citrate 0.54 per cent, and small quantities of Prostigmin, was compared to a control solution of potassium citrate 1.6 per cent. Both solutions were effective in producing cardiac arrest in hypothermic dogs. The danger of serious arrhythmia during ventriculotomy in the hypothermic animal was almost abolished using controlled cardiac arrest. (*Glenn, W. G., and others: Method for Controlled Cardiac Arrest as Adjunct to Open Heart Surgery, J. Thoracic Surg. 32: 604 (Nov.) 1956.*)

VENTRICULAR FIBRILLATION Dogs were allowed to develop ventricular fibrillation during hypothermia and maintain the fibrillation for thirty minutes. One group of dogs had cyanotic heart disease induced prior to experiments. Fifteen dogs had pulmo-aortic fistula created and a third group were normal dogs. Ninety-two per cent of the controls and cyanotic group were resuscitated, but only 53 per cent of the chronic heart strain group. The implication is that ventricular fibrillation developing during hypothermia in the presence of a diseased heart should be strenuously avoided. (*Riley, P. A., Barila, T. G., and Hughes, C. W.: Ventricular Fibrillation During Hypothermia A. M. A. Arch. Surg. 73: 985 (Dec.) 1956.*)

CHEYNE-STOKES Increased transit time of blood from heart to brain produces periodic breathing in dogs, similar to Cheyne-Stokes respirations in humans. A circulatory delay system was inserted between the heart and brain of thirty dogs to prolong the transit time of blood from lungs to brain. Cheyne-Stokes breathing was produced in each animal and the duration of the cycle increased with increase in volume of the delay system. Variations in per cent oxygen saturation and carbon dioxide concentrations of the blood were directly related to the phases of the Cheyne-Stokes breathing. (*Guyton, A. C., and others: Basic Oscillating Mechanism of Cheyne-Stokes Breathing, Am. J. Physiol. 187: 395 (Nov.) 1956.*)

PULMONARY EDEMA Antifoam compound no. 5507 is more effective in treating epinephrine-induced pulmonary edema in rabbits than is 10 or 20 per cent ethyl alcohol or octyl alcohol. Compound no. 5507 consists of silicone 0.01 per cent, Superinone (a polyhydric alcohol) 0.75 per cent, glycerin 1 per cent and potassium bicarbonate 1 per cent. After negative toxicity studies on animals, the compound was used to treat successfully the pulmonary edema of eight patients. (*Balagot, R. C., Reyes, R. M., and Sadove, M. S.: Antifoam Agents in Pulmonary Edema, J. A. M. A. 163: 630 (Feb. 23) 1957.*)

BLOOD ACTH LEVEL Utilizing a cross circulation technique with rats, it was demonstrated that a severe stress will produce a high secretory rate of ACTH for one to two hours. This was followed by a decline in ACTH release despite the presence of adequate pituitary stores. ACTH almost disappeared from body fluids six hours after a severe stress. After a milder stress a moderate rate of ACTH secretion was maintained during the twelve hour period studied. The fall in ACTH is not due to the pituitary inhibiting effect of adrenal cortical steroids. (*Brodish, A., and Long, C. N.: Changes in Blood ACTH Under Various Experimental Conditions Studied by Means of Cross Circulation Technique, Endocrinology 59: 666 (Dec.) 1956.*)

CARBON DIOXIDE Utilizing the denervated nictitating membrane of the cat as the test body, it was demonstrated that carbon dioxide is a potent stimulus for increasing the circulating sympatho-catechol amines. The threshold for adrenal stimulation was about 15 per cent carbon dioxide in alveolar air. The author points out the fallacy of using the blood pressure response to assess vascular smooth muscle action when carbon dioxide is administered. (*Tenney, S. M.: Sympatho-Adrenal Stimulation by Carbon Dioxide and Inhibitory Effect of Carbonic Acid on Epinephrine Response, Am. J. Physiol. 187: 341 (Nov.) 1956.*)

APNEA Respiratory acidosis is the chief factor responsible for the bradycardia of apnea, based on response of eleven dogs to apnea when breathing 100 per cent oxygen and also room air. Apnea was produced by *d*-tubo curarine. Bradycardia was observed after ninety seconds of apnea. This

occurred during so-called apneic oxygenation and apneic hypoxia, and during the same types of apnea following bilateral vagotomy. (*Nahas, G. G.: Heart Rate During Short Periods of Apnea in Curarized Dogs, Am. J. Physiol. 187: 302 (Nov.) 1956.*)

LUNGS The lungs are the single visceral organ in contact with the outside world, yet when removed from the chest under sterile conditions they contain no pathogenic bacteria. The lungs possess a defensive mechanism made up of cells lying on and within the septums. Under pathologic conditions these cells assume the functions of ameboid phagocytic macrophages. To all appearances these cells are the elements commonly identified as respiratory epithelial cells lining the walls of the air sacs. (*Fried, B. M.: Structure of Respiratory (Terminal) Portion of Lungs, A. M. A. Arch. Int. Med. 98: 691 (Dec.) 1956.*)

VENTILATION Tidal volume exchange by rocking bed was improved in 8 of 11 poliomyelitis patients by elevating the cephalothoracic position at the lower radius of the rocking arc from supine to an angle of 15 to 30 degrees above the horizontal. (*Joos, T. H., and others: Rocking Bed and Head Position, New England J. Med. 255: 1089 (Dec.) 1956.*)

TRANSAMINASE Hepatic and cerebral damage, produced in dogs by the administration of carbon tetrachloride, resulted in highly significant rises in the activity of both glutamic oxalacetic transaminase and glutamic pyruvic transaminase in serum and in cerebrospinal fluid. Little or no transfer of these enzymes occurs between the serum and cerebrospinal fluid. (*Fleisher, G. A. and Wakim, K. G.: Transaminase in Canine Serum and Cerebrospinal Fluid After Carbon Tetrachloride Poisoning and Injection of Transaminase Concentrates, Proc. Staff Meet. Mayo Clin. 31: 640 (Nov.) 1956.*)

LIVER TEST The sodium D-lactate tolerance test is a reliable measure for evaluating hepatocellular damage. However, it is both expensive and difficult to perform. An injection of epinephrine will provoke an increase in endogenous lactic acid. Studies in normal rats subjected to partial hepatectomy, carbon tetrachloride poisoning and bile duct ligation, indicated that this technique also may be as reliable as the sodium D-lactate tolerance test. The authors demonstrated that hepatocellular loss or damage consistently impaired the clearance rate of endogenous lactic acid loading after epinephrine. Biliary obstruction had no such effect until secondary cellular damage following prolonged biliary stasis occurred. (*Nalebuff, D. J., and Winternitz, W. W.: Lactic Acid Response to Epinephrine in Experimental Liver Disease; A Review, Yale J. Biol. & Med. 29: 96 (Nov.) 1956.*)

Briefs were submitted by Drs. B. M. Anderson, J. Atkinson, W. R. Brewster, Jr., D. W. Eastwood, J. E. Eckenhoff, F. E. Greifenstein, M. H. Harmel, S. J. Martin, J. L. McDonnell, and R. W. Ridley.