on force of contraction. Since the separation of inotropic and chronotropic effects was transient and unpredictable, the combined therapy offered no advantage in the treatment of cardiogenic shock. (*Stubbs, D., Pugh, D., and Bell, H.: Combined Use of Isoproterenol and Propranolol in Cardiogenic Shock, Clin. Pharmacol. Ther. 11: 244 (March) 1970.*)

PLASMAPHERESIS No consistent abnormalities in clinical or laboratory findings were observed during six years of experience with plasmapheresis, in which more than 14,000 units of plasma were collected. Some donors gave as much as the plasma equivalent of four units of whole blood per week. Repeated plasmapheresis of a small pool of preselected donors provides a better product than plasmapheresis of random donors. Potential hazards for the plasmapheresis donor include hemoglobin, protein, and iron depletion, and misidentfication of blood returned to the donor. Apparently the liver is capable of responding to plasmapheresis by increasing the rates of synthesis of albumin and other fatty plasma proteins. Recovery of normal gamma-globulin values is slower because it is dependent upon increased catabolism. Levels of total serum proteins and protein fractions should be monitored frequently in regular plasmapheresis donors. (*Cohen, M. D., and Oberman, H. A.: Safety and Long-term Effects of Plasmapheresis, Transfusion 10: 58 (March) 1970.*)

Respiration

INERTANCE Measurements of the inertance (inertia) of the respiratory system were made in five anesthetized, paralyzed subjects. Inertance values ranged from 0.018 to 0.035 cm $H_2O \cdot K \cdot sec^2$, after correction for the difference in density between the anesthetic gas mixture and air. (*Bergman, N. A.: Measurement of Respiratory Inertance in Anesthetized Subjects, Resp. Physiol. 9: 65 (April) 1970.*)

LUNG MECHANICS One pulmonary artery was occluded by inflation of an intraluminal balloon in each of a group of anesthetized, vagotomized dogs. Compliance decreased and resistance increased in both ipsilateral and contralateral lungs. End-expiratory P_{CO_2} decreased markedly in the occluded lung and increased in the contralateral perfused lung. Both inhalation of oxygen and intravenous administration of isoproterenol reversed the changes in compliance in both lungs. Inhalation of 2 to 8 per cent CO_2 increased compliance in the occluded lung but not in the perfused lung. Following multiple embolizations of one lung with iodinated oil, qualitatively similar alterations in pulmonary mechanics occurred; these were reversed by oxygen inhalation and by isoproterenol, but not by inhalation of CO_2. Observed effects of oxygen and isoproterenol on pulmonary mechanics following pulmonary artery occlusion suggested that the mechanical changes were due to smooth-muscle contraction secondary to ischemia. Compliance and resistance changes in contralateral perfused lungs may have been due to a circulating bronchocontrictor substance elaborated in the occluded lung. (*Tisi, G. M., and others: Effects of O_2 and CO_2 on Airway Muscle Following Pulmonary Vascular Occlusion, J. Appl. Physiol. 28: 570 (May) 1970.*)

ATELECTASIS Pulmonary hemodynamics associated with atelectasis were studied in dogs after recovery from surgical implantation of various flow- and pressure-sensing devices. Thirty minutes of acute unilateral atelectasis produced no remarkable change in cardiac output. A small but significant decrease in flow to the collapsed lung (4 per cent) occurred, and flow to the ventilated lung (1 per cent). Transpulmonary pressure was zero on the collapsed side and and increased on the ventilated side. Pulmonary vascular resistance increased 15 per cent in the atelectatic lung but also increased 8 per cent in the expanded lung. The increase in vascular resistance in the expanded lung aids in maintenance of circulation in the collapsed lung and exaggerates hypoxia due to atelectasis. (*Morgan, B. C., and Guntheroth, W. G.: Pulmonary Blood Flow and Resistance during Acute Atelectasis in Intact Dogs, J. Appl. Physiol. 28: 609 (May) 1970.*)

OXYGEN UPTAKE Passive hyperventilation of anesthetized, paralyzed dogs increased oxygen uptake significantly and reproducibly. The increased uptake was not a result of an