

EPITOME OF CURRENT MEDICAL LITERATURE,

PHYSIOLOGY.

THE INFLUENCE OF VAGUS STIMULATION ON THE COAGULATION TIME OF THE BLOOD.—The coagulation time of the blood was increased on stimulation of the vagus in the rabbit, cat and dog. Cannon and Mendenhall have already described an opposite effect on stimulating the splanchnic. The antagonism of the vagus and the sympathetic in this instance is emphasised. Plattner and Kodera. (*Pflüger's Arch.*, 1928, 219, 564.)

MENTAL FATIGUE AND ORGANIC PHOSPHORUS EXCRETION.—After prolonged mental fatigue the organic phosphorus content of the urine increases. Taranowitsch. (*Biochem. Ztschr.*, 1928, 194, 461.)

THYROID FEEDING AND GROWTH.—Thyroid feeding from birth in guinea-pigs is always marked by slower growth. With large doses death occurs. Durrant. (*Am. J. Physiol.*, 1928, 85, 364.)

THE ELECTRICAL SKIN RESISTANCE.—The author finds that emotional states and changes can be detected more satisfactorily by the study of skin resistance than by any other recognised physiological means, such as body temperature, blood pressure and baso-metabolic rates. Normal subjects show a more or less constant variation throughout the day, or predictable slight variations. With catatonic or schizophrenic patients, on the other hand, one often observes extreme variation from hour to hour. Richter. (*Arch. Neurol. and Psychiat.*, 1928, 19, 488.)

BASAL METABOLISM BEFORE AND AFTER A SUMMER VACATION.—There was no change in basal metabolism as a result of one month's holiday either in men or women, whether taken individually or in groups. The attitude to work and the mental outlook improved, but the basal metabolism seems to have a fixity for normal individuals not previously recognised. Benedict and Finn. (*Am. J. Physiol.*, 1928, 85, 665.)

PHARMACOLOGY.

CONCERNING THE ANTIPYRETIC PROPERTIES OF BENZYL BENZOATE.—Benzyl benzoate has been used in respiratory diseases, particularly in asthma and whooping cough, with considerable success. The benefit is due to its antispasmodic effect on smooth muscle and to its expectorant action. The authors in this paper study the antipyretic action of the substance and benzyl alcohol in hyperpyrexia in animals produced in a variety of ways. They find that both, given in aqueous suspension by the stomach, produce a fall in the temperature in fever. The action is due to a peripheral action of the substances in dilating the blood vessels, thus causing the fall of temperature through greater dissipation of heat from the surface of the body. They find further that these substances have practically no narcotic action even when given in large doses.

David I. Macht and Harriet P. Leach of the Pharmacological Research Laboratory, Hynson, Westcott and Dunning, Baltimore; *J. Pharm. and Exp. Ther.*, 1929, XXXV, 281.

CHANGES IN THE TONICITY OF SMOOTH MUSCLE PRODUCED BY TOXINS OF ASCARIS LUMBRICOIDES.—The authors have studied the effects of extracts made from whole ascaris lumbricoides, their body fluid, uteri, ovaries, intestines and cuticles. These all produce an increase in the tonus and an increase in the rate of contraction of intestinal muscle. The extracts of cuticle and of whole worm were the most potent. Given to intact animals, the extracts produce colicky symptoms, diarrhoea, vomiting and frequent defaecation. The extracts are also haemolytic, and stimulate the isolated uterus of the cat and rabbit.

Chester A. Herrick and Fred. E. Emery of the Departments of Zoology and Physiology, University of Wisconsin; *J. Pharm. and Exp. Ther.*, 1929, XXXV, 129.

THE ACTION OF ADRENALIN ON THE RESPIRATORY CENTER, WITH REMARKS UPON THE TREATMENT OF SEVERE RESPIRATORY DEPRESSION.—The author presents evidence that adrenalin apnea is not due to direct depression or to acute anemia of the respiratory center. Reflex inhibition appears to be a factor, but the real cause of it is the increased blood-supply to the center.

When the center is depressed, as by morphine, then adrenalin stimulates it, which is thought to be due to the improved blood-supply.

The author suggests that the respiratory center is never in real danger as long as it receives a sufficient supply of oxygen, and that the conventional respiratory stimulants such as caffeine or camphor are never urgently indicated. He thinks that serious depression or failure of respiration should be treated by measures which aim at improving the oxygen supply to the brain, among the best of which he places adrenalin and ephedrine.

Carl F. Schmidt of the Laboratory of Pharmacology, University of Pennsylvania; *J. Pharm. and Exp. Ther.*, 1929, XXXV, 297.

THE ACTION OF CHLORINE ON MEN POISONED BY TOXIC SMOKES.—The gases experimented with are the so-called "sensory irritant gases", "sternutators" or "sneeze gases", which are not gases, but crystalline solids, the fumes of which act as irritants. The substances used both in the recent war and in these experiments were diphenylchlorarsine $(C_6H_5)_2AsCl$, diphenylcyanarsine $(C_6H_5)_2AsCn$ and diphenylaminechlorarsine $(C_6H_4)_2AsClNH$, commonly referred to as D.A., cyan D.A. and D.M. respectively. The symptoms produced are first pain and irritation locally in the respiratory tract, accessory sinuses and the stomach, followed by general symptoms such as giddiness, lethargy and even unconsciousness. Disturbances and locomotion occur frequently, but varying in degree, and the patient shows an intense mental depression.

The investigators found that chlorine reacts to form non-irritant compounds with these substances and this led them to try the inhalation of chlorine as a curative measure. They found that inhalation of a concentration of 0.015 mgm. per litre of chlorine effectively prevented the onset of the usual irritant symptoms of D.A., cyan D.A. and D.M. Apparently an important point in the beneficial effect is the fact that these substances are insoluble and therefore tend to remain on the surface of the mucosae and are thus easily reached by chlorine when inhaled. The authors discuss the difficulties of chlorine inhalation under the conditions of an advanced dressing station.

Duncan C. Walton and W. A. Eldridge of the Medical Research Division of Edgewood Arsenal, Maryland: *J. Pharm. and Exp. Ther.*, 1929, XXXV, 241.

EXPERIMENTAL MEDICINE.

EFFECT OF ASH OF LIVER ON BLOOD REGENERATION IN PERNICIOUS ANAEMIA.—The administration of ash of liver to two patients with typical pernicious anaemia resulted in the preliminary signs of remission, in particular an increase in reticulocytes. But there was no true remission until Minot's extract 343 was given. The substance responsible for the above was apparently lost by dissolving the ash in hydrochloric acid, neutralising and evaporating to dryness.

Elden and McCann: (*Proc. Soc. Exp. Biol. and Med.*, 1928, 25, 746.)

EPICRAM.

Yesterday the Zeus of stone
From the doctor had a call.
Though he's Zeus and though he's stone
Yet to-day's his funeral.

NICARCHUS.