Ja pd

Evans pd

Brunelle pd

Ellis pd

Woodruff pd

Ritchie pd

Easlin pd

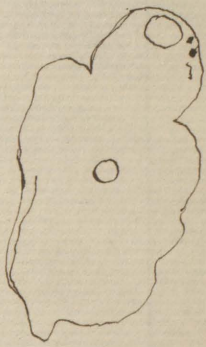
Cameron J.D. pd

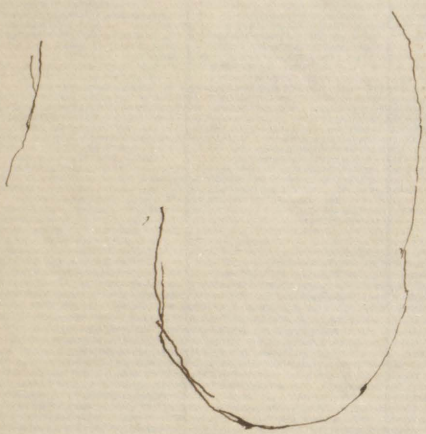
Lafleur pd

Cameron K pd

4/7/30

with 1. inch





This is my lecture portfolio with the list of students in the last class to which I lectured at McGill. The rule was to call the roll once a week, but as the list shows this was not always carried out.

For the first few years I wrote out and read my lectures. I am sorry no copy has been kept. I destroyed them all on leaving Montreal. Then I got into the habit of lecturing from slips, two pieces of which are here preserved, one on the skin the other on glycogen.

W. Osler

PETER BENT BRIGHAM HOSPITAL
721 HUNTINGTON AVENUE
BOSTON 17, MASS.

JOSEPH B. HOWLAND, M. D.
SUPERINTENDENT

HENRY A. CHRISTIAN, M. D.
PHYSICIAN-IN-CHIEF

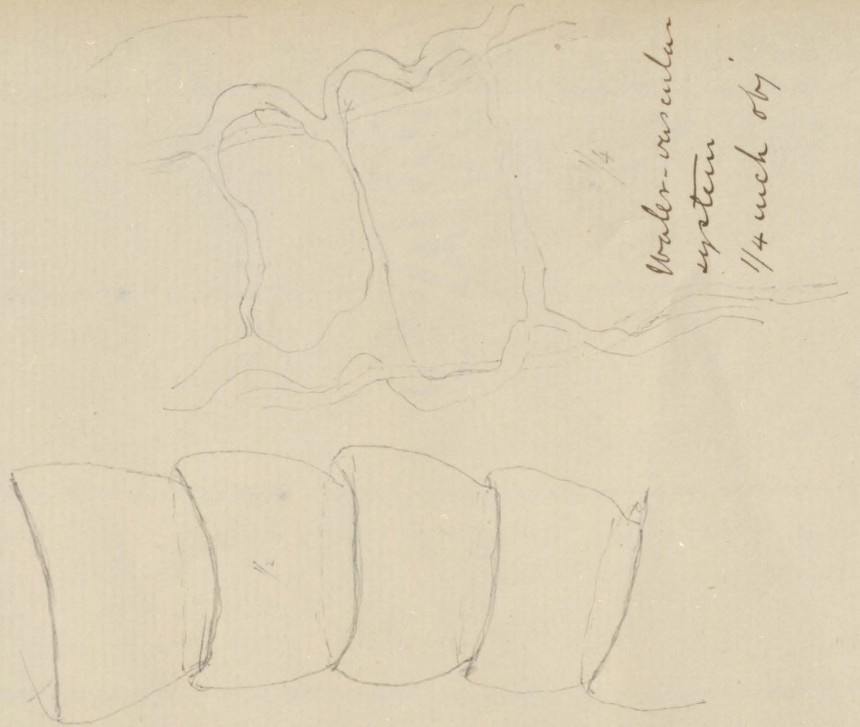
HARVEY CUSHING M. D.
SURGEON-IN-CHIEF

S. BURT WOLBACH, M. D.
PATHOLOGIST

Dig 8
A Sheet of Osler Physiology Lectures facsi p. 224

Aha! That's where it was!
This is the missing "slip" for the SKIN lecture, belonging in the portfolio, # 7666 z, ~~I find~~ & lost for 10 years. I find it today in an "Osleriana" file among the Cushing papers, # 8303; H.C. evidently thought of using it as an illustr. for the "Life".

W. W. Francis
26. iii. 36.



Four segments of tænia -- pomfoul
1/2 inch obj

11/9/70

Edgar pd

Dickson pd

Lusk. pd

Crore pd

Hall W pd

Bowen pd

Christie pd

Grant pd

Aylen pd

~~Stewart~~

Madge

Ayde

MacDonald

Boone pd

Fillmore pd

Boggs pd

~~Millmore pd~~

Travers

Pothier pd

Flett

54
50
104

1883-84

Powne N.A. pd	a / / / / / / / / / / a /	Full pass
De Cow.	/ / / / / / a a / / / a	P. Ch. Mat. Med.
Elder J.	/ / / / / / / / / a a a / / /	all but chem
Williams J.T. pd	/ / / / / / / / / / / / / a	all but chem
McGuaig W.J. pd	/ / / / / / / a / / / / / /	Full
Kirkpatrick R.C. pd	/ / / / / / / / / / / / / /	Mat & Phy.
Kulloch J.A. pd	/ / / / a / / / / / / / /	Full
Gladman G.J. pd	/ / / / / / a / / / / / /	Full
Kennedy R.A. pd	/ / / / / / / a / / / / a /	Mat Med & Phy.
~~Haythorne J.~~	~~a a a a a a~~	Mat Med & Chem
Stephen G.C. pd	/ / / / / / / / / / / a a /	Mat P. Ch. Hy. & Physics
[illegible] pd	/ / / / / / / / / / / / / /	all but anat
Blackader E.H. pd	/ / / / / / / / / a / / a /	—
Rowat W.M. pd	/ / / / / / / / / / / / / /	Full
Wilson C.W. pd	/ / / / / / / a / / / / / /	Full
Gray J.E.	/ / / / / / / / / / / / / /	Full
White W.W. pd	/ / / / / / / / / / / / / /	Wh. all but chem
McKay D.M. pd	/ / / / / / / / / / / / / /	Full
Hughes P.H. pd	/ / / / / / / / / / / / / /	Full
~~Young A.C. pd~~	~~/ / / / / / / / a a a~~	
Grant J.H.Y. pd	/ / / / / / / / / / / / / /	Full
Turnbull A.R. pd	/ / / / / / / / / / / / / /	Full
Earl E.H. pd	/ / / / / / / / / / / / / /	Full
Lockhart D.G. pd	/ / / / a / / / / / / a /	all but chem
McKay Eug. pd	/ / / / a / / / / / / / /	Full
Schmidt A.T. pd	/ / / / / / / / / / / / / /	Full
Raymond G.H. pd	/ / / / / / / / / / / / / /	all but chem
Crockett W.C. pd	/ / / / / / / / / / / / / /	"

~~Ramsford P.H. pd~~	~~1 1 s s s s s s s s s~~	
Tilson J.B. pd	1 1 s 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Poole Alf	1 1 1 1 a 1 1 1 1 1 1 1 1	full
Raymond Alf pd	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Schmidt Aud. J. pd	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Duffell J.L. pd	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Seery F.J. pd	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Worthington A.N. pd	1 1 1 1 1 1 1 1 1 1 1 1 w 1 1	full
Grant R.C.J. pd	1 1 1 1 1 1 1 1 a a 1 1 1 1	all but aud.
Clarke J.L. pd	1 1 1 1 a 1 1 1 1 1 a 1 1	full
McCollum E.P.	1 1 1 1 1 1 1 1 1 1 1 1 1 a 1 1	full
Morgan V.H. pd	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Pringle W.R. pd	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Berkett H.S.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Orton T.H.	1 1 1 1 a 1 a 1 1 a a + lec 1 1 h w up	full
~~Harvey C.L.~~	~~s s s s~~	
Robertson F.D.	1 1 a 1 1 1 1 1 1 1 1 w 1	full
McGannon T.G.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Martin A.H. pd	1 1 1 a 1 1 1 1 1 a w	-
White F.J. pd	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	full
Gardner I.M.	1 1 1 1 1 1 1 1 1 1 1 a	full
McGregor J.G.	1 1 1 1 1 s 1 1 1 1 a a	all but aud.
Wilkins H.P.	1 1 1 1 1 1 1 1 1 1 1 a	full
51 ~~Martin pd~~		
52 Porter J.A.	1 1 1 a 1 1 a a a	-
23		
23		
50		

Mr. O's Lecture Portfolio
with list of students
in last class to which
he lectured at McGill

& note about
his lectures written
at Oxford during
the war.

From Pike

I. 84 Tania

II 53 " "

From Pickerel

8 Tania. length 10-12 inches

width of posterior segments about 1/4 inch