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

ADAMS, MARGARET A., and HIMWICH, H. E.: Studies in Glandular Metabolism.

I. The Source of the Lactic Acid Produced on Incubation of the Testicle and the Submaxillary Gland. Am. J. Physiol., 1929, 91, 172-77.

From dogs and cats, either both submaxillary glands or both testicles were removed after which one gland was frozen while the other was allowed to incubate at 37°C. for from two to three hours. In almost all cases the glycogen was decreased in the incubated gland, and in some a quantitative relationship was found to exist between the amount of glycogen lost and the increased amount of lactic acid. The amount of intermediary carbohydrates remained unchanged. These observations indicate that glycogen is in part or wholly the source of the lactic acid formed on the incubation of these tissues.

II. The Carbohydrates of Resting and Secreting Submaxillary Glands. Ibid., 1930, 93, 568-73.

In order to determine whether the transformation of glycogen into lactic acid was responsible for the energy causing glandular secretion, the lactic acid content of submaxillary tissue, venous blood, arterial blood, saliva, and lymph during stimulation with a tetanizing current was measured. The quantities found indicate that glycolysis does not serve as a source of energy for glandular secretion.

L. W. D., JR.

ANDERSON, WILLIAM E., MENDEL, L. B., REED, L. L., and YAMAGUCHI, F.: Factors Influencing the Distribution and Character of Adipose Tissue in the Rat. J. Biol. Chem., 1930, 87, 147-74.

Rats were fed on diets high in fat or carbohydrate and were later killed. By removal of fat from different depots it was found that more fat was stored in rats on a diet rich in fat. The stored fat was in proportion to increases in body weight. Male rats stored more fat in the perirenal depot than did females, while the latter stored more in the genital fat depot. Reserve fat is distributed independently of diet, but forced exercise causes an increased amount of intermuscular fat. The degree of saturation of stored fat depends on the diet, and fat in different depots differs only in the degree of saturation.

L. W. D., JR.
ABSTRACTS

BLAKE, F. G.: Diagnosis and Treatment of Pneumonia. New Eng. J. Med., 1930, 202, 991-95.

It is important to make a diagnosis not only on an anatomical basis, but on the etiology, in which there are three factors: bacterial incitant, an immediate predisposing cause, and the immunity or susceptibility of the host. In a review of the lesions and course typical of the various bacterial incitants, emphasis is placed upon sputum examination. Therapy of pneumonia is divided into three types: (1) drug therapy, (2) specific antiserum treatment, and (3) induced physiological responses. In discussing the first of these, mention is made of the irrational use of strychnine, the theoretical advantage of digitalis, and the rationale of morphine administration. The third type of therapy involves an attempt to help patients by correcting disturbances in the physiological processes through measures based on physiological principles, e.g., by the use of oxygen, intravenous glucose, and saline.

BLAKE, F. G., POOLE, A. K., and BUMSTEAD, J. H.: Skin Tests with Pneumococcus and B. influenzae Antigens in Influenza and Pneumonia. J. Clin. Invest., 1929, 7, 519-20.

When the skin activity of patients with uncomplicated influenza or with pneumonia is tested by use of antigens prepared from pneumococcus Type I, pneumococcus Type II, and B. influenzae, it is found that those with influenza appear to show heightened reactivity during the acute stage and tend to lose this after recovery; those with pneumonia show little reactivity during the acute stage and tend to become more reactive after recovery.

BLUMER, G.: The Relation of Clinics and Health Associations to the Medical Profession. New Eng. J. Med., 1930, 202, 999-1001.

On the basis of experience gained as chairman of the Committee on Public and Professional Relations of the New Haven Medical Association and on reports from numerous colleagues throughout Connecticut, the author discusses some problems due to: (1) changes in the hospital situation, suggesting the position of a hospital be that of a consultant; (2) free clinics and pay clinics; (3) increased activity of health departments; (4) the danger of unsupervised nurses assuming too much responsibility; and (5) factory medicine, with its complicating insurance medicine. The economic aspect of the situation is the one most needing intelligent treatment, and this is now being studied.
Breck, Charles A.: Replantation of the Eye in the Albino Rat. (Abstracted in) Anat. Rec., 1930, 45, 257.

Microscopic studies showed a complete replacement of the nervous structures by fibrous connective tissue, and in no case was there an optic nerve connecting the eye with the brain. The cornea of these bulbs became thickened and vascularized very early, and failed to regain subsequently their original transparencies. The lens, although large in proportion to the entire organ, decreased in size. It retained its epithelial capsule, but its interior became less distinctly laminated than is normal.

Buck, Albert W., and Jordan, R.: An Accounting System that Provides Accurate Budgetary Control. Mod. Hosp., 1930, 34, 77-80.

Callison, William E., Lander, J., and Underhill, F. P.: The Potassium and Calcium Content of the Brain under MgSO₄ Anesthesia. J. Pharmacol. & Exper. Therap., 1930, 38, 385-89.

Activity or depression of the brain fails to elicit marked changes in the calcium-potassium relationship. These experiments lend support to the view that the tissues themselves do not readily undergo alteration of composition.

Casman, Ezra P., Valley, G., and Rettger, L. F.: The Serologic Diagnosis of Pullorum Disease in Domestic Fowls. I. Variations in Agglutinability of Bacterium pullorum and Elimination of the so-called "Cloudy" Reaction. J. Immunol., 1930, 18, 353-77.

Maximum agglutination takes place at a pH of 6.4 or 8.0 and the optimum temperature is 37°C. The "cloudy" reaction can be eliminated by adding from 0.2 to 0.3 per cent of phenol to the antigens and by adjusting the H ion concentration of the antigen to pH 8.2 to 8.5.

DeAberle, Sophie B., Thompson, W. R., and Pitney, E. H.: Relation of Weight of Placenta, Cord, and Membranes to Weight of Infant in Normal Full-term and in Premature Deliveries. Proc. Soc. Exper. Biol. & Med., 1930, 27, 586.

The correlation between the weight of the infant and the weight of the placenta, cord, and membranes has been studied in 4129 instances. The cases were distributed in two main classes, one class consisting of fetuses weighing under 1500 grams, the other of infants weighing 1500 grams or over. In the latter case males and females were analyzed separately. In each group a positive correlation was found.

W. P. W.
Dial, Donald E.: Metastatic Carcinoma in The Spleen. Am. J. Path., 1930, 6, 79-85.
A case of this relatively rare condition is presented. F. A. W.

Downs, William G., Jr.: Tadpoles Fed Pituitary Extracts. J. Dent. Res., 1930, 10, 1.
Tadpoles were fed the so-called hormones of growth and of sex development, prepared from the anterior lobe of the pituitary gland according to the method of Evans. The size of the animals at the onset averaged 11 mm., at the end of the experimental period the animals receiving the growth hormone averaged 44 mm., while those receiving the sex hormone averaged 31 mm., and the controls 36 mm. Because of the number of variables the author draws no conclusions from the experiment. D. F. H.

Downs, William G., Jr., and Goss, C. M.: The Presence of Nerve Fibers in the Dentinal Tubules of Mammalian Teeth. Proc. Soc. Exper. Biol. & Med., 1929, 27, 64-65.
The dentinal tubules of mammalian teeth contain definite, unmyelinated fibers. These may be demonstrated in material fixed with pyridine and impregnated with silver according to a modification of the Cajal technic. From their arborization around the odontoblast the fibers extend into the dentinal tubules, following these tubes to the dento-enamel junction, where they apparently dichotomize between the dentin and the enamel. H. H. C.

Edwards, Herbert R.: Tuberculosis. Americana Ann., 1930, 752-54.
The advances made in combatting tuberculosis in this country in the last 25 years may be roughly gauged by comparing the death rate of 200 per 100,000 in 1904 to 81 per 100,000 in 1927. Although tuberculosis has been reduced from the leading cause of death to tenth place, it still remains the leading cause of death in the 15 to 20 years age group. F. A. W.

Emery, Edgar V.: Pooling and Coordination of Effort in Mental Hygiene Clinics. Ann. Am. Acad. Pol. & Soc. Sci., 1930, 149, pt. 3, 80-85.
The pooling of knowledge and effort from four points of view—that of general medicine or the pediatrician, of the social worker, of the clinical psychologist, and of the psychiatrist is essential to the well-organized, mental hygiene clinic. The advantages of coordination and team-work are quite apparent not only in the case of the patient but also in the case of the individual clinic member. C. A. C.
EMERY, EDGAR V.: Cooperation between Clergyman, Psychiatrist and the Social Worker. Religious Education, 1929, 24, 624-630.

The clergyman, in his pastoral capacity, occupies a unique position and it is highly desirable that he have an accurate knowledge of the viewpoints and resources of the social worker and the psychiatrist. The cooperation of clergyman, psychiatrist, and social worker is essential to the best interests of humanity.

EMERY, EDGAR V.: Mental Diagnosis and Probation. Ann. Am. Acad. Pol. & Soc. Sci., 1930, 149, pt. 3, 184-189.

The hazards of mental diagnosis in child delinquency are great, and an intelligent appreciation of mental diagnosis and treatment is necessary to the probation officer.

FOX, JAMES C., JR.: Subarachoid Hemorrhage—Diagnosis and Treatment. Proc. Conn. Med. Soc., 1929, 137, 172-184.

The diagnostic signs are severe headache, marked rise in intracranial pressure (300 to 400 mm.), irregular temperature (101 to 102° average), variable low pulse, and, of most importance, a bloody spinal fluid which becomes progressively clearer as it is withdrawn. Spinal drainage is the best treatment, and is most effective if done 24 hrs. following hemorrhage. Drainage should be done slowly with frequent manometer readings, and stopped as soon as the pressure is normal (100 to 150 mm), usually after the withdrawal of 20 cc.

FREEMAN, NORMAN E.: The Rôle of Hexose Diphosphate in Muscle Activity. Am. J. Physiol., 1930, 92, 107-116.

An increase in the amount of hexose diphosphate used in perfusing the frog heart causes an increase in muscle efficiency. This action may be due to its function as a muscle buffer rather than to its accredited function as lactacidogen, the immediate precursor of lactic acid in muscular contraction.

FRISCH, ROBERT A., MENDEL, L. B., and PETERS, J. P.: The Production of Edema and Serum Protein Deficiency in White Rats by Low Protein Diets. J. Biol. Chem., 1929, 84, 167-77.

In growing albino rats there is a decrease in serum proteins consequent upon diets deficient in protein, and frequently associated with this decrease there is an edema.
GESELL, ARNOLD: The Organization of Child Guidance and Developmental Supervision. Ment. Hyg., 1929, 13, 780-87.

The broader problems of the organization of child guidance can be solved only on a wide community basis. The medical, social, and educational aspects of the task cannot be separated, nor should special age periods be partitioned from one another.

F. A. W.

GREENWAY, JAMES C., and HISCOCK, I. V.: Mortality among Yale Men; Further Analysis of Mortality among Athletes and Other Graduates of Yale University. Yale Alumni Weekly, 1929, 39, 7-8.

The life expectancy of Yale College graduates of the classes from 1875 to 1905 is only slightly higher than that of the average young man accepted for life insurance. The statistics of athletes and of honor men are considerably more favorable than are those for the college body as a whole.

F. A. W.

GROSS, ERWIN G., KRAUSE, A. C., UNDERHILL, F. P., and PETERMAN, F. I.: Studies in the Metabolism of Aluminium. VI. The Occurrence of Aluminium in Human Liver and Kidney. VII. The Aluminium Content of some Fresh Foods. Am. J. Physiol., 1929, 90, 67-71; 72-75.

The aluminium content of human liver varies from 0.17 to 1.17 mg. per 100 gm., of the kidney from 0.13 to 0.87 mg. per 100 gm. When large amounts of aluminium are to be found in the liver usually there is also a large amount in the kidney. The content varies among individuals of the same age in different localities, but in a given locality comparable individuals show equal amounts.

A table showing the aluminium content of fresh foods indicates that the highest values are to be found in cherries and onions (3.49 to 4.31 mg. per 100 gm. respectively), with lettuce, milk, flour, and liver showing between 1 and 2 mg. per 100 gm., and that the lowest values are present in apples, eggs, oranges, and watermelon (less than 0.1 mg. per 100 gm.).

J. C. S.

HARTSHORN, WILLIS E.: The Surgical Clinic in the Dispensary. New Eng. J. Med., 1930, 202, 110-115.

An ideal type of out-patient clinic and several methods of treatment of chronic conditions in ambulatory patients are described in detail.

M. L.

HAYNES, FLORENCE W., and HIMWICH, H. E.: Effect of Pituitary Extract on Basal Metabolism. Proc. Soc. Exper. Biol. & Med., 1930, 27, 815-816.

Previous studies on the effect of pituitary extract on basal metabolism have not been conclusive, although an increase has been presumed.
significant experiments, here reported, were performed on male rats after a 24-hour fast. They showed that a sufficient amount of chloretone-free pituitrin injected subcutaneously produces a decided lowering of the basal metabolism. The decrease in basal metabolism is caused by the pitressin; pitocin produces a slight increase.

Howes, Edward L.: Colorimetric Determination of Acriflavine and Neutral Acriflavine. Ind. & Eng. Chem., 1930, 2, 114-116.
The technic and accuracy of a qualitative method for the determination of acriflavine and neutral acriflavine are described.

Johnson, Carl E., and Harvey, Samuel C.: Granuloma Senilis. Arch. Dermat. & Syph., 1930, 21, 566-569.
A report and study of a case of granuloma senilis, a condition reported in a previous instance by Kreibich in 1927. The points of differential diagnosis and etiology are given, and microscopic sections are presented.

Lindsay, Merrill K.: Relation of Myodynamia to the Contour and Structural Arrangement of Bone. Dental Cosmos, 1930, 72, 289-291.
With Wolff's law as the sine qua non of myodynamics, the author discusses the varied contours and structures of bones resulting from altered forces bearing upon them. Functional deformities, those resulting from faulty demands, and deformities due to actual bone disease or trauma are expressions of functional accommodation to abnormal static demands. Treatment involves correction of the muscles and soft parts to overcome the bony developmental defects.

Moïse, Theodore S., and Smith, A. H.: Atelectasis in the Pathogenesis of Abscess of the Lung. Arch. Int. Med., 1930, 45, 92-101.
A study of spontaneous pulmonary suppuration was made in the albino rat. Atelectasis following obstruction is observed fairly often as a result of a mucus bronchial plug. Since micro-organisms are found in otherwise healthy lungs it is suggested that a growth of the pathogens takes place distal to the occluding plug, and a pulmonary abscess results. Spread may occur by direct extension or by a repetition of the above process.

Phelps, Winthrop M.: Specificity of Light Action in Tuberculosis. J. Bone & Joint Surg., 1930, 12, 253-269.
Clinical and experimental study of the light-band lying between 320 and 380 millimicrons shows that this band is active. Its effect is an indirect ac-
Acceleration of the process of repair. This band is present in sunlight at the sea-level, as elsewhere, and all dosage should be measured. An electrical method of measuring the intensity in gram-calories per square centimeter per minute is described. A good artificial source of this light is the arc-lamp with proper carbons and a power consumption of at least 25 amperes. Erythema and tan are of no use as a basis of dosage because these are caused by the waves below 320 millimicrons; therefore if the source of light is free of these lengths it is possible to give larger doses without the possibility of undesired erythema.

C. H. W.

Rose, William B., and Stucky, C. J.: Studies in the Physiology of Vitamins. VIII. The Effect of Parathormone on Normal and Vitamin B-Deficient Rats. Am. J. Physiol., 1930, 91, 513-519.

Successive injections of parathormone produce a significant increase in the calcium of the blood serum. In these experiments it averaged 42 per cent. Repeated parenteral administration of the extract is fatal to vitamin B-deficient rats.

F. A. W.

Rose, William B., Stucky, C. J., and Mendel, L. B.: Studies in the Physiology of Vitamins. IX. Hemoglobin, Sugar and Chloride Changes in the Blood of Vitamin B-Deficient Rats. Am. J. Physiol., 1930, 91, 520-530.

Rats on a vitamin B-deficient diet develop anhydremia, as indicated by a definite increase in hemoglobin. No significant difference occurs in the blood sugar level. There is a tendency toward a decrease in blood chlorides.

F. A. W.

Rose, William B., Stucky, C. J., and Cowgill, G. R.: Studies in the Physiology of Vitamins. X. Further Contributions to the Study of Gastric Motility in Vitamin B Deficiency. Am. J. Physiol., 1930, 91, 531-46.

The decrease in gastric contractions in vitamin B-deficient dogs is not due to any specific effect of a lack of this vitamin in the diet. However, a deficiency of this food essential seems to accentuate gastric disturbances observed in such dogs.

XI. The Effect of Insulin on Gastric Atony in Vitamin B Deficiency. Ibid., 1930, 91, 547-53.

The vigorous response to insulin obtained in normal dogs is greatly diminished in those animals showing complete gastric atony incident to B-avitaminosis.
XII. The Effect of Parathormone on Gastric Motility in Vitamin B-Deficient and Normal Dogs. Ibid., 1930, 91, 554-62.

Parathormone produces no significant effect on gastric atony in dogs suffering from B-avitaminosis.

XIII. The Relation of Gastric Motility to Anhydremia in Vitamin B-Deficient Dogs. Ibid., 1930, 92, 83-91.

These experiments indicate that the decrease in gastric motility occurring in B-avitaminosis is due in part at least to the concomitant anhydremia that develops.

F. A. W.

Streeter, E. C.: Leonardo da Vinci and the Practise of Dissection among the Florentine Artists. Long Island Med. J., 1930, 24, 144-47.

While the Byzantine and medieval painters aimed only to create an abstract, symbolic type of beauty, the ambition of the Renaissance artists was more naturalistic, and their interest in anatomy was inevitable. A plaque of Donatello's shows a public school dissection. After his time, however, the artists pursued anatomy alone and secretly, having withdrawn from the schools. The artists' interest lay in muscles and their functions which were hardly considered in the regular anatomical course. This interest becomes most marked in Michelangelo, and in da Vinci, whose ideas concerning functional anatomy are amazingly modern.

R. W. H.

Van Campenhout, Ernest: Historical Survey of the Development of the Sympathetic Nervous System. Quart. Rev. Biol., 1930, 5, 23-50.

Since the original work of Remak in 1847, studies in this field have been many, and varied in character, and probably reached their climax in the application of experimental embryological methods by Kuntz in 1922. Cumulative study has developed three theories of possible origin of the autonomic nervous system—the neural crest, the dorsal root, and the ventral root.

J. C. S.

Vermooten, Vincent: The Elongation of the Ureter. J. Urol., 1930, 23, 427-439.

An attempt is made to correlate the experimental work on ureteral stricture in dogs with ureteral kinks and elongations which may be found in patients with ptosed kidneys. It is suggested that indications of elongation should mean ureteral obstruction with slight dilatation in the proximal portion.

M. L.
Vermooten, Vincent: A Ball of Hair in the Urethra; A Late Complication of the Bucknall Operation for Hypospadias. New Eng. J. Med., 1930, 202, 658-660.

The author reports a case of a ball of hair, to which had been added calcium phosphate deposits, found within the urethra following a modified Bucknall operation.

D. N. B.

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:

Beers, Daniel N.: Transplantation of Larval Amphibian Eyes.

Return of vision following transplantation was shown to occur in 32 adults and in one larva. In one case it was found to take place as early as 48 days after operation. The eyes showed corneal and pupillary reflexes, ocular movements, and pigmentation changes as described for other transplanted and normal controls.

L. J. S.

Bird-Acosta, Ignatio: The Effect of Histamine on the Blood Sugar of the Rabbit.

Previous workers using dogs, rabbits, and guinea pigs obtained striking effects on blood sugar following the intravenous injection of small quantities (3 mg. per kilo of body weight) of histamine. In the present study it was found that doses not in excess of 3 mg. per kilo of body weight administered subcutaneously to normal fasting adult rabbits caused no appreciable effect on the blood sugar.

L. J. S.

Bishop, Courtney C.: Observations on the Rate of Absorption of Cerebrospinal Fluid in the Dog.

By establishing a connection between a closed hydraulic system for measuring pressures and the subarachnoid space, and allowing warm physiological saline to run into the subarachnoid space, it was hoped that a measurement of the rate of absorption of the fluid might be made under different pressures without altering the normal volume and pressure of the cerebrospinal fluid in any other way. It was found that the rate of absorption was extremely slow and varied with the pressure. This suggests that the process is a simple filtration.

A. T.
Boyce, Frederick F.: The Influence of the Subcutaneous Injection of Yeast Extracts on the Blood Sugar Content of Rabbits.

Twelve normal fasting rabbits were used; six for tests of extracts of Fleischmann's yeast and six with extracts of Harris' yeast. Lowering of blood sugar content was constant. In all experiments a maximum lowering was reached after three hours. A second injection of yeast extract at the end of three hours showed a further lowering which was not as prominent as the first. Increased concentration of the hormone of yeast extract gave a pronounced result on the first injection, but not on the second. The lowering of blood sugar content produced by extracts of Fleischmann's yeast was more striking than that produced by extracts of Harris' yeast. In no case was glycosuria encountered.

L. M. P.

Breck, Charles A.: Replantation of the Eye in the Albino Rat.

The eye was replanted in each of 60 rats, results showing that a return of circulation occurred in 28.3 per cent, a small bulb persisted in 6.6 per cent, a fibrous stump persisted in 20 per cent, and complete resorption took place in 71.6 per cent. In the nine control rats which were subjected to extirpation of the eye three showed a return of circulation, one a persistence of the small bulb, five a persistence of the fibrous stump, and three a complete resorption. These results do not favor anatomical union. Furthermore, microscopic observation showed fibrous connective tissue in the place of nervous tissue, and in no case was there evidence of a nervous connection between replanted eye and brain. The lens decreased in size, the retina degenerated, and the cornea thickened, but did not regain its original transparency. No evidence of functional activity was noted.

L. M. P.

Connor, Joseph J.: The Influence of Glycine on the Blood Sugar Curve of the Rabbit.

The normal blood sugar in the normal rabbit after a 24-hour fast varies between 108 and 125 mg. per 100 cc. No change in the blood sugar content is caused by saline. Twenty-nine hours after injection of dextrose, this sugar was still being absorbed from the blood stream. In rabbits with normal glycogen stores there is no change in blood sugar content following the injection of glycine. When both dextrose and glycine are given, the former 24 hours prior to the glycine injection, the dextrose is absorbed and stored in the form of glycogen. Upon the injection of glycine, hyperglycemia results.

Glycine may or may not cause a hyperglycemia in rabbits. The response to glycine varies directly with the glycogen stores of the animal. Only when the store of glycogen is presumably large does hyperglycemia occur.

W. H. H.
DEABERLE, SOPHIE B.: Cyclic Proliferative Phenomena in the Mammary Glands, Vagina, and Uterus of the Guinea Pig.

The width and mitotic index of the vaginal, nipple, and uterine epithelia, and variations in the parenchymal tissue of the mammary glands were studied at various stages in the oestrous cycle in 24 virgin, adult guinea pigs. In each organ the difference between maximal and minimal height of epithelium was found to be statistically significant.

The maximum width of the vaginal mucosa is present from approximately 48 hours before and on through stage I of oestrum. The minimum width occurs at the beginning of the dioestrous period. The mitotic index resembles the curve of proliferation. Maximum proliferation in the nipple occurs during oestrum, and the minimum width in the first half of dioestrum. The curve of proliferation is similar to that of the mitotic index. Proliferation in the mammary gland parallels changes in the nipples.

The thickness in the uterine epithelium changes only slightly during the cycle. The maximum thickness is in the first half of the oestrous cycle and the minimum thickness at the end of the dioestrum. The mitotic index rises and then drops at stage I, resembling in this respect the vagina and nipples. It then shows an independent rise at stage IV. The difference of proliferative response suggests that, although the hormone from maturing follicles has been shown to be responsible for the initial proliferation of these organs, a second factor may operate in producing the complete cyclic changes in these organs of the guinea pig.

W. H. H.

EAGAN, EDWARD F., JR.: The Pathology of Subdural Hematoma.

The pathology of subdural hematoma of the posttraumatic type, experimentally produced in dogs was studied in connection with the clinical pathology and treatment of posttraumatic and the so-called spontaneous progressive subdural hematomata. It was found that during the four to six weeks stage the increased vascularization of the lesion presented a picture quite similar to that described as characteristic of spontaneous progressive hematoma. Since the latter condition is most commonly noticed in debilitated and alcoholic patients where successive traumata might occur, it is suggested that there may be no distinct difference between the two lesions.

A. T.