

cardiographic Changes Produced by Valsalva Maneuvre in Healthy Adults. Amer. J. Cardiol. 5: 473 (April) 1960.)

BLOOD COAGULATION The erythrocytes contain a clotting factor which seems to enter into a reaction for the formation of thromboplastin. This substance does not seem readily available for use except when the erythrocytes become damaged. With damage, however, this substance, called erythrocytin, is readily available to enter into the clotting mechanism and does not require preliminary activation as do platelets. (Quick, A. J.: *Influence of Erythrocytes on Coagulation of Blood, Amer. J. Med. Sci. 239: 51 (Jan.) 1960.*)

PLASMA EXPANDERS Three procedures for processing human plasma incorporate heat treatment for 10 hours at 60 C. in the presence of suitable stabilizers to inactivate the virus of hepatitis. The reprocessed, heat-treated plasma preparations fall into three classes: (1) heated whole plasma from which little fibrinogen has been removed, (2) partially fractionated materials from which gamma globulin, fibrinogen and some lipoproteins have been removed and (3) albumin solutions. In many cases these plasma expanders show evidence of major changes in their electrophoretic and ultracentrifugal patterns. Because high molecular weight aggregates and some denatured albumin-globulin complexes are formed during the preparation of these expanders, it has been demonstrated that these preparations contain a new antigen not present in the unheated materials. Immunization of volunteers with the human plasma preparations in several instances led to the appearance of reactions. It is difficult to attribute the reactions to any one antigen. (Maurer, P. H., and Subrahmanyam, D.: *Immunological Studies with Plasma Expanders Derived from Human Plasma, J. Clin. Invest. 39: 698 (April) 1960.*)

SHOCK Studies of myocardial metabolism of 18 intact dogs revealed an abnormal metabolic pattern during hemorrhagic shock which was alleviated by blood transfusion but not by *l*-norepinephrine. It is believed that the reason that *l*-norepinephrine treatment does not

increase survival rate of dogs is because it fails to correct the fundamental metabolic abnormality which, at the same time, imposes a heavier burden of work on the heart. (Hackel, D. B.: *Effects of L-Norepinephrine on Cardiac Metabolism of Dogs in Hemorrhagic Shock, Proc. Soc. Exp. Biol. & Med. 103: 780 (April) 1960.*)

BLOOD STORAGE Human or ox blood, diluted to a 40 per cent increase in volume, rapidly frozen and stored for one year in liquid nitrogen, and periodically examined, showed a gradual loss of oxygen capacity of 2.5 per cent, of which 0.5 per cent represented conversion to methemoglobin. An immediate hemolysis of 5 to 6 per cent took place due to freezing and thawing—which was doubled during the year. Potassium accumulation in plasma due to escape from intact cells and to liberation from hemolyzed erythrocytes was either stopped or nullified by a reversed migration of the K-ion to the cells. (Sendroy, J., Jr., and O'Neal, J. D.: *Oxygen Capacity of Stored Frozen Blood, Proc. Soc. Exp. Biol. & Med. 103: 760 (April) 1960.*)

PULMONARY FUNCTION TEST A simple rapid method employing helium is presented for estimating functional residual capacity of the lungs. It is not expensive and is useful for a variety of other tests of pulmonary function. The results are highly reproducible and are not subject to a significant systematic error. (Mensely, C. R., and others: *Simplified Closed Circuit Helium Dilution Method for Determination of Residual Volume of Lungs, Amer. J. Med. 28: 824 (May) 1960.*)

PULMONARY FUNCTION Alterations in pulmonary mechanics occur in man when an inspiration is taken from below the resting lung volume and during shallow breathing. A study of pulmonary function changes in 25 normal subjects whose chests were tightly bound in the expiratory position resulted in a reduction in the total lung capacity and its subdivisions. Lung pressure volume relationship was altered, a smaller volume resulting per unit pressure, over much of the vital capacity. There was slight uneven distribution of inspired gas and a small quantity of very