

tion, *J. Thoracic Surg.* 36: 88 (July 1958.)

PULMONARY COMPLIANCE Elastic properties of the lung were measured in 5 patients during Cheyne-Stokes respirations. Compliance was normal in 3 patients and reduced in 2. Thus the periodic breathing is due to periodic fluctuations in the activity of the respiratory center in some patients and to peripheral factors in other patients. Aminophylline abolished periodic breathing in the 3 patients to whom it was given. Oxygen will abolish periodic breathing of central origin and carbon dioxide will usually do the same for that associated with cardiac disease. (Lyons, H. A., and others: *Pulmonary Compliance in Patients with Periodic Breathing*, *Circulation* 17: 1056 (June 1958).)

EXTENDED ASYSTOLE Normothermic dog heart begins to show EKG evidence of myocardial injury after 39 to 44 minutes of asystole and 50 to 60 minutes of asystole ended fatally in cardiac by-pass experiments. Thirty-five minutes is a recommended safe limit. (Milnes, R., and others: *Extended Asystole*, *A. M. A. Arch. Surg.* 77: 13 (July) 1958.)

HYPOTENSION Reduction in cerebral cortical oxygen as measured by the oxygen electrode occurred more readily when dogs given chlorpromazine were subjected to blood-letting hypotension. Greater reduction in blood volume was necessary to produce hypotension in a control group and at the same arterial pressure cortical oxygen tension dropped less in the control group than in the group of dogs receiving sympatholytic drugs. Electroencephalographic abnormalities occurred at higher blood pressure levels when a blocking agent was used than in the controls. (Bloor, B., and others: *Study of Cortical Oxygen Tension During Induced Hypotension*, *A. M. A. Arch. Surg.* 77: 65 (July) 1958.)

SHOCK Rats raised in germ-free conditions and subjected to hemorrhagic shock under germ-free experimental conditions did not differ from a control group in their response. This evidence must be interpreted carefully according to the authors

and does not necessarily eliminate the possibility that bacteremia is of importance as a cause of irreversibility of shock as postulated by Hine. (Zwiefach, B. W., and others: *Irreversible Hemorrhagic Shock in Germ-free Rats*, *J. Exp. Med.* 3: 437 (March) 1958.)

EXTRACORPOREAL CIRCULATION Magnesium sulfate or potassium chloride solution perfused into the coronary arteries separately were not as effective in stopping an isolated cat heart as the combination. Persistence of asystole followed use of potassium alone. Magnesium sulfate caused increase in ectopic beats. Neostigmine was added to induce a slower rate with better coronary perfusion as the heart was recovering. (Merritt, D., and others: *Potassium, Magnesium and Neostigmine for Controlled Cardioplegia*, *A. M. A. Arch. Surg.* 75: 365 (March) 1958.)

HEMOLYSIS With the plastic-sheet bubble oxygenator, hemolysis is partly due to the jets of oxygen entering the blood at the bottom of the chamber. Other factors include the percentage volume of red cells, cohesion of cells, spheroidicity, changes in membrane strength and heating to 52-58 C. The reticulo-endothelial system probably removes hemoglobin from the blood stream as rapidly as the hemoglobin is released. Another potential hazard of hemolysis is the effect of the red cell stromata which may produce hypotension and shock. Disturbances in the blood clotting mechanisms have also been ascribed to hemolysis. (Ferbers, E. W.: *Studies of Hemolysis with a Plastic-Sheet Bubble Oxygenator*, *J. Thoracic Surg.* 36: 23 (July) 1958.)

ULTRASONIC DEFIBRILLATION When ventricular fibrillation was induced electrically in the hypothermic rabbit ultrasonic irradiation restored 20 per cent of the rabbit hearts to normal rhythm. This technique failed entirely when dog hypothermic heart was used. (Haeger, K. H.: *Ultrasonic Irradiation of Ventricular Fibrillation in Hypothermic Rabbit and Dog*, *Acta chir. scandinav.* 114: 99 (Feb.) 1958.)

VENTRICULAR FIBRILLATION Rabbit hearts were perfused through the