

The Particularly High Vitamin-C Content of the Cerebro-spinal Fluid of Newborn Normal and Premature Infants. (*Compt. Rend. Soc. Biol.*, vol. cxxi, pp. 987-8, 1936.) Rohmer, P., Bezssonoff, N., and Stoerr, E.

The spinal fluid of 5 normal full-term infants 4-16 days old contained 13-16 mgrm. ascorbic acid per litre, and that of 6 premature infants 2-30 days old contained 18-36, average 27, mgrm. per litre. The spinal fluid of normal infants 3 weeks to 5 months old contained 5-8 mgrm. per litre (same as adults).

L. E. GILSON (Chem. Abstr.).

On the Existence of an Intrinsic Deficiency in Pellagra (Prelim. Report). (*Amer. Journ. Med. Sci.*, vol. cxcii, p. 1, July, 1936.) Sydenstricker, V. P., et al.

The authors investigated six cases of pellagra, administered gastric juice and found unusually rapid recovery. They suggest that in pellagra there is an intrinsic deficiency of variable degree. Some individuals retain enough intrinsic factor to recover even on diets grossly deficient in vitamin B₂; others are able rapidly to regenerate the intrinsic factor and so recover on high-vitamin feeding. Others are totally lacking in intrinsic factor and unable to regenerate it even under optimum dietetic therapy. These may recover under substitution therapy with intrinsic factor or may die of nervous or cardiac damage inflicted before therapy was started. It is suggested that the intrinsic factor is exhausted or cannot be regenerated during prolonged deprivation of extrinsic factor.

G. W. T. H. FLEMING.

The Relationship between Alcoholic Intoxication and Anoxæmia. (*Amer. Journ. Med. Sci.*, vol. cxcii, p. 186, Aug., 1936.) McFarland, R. A., and Barach, A. L.

The writers tested 23 subjects under various degrees of alcoholic intoxication. They found that the amount of alcohol in the venous blood showed a tendency to decrease while breathing 50% oxygen and excess carbon dioxide as compared to air. In a number of cases the decrease was more than 50%. An increase of lactic acid in venous blood was absorbed following the ingestion of alcohol in air. This increase was not so great when the subject breathed 50% oxygen and excess carbon dioxide. After the ingestion of the alcohol in air the pulse and blood-pressure on the average showed a transient rise, followed by a return to normal. Following the larger doses there was a fall in the blood-pressure and the pulse became smaller in volume. Following the alcohol drinks in 50% oxygen the variations in pulse and blood-pressure were not so great. The changes in rate of respiration were not significant.

G. W. T. H. FLEMING.

Heat Regulation in Dementia Præcox. (*Journ. Neur. and Psychopath.*, vol. xvi, p. 321, April, 1936.) Finkelman, I., and Stephens, W. M.

The authors investigated a group of 50 hebephrenics. They found that these patients reacted to cold with a lower heat production than the normals. The drop in temperature was greater than in the normals. Schizophrenics do not have any respiratory shock on immersion in cold water as a rule, and there is an absence of or only very slight shivering response. The writers consider that there is a physiological disturbance in the hypothalamus in schizophrenia.

G. W. T. H. FLEMING.

5. Pharmacology and Treatment.

Essential Pharmacology of the Autonomic Nervous System. (*Journ. Amer. Med. Assoc.*, vol. cvi, p. 357, Feb. 1, 1936.) Jackson, D. E.

Drugs that exert their action on the autonomic nervous system may do so in one of four situations—the nuclei of origin within the central nervous system,

the outlying ganglions, the autonomic nerve terminations and the carotid sinus. Autonomic nerves are divided into two groups, the cranio-sacral or para-sympathetic and the thoracico-lumbar or true sympathetic. Stimulation of the sympathetic nerve-endings can be brought about by epinephrine, ephedrine, synephrine, propadrine, usarine and many other drugs.

The author has investigated one of these, β -methyl- γ -methylamine- β -j-neptene, which when injected intravenously produces a great rise of blood-pressure lasting $2\frac{1}{2}$ to 3 hours. At the same time the stomach, intestines and bronchioles are released and the pupils dilated. It is suggested that this drug may be of use by relaxing the stomach and intestines in post-operative tympanites and possibly in some gynæcological conditions. The carotid sinus is affected not only by pressure variations, but also by such drugs as nicotine and by variations in the CO_2 content of the blood. The terms "cholinergic" and "adrenergic" are used to define the functions of those groups of fibres of the general autonomic system which are conceived to liberate either acetyl-choline or epinephrine when nervous impulses reach the point at which these fibres terminate in glands or smooth muscle fibres. The post-ganglionic para-sympathetic fibres liberate acetyl-choline at their terminations, and atropine will prevent its action by making the cells or fibres insensitive to acetyl-choline. Acetyl-choline is in normal subjects rapidly destroyed by an esterase. Physostigmine, by using up this esterase in its own hydrolytic destruction, intensifies the action of acetyl-choline. In some instances fibres belonging anatomically to the true sympathetic are cholinergic in action, e.g., nerves to the sweat-glands and to some blood-vessels. Acetyl-choline is produced at the endings of pre-ganglionic fibres on the passage of an impulse, both in the sympathetic and para-sympathetic systems. Drugs such as histamine, post-pituitary extracts, barium and nitrates may very well have some action on the autonomic nervous system. There are a number of diseases or symptom-complexes due to unusual or anomalous reactions of the autonomic nervous system concerning which the above-mentioned drugs may throw some light. Such are asthma, angio-neurotic œdema, hypertrophic rhinitis and urticaria. Migraine has been treated with apparent success by ergotamine tartrate and paroxysmal tachycardia with the ethyl ether of beta-methyl choline.

Other diseases mentioned are myasthenia gravis, hiccup, angina pectoris, hyperpnea, auricular flutter, peripheral vascular disease, acromegaly, leontiasis ossea, diabetes insipidus and ergot poisoning.

T. E. BURROWS.

Action of Drugs on the Choline Esterase of the Brain. (*Journ. Pharm. and Exp. Therap.*, vol. lvii, p. 427 Aug., 1936.) Bernheim, F., and Bernheim, M. L. C.

The writers found that all parts of the brain contained choline esterase, and the brain as a whole contained more esterase per mgrm. of dry weight than the blood-serum or any other tissue. The esterase is greatly inhibited by very small concentrations of morphine or apomorphine. It is suggested that these drugs and possibly other centrally acting drugs may cause the accumulation of acetyl-choline in the brain by inhibiting the choline esterase. Acetyl-choline when injected into the brain in very small amounts can cause cardiac and respiratory irregularities and blood-pressure changes.

G. W. T. H. FLEMING.

The Role of Potassium in Epinephrine Action. (*Journ. Pharm. and Exp. Therap.*, vol. lvii, p. 376, Aug., 1936.) Camp, W. J. R., and Higgins, J. A.

Potassium effects all the changes in the systems studied that are produced by epinephrine, and this action is obtained after decerebration, bilateral adrenalectomy, atropine and ergotoxine. Potassium is responsible for the typical changes ascribed to epinephrine, and is liberated from the heart by vagus stimulation. One of the functions of the adrenal is to maintain a constant distribution of potassium.

G. W. T. H. FLEMING.