kins, D. H., and Klink, E. J.: Orthophasic Post-systolic Myocardial Augmentation, Arch. Surg. 89: 354 (Aug.) 1964.)

HALOTHANE A widespread intense emotional reaction developed following the early reports of liver necrosis following halothane anesthesia. This reaction was similar to that which occurred following the Beecher-Todd report on the adverse effects of muscle relaxants. The "clinical impression" type of reports provoked scientific men and women in the field of anesthesia to undertake a full-scale investigation into the problem. Already the apprehension and emotional reaction is subsiding and some anesthesiologists are returning to their comfortable "ruts" with halothane. This subsidence of concern is just as unfortunate as the emotional convulsion that attended introduction of the problem. *(Cullen, S. C.: Editorial—Halothane, Clin. Pharmacol. Ther. 5: 395 (July-Aug.) 1964.)*

DRUG TERATOGENICITY The placenta behaves toward most drugs as an inert barrier with lipoid properties. Accordingly, any lipid-soluble drug (or one that crosses the blood-brain barrier) will readily penetrate the placental barrier. Morphine, meperidine, hyoscine, chloral hydrate, barbiturates and anticoagulants readily cross the placental membranes but do not seem to cause fetal deformities. Some doubt exists about the effects of meclizine and phenmetrazine. The detection of the teratogenic effect of drugs still remains a challenge. *(Cahen, R. L.: Evaluation of the Teratogenicity of Drugs, Clin. Pharmacol. Ther. 5: 480 (July-Aug.) 1964.)*

CATECHOLAMINES A definite correlation exists between the urinary excretion of catecholamines and the various types of stress. Generally, in forms of mental stress associated with anger, apprehension or exhilaration, norepinephrine excretion is increased. In emotional states characterized by apprehension, discomfort or painful or unpleasant feelings epinephrine excretion is increased. *(von Euler, U. S.: Quantitation of Stress by Catecholamine Analysis, Clin. Pharmacol. Ther. 5: 398 (July-Aug.) 1964.)*

COST OF BREATHING Oxygen cost of breathing increases exponentially with ventilatory efforts. At minute volumes of about 150 liters breathing becomes an end in itself, the whole oxygen uptake being required to satisfy the energy requirements of the respiratory effort. The quantity of oxygen available for work reaches an optimum value at ventilation of between 100–120 liters/minute. Breathing against resistance increases oxygen cost, more so during inspiratory than during expiratory obstruction. With maximal physical effort and in patients with severe restriction to respiration, the energy cost of breathing becomes part of the respiratory regulation in terms of hypoventilation and increasing tolerance to respiratory acidosis. *(Millhahn, H. P., and Eckermann, P.: Energy Consumption of Respiration, Klin. Wschr. 42: 722 (Aug. 1) 1964.)*

CARDIAC CATECHOLAMINES In a cat heart preparation superfusing an isolated segment of rabbit intestine, mephentermine releases a substance into the cardiac perfusate which produces relaxation of the intestine. The intestine-relaxing substance was not released by mephentermine from a heart taken from an animal pretreated with reserpine, but the relaxing substance was released after an infusion of levarterenol through the heart. The relaxing substance was released by mephentermine after pretreatment of the heart with dichloroisoproterenol, but the effects on the heart itself were blocked. The necessity of intact stores of catecholamines is indicated for cardiac action of mephentermine. *(Swaine, C. R., Perlmutter, J. F, and Ellis, S.: Release of Catecholamines from the Isolated Cat Heart by Mephentermine, Naunyn-Schmiedeberg Arch. Exp. Path. 248: 331 (June 22) 1964.)*

CARDIAC METABOLISM During asystole the following metabolic changes occur: glycogen and glucose decrease, alpha-glycerophosphate and lactic acid increase. Phosphocreatin and adenosine triphosphate (ATP) decrease with an associated decrease of the ATP/ADP coefficient. Injections of adenosine and inorganic phosphate, together with epinephrin, norepinephrin and glucose with insulin increased the synthesis of phosphocreatin.

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