

I. C., and Shepherd, J. T.: *Effects of Carotid Artery Compression in Man with Special Reference to Changes in Vascular Resistance in Limbs*, *J. Physiol.* 139: 377 (Dec. 31) 1957.)

#### PULMONARY BLOOD VOLUME

By volume measurements of the blood in the pulmonary and systemic circulation it was determined that the average pulmonary and left heart blood volume was 10.3 ml./kg.  $\pm$  1.9 S.D. In acute right heart failure this was reduced to 5.3 ml./kg.  $\pm$  1.0 S.D. This is a reduction of 48 per cent. Acute left heart failure increased the volume to 17.5 ml./kg.  $\pm$  2.8 S.D., a 70 per cent increase. (Lindsey, A. W., and others: *Pulmonary Blood Volume of Dog and Its Changes in Acute Heart Failure*, *Am. J. Physiol.* 190: 45 (July) 1957.)

**FIXED COUPLING** Strong central sympathetic nervous system stimulation produced by intracisternal injection of potassium phosphate causes increase in blood pressure, pulse rate and cardiac arrhythmias. The predominant arrhythmia is a normal sinus beat alternating with an abnormal ventricular beat. This fixed coupling or bigeminy is similar to the Wolff-Parkinson-White syndrome, except in the latter the two impulses are dependent on the auricular impulse. (Walker, S. M.: *Fixed Coupling and Short P-R Interval Induced in Dog by Stimulation of Sympathetic Nervous System*, *Am. J. Physiol.* 190: 41 (July) 1957.)

**CARDIAC ARREST** Common causes of cardiac arrest, the effects of which may be reversed (and the patient successfully resuscitated), are: (1) deep anesthesia, (2) obstructed airway, and (3) neurologic reflex mechanisms. Major complicating causes, the effects of which may be irreversible (and lead to failure of resuscitative measures), are: (1) aspiration of vomitus, (2) decreased respiratory function from advanced pulmonary disease, (3) impaired cardiovascular function from disease and trauma, and (4) diminished circulating blood volume from overwhelming shock or massive hemorrhage. (Cole, S. L., and Corday, E.: *Clinical Factors Affecting Cardiac Resuscitation*, *West. J. Surg.* 65: 351 (Nov.-Dec.) 1957.)

#### DEXTRAN PROLONGS BLEEDING TIME

In a study concerning the effect of dextran on bleeding time, 257 normal adult humans were infused with 1,000 ml. of 6 per cent dextran solution. Three post-infusion abnormalities were recorded (spontaneous epistaxis, excessive bleeding from minor razor nicks and spontaneous hematoma). No adverse symptoms were noted in a control group who received either albumin or povidone (polyvinylpyrrolidone). In 42 per cent of subjects the dextran infusion measurably prolonged the bleeding time; in 8 per cent of subjects, bleeding time after infusion exceeded 30 minutes. There was a direct relationship between the molecular weight of the dextran infused (5 preparations were tested) and the incidence of prolongation of bleeding time. The maximum incidence did not occur immediately after the infusion, but rather three to nine hours later. The effect cannot be explained on the basis of simple increase in circulating blood volume, thrombocytopenia or fibrinogenopenia; rather, the phenomenon appears to be due to interference with platelet activity. The use of large infusions of dextran carries a risk of serious failure of the hemostatic mechanism. (Langdell, R. D., and others: *Dextran and Prolonged Bleeding Time*, *J. A. M. A.* 166: 346 (Jan. 25) 1958.)

**HEPARINEMIA TESTS** Concentrated aqueous heparin given intramuscularly or hypodermically (100 mg. every 8 hours) prolonged the Lee-White clotting time to therapeutic levels in every patient. The elevated clotting time occasionally persisted for more than 17 hours after heparin was stopped. The partial thromboplastin time was found to be a poor indicator of heparinemia. The thrombin time of platelet-poor plasma proved a sensitive indicator of heparinemia. (Rapaport, S. I., and Ames, S. B.: *Clotting Factor Assays on Plasma from Patients Receiving Intramuscular or Subcutaneous Heparin*, *Am. J. M. Sc.* 234: 678 (Dec.) 1957.)

**SATIATED BLOOD** At the height of digestion the blood acquires some special biological characteristics. Such "satiated" blood is characterized by a lower concentration of hydrogen ions, a larger alkaline reserve and a high sugar and chloride con-