

by adrenaline or ammonium chloride. All derivatives of phenothiazine arrest progress of edema; however, their effectiveness differs somewhat. (Raevskii, K. S.: *Influence of Some Derivatives of Phenothiazine on Experimental Toxic Lung Oedema*, *Byull. Eksper. Biol. i Med.* 43: 33 1957.)

PULMONARY EMBOLISM In the patient with suspected pulmonary embolism, simultaneous measurement of arterial and end-tidal carbon dioxide tensions may assist in diagnosis. In the absence of pulmonary infarction, a difference of less than 5 mm. of mercury implies either no embolism or an embolus occluding less than the equivalent of a lobar branch of the pulmonary artery. In the absence of emphysema, a large difference indicates pulmonary vascular occlusion. (Robin, E. D., and others: *A Physiologic Approach to the Diagnosis of Acute Pulmonary Embolism*, *New England J. Med.*, 260: 586 (March 19) 1959.)

HIGH ALTITUDE The concentration of lactic acid, sodium, potassium and calcium was measured in four structures of the brain 3 hours after death in anesthetized and unanesthetized dogs which had been subjected to simulated altitude of 30,000 feet. There was elevation of: (a) the sodium concentration in the corona radiata but not in the cerebral cortex or caudate nucleus; (b) the calcium concentration in cortex, corona radiata and caudate nucleus; (c) the lactic acid concentration in all the tissues. No potassium changes were seen. Effect of pentobarbital anesthesia was very slight. (Van Fossan, D. D., and Biddulph, C.: *Effects of Altitude and of Anesthesia on Brain Electrolytes and Lactic Acid*, *Am. J. Physiol.* 196: 1063 (May) 1959.)

HYPOTHERMIA Neither prednisolone nor hypothermia when used alone significantly decreased mortality from cerebral damage in rabbits. However, hypothermia and prednisolone used in combination decreased the mortality from the cerebral injury and increased the survival time of those animals dying. (Raimondi, A. J., and others: *The Effect of Hypothermia and Steroid Therapy on Experimental Cerebral Injury*, *Surg. Gynec. & Obst.* 108: 333 (March) 1959.)

GASTRIC HYPOTHERMIA Gastric digestion is retarded considerably by local gastric cooling. Inhibition of peptic activity is the primary cause of this suppression of gastric digestion. Local gastric cooling in man can be obtained by circulating a coolant (equal parts ethyl alcohol and ice-cold water) through a system of tubes and balloons in the stomach. This technique has been applied in treating nineteen patients who had unrelenting hemorrhages from the duodenum, stomach, and esophagus and who, in spite of massive replacement therapy, were in a condition too precarious for emergency operation. Prompt cessation of hemorrhage occurred in all patients, thus accomplishing either adequate treatment or a period in which restoration to normal blood volume and optimal condition for any necessary definitive surgical therapy could occur. Local gastric hypothermia is rational for situations in which the digestive activity of gastric juice may be responsible for continued erosion and hemorrhage. It should not be relied on in situations complicated by blood dyscrasias, carcinoma, and other miscellaneous disorders. (Wangensteen, O., and others: *Depressant Action of Local Gastric Hypothermia on Gastric Digestion*, *J. A. M. A.* 169: 1601 (April 4) 1959.)

NEW NEUROPHYSIOLOGY Based on current work of the past few years, the four basic tenets or basic concepts of neuron doctrine which arose from electrophysiological studies of the 1920's and 1930's are slowly changing: (1) that all or none impulse with after potentials as the only true form of nervous activity is changing to the idea that some neurons have two axons and can deliver two non-identical nerve impulses simultaneously in two different directions; (2) that neuron excitation spreads to all parts of the neuron as a propagated nerve impulse is changing to the idea that neuronal excitation impulses do not spread directly but prepare the neuron for firing at some given spot within the cell, e.g., at base of axon; (3) that dendrites propagate impulses toward a cell body is changing to the idea that impulses may spread and exert influence on other neurons by electrotonic spread; (4) that the synapse is the only point of selection, evaluation, fatigue and facilitation