ABSTRACTS

The following abstracts are based upon articles published from the Yale University School of Medicine.

Barker, Creighton: Fusospirillosis (Vincent’s Angina). Nelson Loose-Leaf Living Medicine. Survey of Literature. Service vol., 1930, 476-78.

German, William J.: Aphasia. Yale J. Biol. & Med., 1929, 1, 363-83.

Gesell, Arnold: Some Relations Between Early Physical and Mental Growth. In symposium on physical education and health, School of Education, New York University, New York University Press, 1930, 89-91.

d'Herelle, Felix: The Nature of The Ultrafiltrable Viruses. Harvey Lecture, 1930, 24, 45-71.

Mendel, Lafayette B., Rose, W. B., and Stucky, C. J.: Studies on the Physiology of Vitamines. IX. Hemoglobin, Sugar, and Chloride Changes in the Blood of Vitamine B-deficient Rats. Am. J. Physiol., 1930, 91, 520-30.

The anhydremia which developed is thought to be due to the diminished food and water consumption incident to B avitaminosis. The changes in blood sugar and blood chlorides appear to be the result of inanition and starvation, since similar changes are observed in the blood of control animals. Whether or not the decrease in water consumption is wholly due to the anorexia is an open question.

C. A. C.

Mendel, Lafayette B., and Vickery, H. B.: Effect of Continued Administration of Iodide on the Growth of the Albino Rat. Proc. Soc. Exper. Biol. & Med., 1930, 27, 806-9.

No appreciable increase in average rate of gain was exhibited by the rats receiving supplementary iodide. The apparent harmlessness of the continued administration of iodide is emphasized.

C. A. C.

Mendel, Lafayette B., and Smith, A. H.: Praktisches Verfahren bei Ernährungsversuchen. Abt. IV, Teil 13 in Handbuch der biologischen Arbeitsmethoden, hrsg. von Emil Abderhalden, pp. 117-72. Berlin und Wien, Urban und Schwarzenberg, 1930.
Musselman, Luther: Effect of Changes in Environment on Development of the Chick. Proc. Soc. Exper. Biol. & Med., 1929, 27, 216-17.

Part of the eggs were treated with saline, part with alcohol. The resulting abnormalities were, chiefly: (1) an absence of the pituitary gland; (2) in some an absence of one eye; (3) failure of head folds to close; (4) in one, an absence of olfactory pits.

Peters, John P.: The Treatment of Nephritis. Chapter LIII in the George Blumer Edition of the Billings-Forchheimer Therapeusis of Internal Diseases. New York, London, Appleton, 1929.

Smith, George H.: Bacteriophage Therapy. Chapter III in The George Blumer Edition of the Billings-Forchheimer Therapeusis of Internal Diseases. New York, London, Appleton, 1929.

Smith, George H.: The Calmette-Guerin Method (B-C-G) of Vaccination Against Tuberculosis. Chapter X in the George Blumer Edition of the Billings-Forchheimer Therapeusis of Internal Diseases. New York, London, Appleton, 1929.

Soper, Willard B.: Possibilities of Collapse Therapy in Pulmonary Tuberculosis. Proc. Conn. Med. Soc., 1929, 137, 196-201.

The advantages of collapse therapy in the acute, fulminating pneumonia type of the disease, as usually seen in young adults and limited to one lung, is evident. It is estimated that from 30 to 40 per cent of the cases exhibiting this type of disease may be restored to normal. Collapse therapy is applicable to 20 per cent of all cases where heretofore the severe lesions rendered doubtful a life expectancy of more than three years. C. H. W.

Thoms, Herbert: A Method for Demonstrating the Mechanism of Labor. Am. J. Obst. & Gynec., 1929, 18, 127-28.

A method for demonstrating the mechanism of labor using manual manipulation of the dried calvarium of an infant's skull passing through a pelvis is described. Flexion, descent, internal rotation, extension and external rotation in all vertex, brow, and sinciput presentations may be shown in their correct relationships.

Thoms, Herbert: Shortening of the Transverse Diameter of the Superior Strait; Its Clinical Significance. Am. J. Obst. & Gynec., 1930, 19, 539-44.

Roentgenographic pelvimetry is important in estimating accurately the shortening of the transverse diameter of the superior strait. External pelvic measurements made for this purpose are practically valueless.
The importance of the transverse diameter of the superior strait, particularly in simple flat pelvis and in the generally contracted pelvis, should be realized by all physicians who include obstetrical cases in their practice.

R. M. C.

UNDERHILL, F. P., and Peterman, Florence: Studies on the Metabolism of Aluminium. I. Method for the Determination of Small Amounts of Aluminium in Biological Material. II. Absorption and Deposition of Aluminium in the Dog. III. Absorption and Excretion of Aluminium in Normal Man. Am. J. Physiol., 1929, 90, 1-14; 15-39; 40-51.

Small amounts of aluminium may be determined by a colorimetric method which involves a removal of iron, the regulation of pH, and a time element. "Dry ashing" at a low heat is used, and "Alizarine Red S" is used as the indicator. The exact method including preparation of standards and controls is described. The method is applicable to blood, tissue, feces, urine, and food-stuffs. The sensitivity of the method is best between 0.0005 and 0.005 mg. of aluminium.

The absorption and deposition of aluminium in dogs were studied by this method. The aluminium was given to the dogs in biscuits, in the form of alum-phosphate or plain alum, depending on the type of baking powder used. Studies of the tissues showed that aluminium is found in the blood and tissues of normal fasting dogs and that aluminium is contained in and is absorbed from the ordinary diet. The aluminium is promptly absorbed from those foods which contain large amounts, and is excreted chiefly in the bile. Absorption, storage, and excretion are decreased after prolonged feeding on foods rich in the metal. The aluminium absorbed circulates in the blood and is stored largely in the liver, brain, kidney, spleen, and thyroid.

In studies on the normal man it was found that aluminium may or may not occur in the blood and may vary in the same individual within narrow limits. Aluminium-rich food may or may not increase the blood content and food poor in aluminium usually decreases the amount present. The urinary excretion, even after the ingestion of large amounts of aluminium, never exceeds 0.5 mg. of the metal in 24 hours.

C. H. W.

UNDERHILL, F. P., Peterman, F., and Steele, S. L.: Studies in the Metabolism of Aluminium. IV. The Fate of Intravenously Injected Aluminium. Am. J. Physiol., 1929, 90, 52-61.

Aluminium injected in amounts of 1 to 2 mg. per kilo in dogs appears promptly in the bile, lymph, and urine, but the amount present in these fluids does not account for all of the injected metal. Part of it is stored in the tissues. Aluminium absorbed from aluminium-rich foods is excreted at all levels in the gastro-intestinal tract.

C. H. W.
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UNDERHILL, F. P., and PETERMAN, FLORENCE: Studies in the Metabolism of Aluminium. V. The Relation of Age to the Amount of Aluminium in Tissues of Dogs. Am. J. Physiol., 1929, 90, 62-66.

Little, if any, aluminium is found in the tissues of embryo dogs. Tissues of puppies contain more aluminium than does embryo tissue, and it is always present in the lungs of five-day old puppies. There is a direct relationship between the age and aluminium content of tissues. C. H. W.

VALLEY, GEORGE: The Rôle of Carbon Dioxide in Biological Processes. Yale J. Biol. & Med., 1930, 2, 229-36.

VAN CAMPENHOUT, ERNEST: The Autonomic Nervous System in the Light of Recent Research. Yale J. Biol. & Med., 1930, 2, 223-28.

WEGMAN, MYRON E.: Chorea and Athetosis. Yale J. Biol. & Med., 1930, 2, 269-83.

The following are abstracts of Theses submitted during the academic year 1929-30 by students of the School of Medicine in partial fulfillment of the requirements for the degree of Doctor of Medicine:

ALPERT, SAMUEL: A Study of Antilytic Sera.

These experiments indicate a similarity in the nature of the antilytic action of antibacteriophagic and antibacterial sera, since in both the antilytic properties disappear after absorption with the homologous bacterial antigen. F. A. W.

CHU, FARN B.: Antigenic State and Antibody Production. The Relative Value as Antigens of Intact and Bacteriophaged Cells of B. pullorum.

The bacteriophaged cells produce a speedier and more stable antibody response than do intact bacteria, but the rates of fixation of the antigen to antibody in each case do not differ significantly. G. K. H.

COBB, JOHN R.: A Study of B. coli Found at Postmortem Examination.

All of the strains studied were remarkably virulent. The virulence of some of the strains may be partially explained on the basis of a soluble diffusible toxin. Both the soluble toxin and the washed organisms were apparently able to produce immunity to the living organism. It was impossible to determine whether strains isolated from different organs of the body were identical. F. A. W.

CONANT, JAMES S.: Deafferentation Studies on the Respiratory Mechanism.

Complete deafferentation of the respiratory tract in the cat has no measurable toxic effect upon polypnea under light anesthesia. In most of the animals studied there was a temporary diminution in the respiratory rate after the nerve sections. This persisted at the most for four minutes, with a rapid return to normal. F. A. W.
COUCH, FRANK H.: Optic Nystagmus Without Adequate Stimuli.
A study of nystagmus, using a stimulus which could conceivably fall within the blind spot. The nystagmus was not significantly modified by this stimulus. Upon cessation of all visual stimuli, "after-nystagmus" usually took place. This was more striking following an inadequate stimulus than after an adequate one.

FLYNN, JOSEPH E.: The Process of Healing of Experimental Wounds of the Spinal Cord.
The healing of experimental wounds of the spinal cord of cats at intervals from 12 hours to 45 days after operation was studied. The main reparative process was carried out by the fibrillary astrocytes. There was repair of the leptomeninges over the spinal cord wound. An early degeneration of the myelin sheaths and neurones was seen. The results at any stage were comparable to those found in brain wounds at similar stages.

GALLAGHER, JAMES R.: The Effect of Changes in the Receptivity of the Cerebral Nervous System on Agglutinin Production.
In an effort to investigate the relation between antibody production and the central nervous system the course of antibody formation in rabbits following the use of strychnine or amytal was studied. Despite the fact that these drugs have an opposite effect upon the receptivity of the organism to stimulation, the antibody responses in the two instances were not qualitatively or quantitatively different. It was noted, however, that the administration of either strychnine or amytal before the inoculation of antigen resulted in a more prompt antibody response than when antigen was given alone.

JOSEPHS, IRVING L.: The Effect of Intraperitoneal Injection of Suprarenal Glands Upon the Gonads of White Rats.
The results of the intraperitoneal injection of adrenal glands, while occasionally striking, were not sufficiently constant to add further proof of an adrenal-gonad interrelationship.
No biological standard of measurement of the adrenal cortex could be established by the results of the investigation.