almost to the value obtained with the subject at rest in the supine position. Moderate exercise in the upright position results in a stroke index similar to that obtained when the subject was at rest in the supine position. With severe exercise it increases to 59 ml. Apparent discrepancies in previous reports are probably due to variations in the circumstances under which resting values were obtained. (*Wang, Y., Marshall, R. J., and Shepherd, J. T.: Effect of Changes in Posture and of Graded Exercise on Stroke Volume in Man, J. Clin. Invest. 39: 1051 (July) 1960.*)

CARDIAC FIBRILLATION The essential factor for fibrillation in the experimental animal is a shortening of the refractory period, usually indicated by a shortening of the action potential. The long refractory period of cardiac as compared to skeletal muscle normally protects the cardiac muscle from fibrillation. Energy is required to maintain its length and fibrillation is facilitated when there is lack of glucose or oxygen or in the presence of metabolic inhibitors. Rising concentrations of calcium ions and falling concentrations of potassium ions also tend to favor reduction of the refractory period and fibrillation. It also seems necessary for the fibers to be out of phase. Such a condition exists when a stream of impulses is produced by electrical stimulation or an ectopic focus and it is likely that the rapid stimulation depresses conduction velocity unequally, thus tending to throw adjacent fibers out of phase. A single impulse in the relative refractory period may act in the same way to slow conduction, arriving at a time when fibers are out of phase because inequality of recovery exists among them. (*Burn, J. H.: Cause of Fibrillation, Brit. Med. J. 1: 1381 (May 7) 1960.*)

BARORECEPTORS Baroreceptor endings may be demonstrated in the pulmonary artery of the anesthetized dog. All of the receptors so located are in the vicinity of the main bifurcation of the pulmonary artery or in the right and left branches between the main bifurcation and the origins of the lobar branches. No receptors have been located in the pulmonary trunk proximal to the main bifurcation. Recordings from fibers whose endings are located in the pulmonary artery show a ventricular systolic pattern of discharge similar to that from aortic baroreceptor fibers. Other fibers show additional patterns of discharge. (*Coleridge, J. C. G., and Kidd, D.: Electrophysiological Evidence of Baroreceptors in Pulmonary Artery of Dog, J. Physiol. 150: 319 (Feb.) 1960.*)

BLOOD VOLUME Studies in rabbits and dogs have suggested that plasma disappears from the circulating blood after a blood transfusion. Occasionally more plasma disappears than is infused. In an attempt to study the phenomenon in man, 24 patients, whose average age was 58 years, were studied after having received 2 to 4 transfusions of 450 ml. whole blood. The blood transfusions amounted to 14 to 75 per cent (average 36 per cent) of the original blood volume. The changes produced included (a) an increase in cell volume of approximately the quantity of cells administered; (b) a reduction of plasma volume; (c) a slight increase in total blood volume (averaging 9 per cent of the original blood volume). The regulation of blood volume after transfusions appears to be explained by an increase in hydrostatic pressure in the veins associated with increased capillary permeability which leads to a loss of plasma and protein from the circulating blood. (*Andersen, S. B.: Blood-Volume in Elderly Anaemic Patients Following Blood-Transfusions, Lancet 1: 717 (April 2) 1960.*)

BLOOD PRESSURE Stimulation of the upper thoracic sympathetic trunk in man during surgical procedures resulted in an increase in systolic pressure, no change in diastolic pressure and an increased pulse pressure. There was also cardiac acceleration although it was not as constant as the blood pressure changes. The changes noted are probably explained by an increase in force of myocardial contraction. (*Randall, W. C., and McNally, H.: Augmentor Action of Sympathetic Cardiac Nerves in Man, J. Appl. Physiol. 15: 629 (July) 1960.*)

BLOOD CLOTTING MECHANISM The clotting mechanism of blood carefully drawn through siliconized equipment into a non-