

shows no abnormality in erythropoiesis. The erythroblast population of the marrow is maintained. Although the plasma iron turnover is reduced, it is significantly higher than in the nephrectomized group and  $\text{Fe}^{59}$  incorporation into red cells is of the same magnitude as in the controlled group. In one bilaterally nephrectomized dog maintenance of marrow erythroblasts was observed after injection of erythropoietic factor. These data indicate that the cessation of erythropoiesis after nephrectomy cannot be accounted for by urea intoxication and that the kidney is probably the source of an erythropoietic factor. (Naets, J. P.: *The Role of the Kidney in Erythropoiesis*, *J. Clin. Invest.* 39: 102 (Jan.) 1960.)

**PULMONARY CIRCULATION** The effect of alveolar and blood carbon dioxide tension changes on the pulmonary vascular dynamics was measured in 12 dogs using an isolated lung lobe which was mechanically ventilated and perfused. Corollary observations were made for alveolar and blood oxygen tension changes. Increase in alveolar and pulmonary venous carbon dioxide tension, whereby the  $\text{P}_{\text{CO}_2}$  gradient between pulmonary arterial and pulmonary venous blood was lowered, resulted in a local elevation of pulmonary vascular resistance, probably from pulmonary arteriolar constriction. No significant hemodynamic variation occurred with high or low carbon dioxide tensions in the pulmonary artery, vein or alveoli of the explored lung segment as long as the pulmonary arteriovenous gradient for  $\text{P}_{\text{CO}_2}$  was maintained. Decreases in alveolar and pulmonary venous oxygen tension, whereby the oxygen tension gradient between pulmonary arterial and venous blood was lowered, resulted in local elevation of pulmonary vascular resistance. Perfusion of the isolated lobe with hypoxic blood produced no change in local pulmonary vascular resistance. It is postulated that a local homeostatic mechanism exists, probably similar to the one described for oxygen, which can divert blood from poorly ventilated alveoli that retain carbon dioxide to adequately ventilated segments of the lung. (Manfredi, F. and Sieker, H. O.: *The Effect of Carbon Dioxide on the Pulmonary Circulation*, *J. Clin. Invest.* 39: 295 (Feb.) 1960.)

**PULMONARY EMBOLUS** Pulmonary embolism may result in three types of disturbance in gas-exchange. One is the development of arterial oxygen unsaturation. A second abnormality is the development of hyperventilation. Hyperventilation serves the purpose of assisting normal arterialization of pulmonary capillary blood. The exact mechanisms subserving hyperventilation are not known. The third abnormality is the development of significant differences between the carbon dioxide tension of arterial blood and end-tidal air. This is produced by dilution of alveolar air by the newly formed dead space. (Robin, E. D., and others: *Alveolar Gas Exchange in Clinical Pulmonary Embolism*, *N. E. J. Med.* 262: 283 (Feb. 11) 1960.)

**CENTRAL BLOOD VOLUME** The effect on central blood volume of ten minutes of moderately heavy leg exercise in the supine position was studied in ten normal subjects. Central blood volume was calculated from arterial dye-dilution curves following superior venacaval or right atrial injection. There was an increase of 141 to 745 ml. in eight subjects with an average for the entire group of 284 ml. During the 20 minutes of recovery the central blood volume declined in all ten subjects by an average of 375 ml. with a range of 127 to 782 ml. The optimal cardiovascular response to exercise is characterized by an augmentation of central blood volume accompanying an elevation of cardiac output commensurate with the increased peripheral oxygen requirements. The augmentation of pulmonary diffusing capacity during exertion is accompanied by an elevation of the volume of blood within the capillary bed. This and other studies would tend to support the view that a redistribution of circulating blood volume occurs during muscular exercise. (Braunwald, E., Kelly, E. R., and Bullock, F. A.: *The Effects of Exercise on Central Blood Volume in Man*, *J. Clin. Invest.* 39: 413 (Feb.) 1960.)

**BLOOD COAGULATION** The phospholipids of human platelets have been identified and measured utilizing a chromatographic technique. Platelet phospholipids are very similar to the phospholipids of human red cells.