anesthetized dogs. Threshold values of the baroreceptors were found to lie toward the lower end of the range of pressures usually quoted for the normal pulmonary arterial pressure in the dog. The baroreceptors signaled each rise in pressure above the threshold with an increase in the frequency of discharge and the number of impulses per cardiac cycle. In both intact and isolated pulmonary artery, pulsatile pressure was a more effective stimulus to the receptors than was a steady pressure. (*Coleridge, J. C. G., and Kidd, C.: Relationship Between Pulmonary Arterial Pressure and Impulse Activity in Pulmonary Arterial Baroreceptor Fibres, J. Physiol. 158: 197 (Sept.) 1961.*)

CARDIAC OUTPUT Cardiac output was measured with peripherally injected Evans blue T 1824 and a computing ear oximeter in 28 normal children (5 to 13 years) and 18 normal adults (24 to 54 years). The average values of 3.19 liters/minute/square meter in children and 3.06 liters/minute/square meter in adults confirm that the recognized relationship between cardiac output and body size for adults holds also for children of the size studied. There was no significant difference in the cardiac index of 17 children breathing 50 per cent nitrous oxide in oxygen and 11 others inhaling a mixture of 50 per cent nitrous oxide in oxygen plus 0.25 per cent halothane. (*Jegier, W., and others: Cardiac Output and Related Hemodynamic Data in Normal Children and Adults, Canad. J. Biochem. Physiol. 39: 1747 (Nov.) 1961.*)

ARRHYTHMIA Two factors, a sympathomimetic amine with cardiac actions and an increase in systemic blood pressure, are required for the consistent induction of bigeminy in cyclopropane-anesthetized dogs. In animals in which a large dose of dichloroisoproterenol (DCI) did not increase the adrenaline threshold for bigeminy, previously ineffective mechanical elevation of blood pressure induced bigeminy. Neither methoxamine nor DCI alone caused bigeminal rhythm, but their combination effectively induced bigeminy of long duration. (*Sutter, M. C., and Dresel, P. E.: Mechanism of Selective Blockade of Cyclopropane-Adrenaline Cardiac Arrhythmias by Dichloroisoproterenol, Canad. J. Biochem. Physiol. 39: 1783 (Nov.) 1961.*)

BODY HEATING During fifty minutes of increased body temperature to 99.5–100.8° F., cardiac output increased 60 per cent from control values, mainly because of increased heart rate. Finger blood flow increased rapidly to reach an early maximum, but forearm blood flow increased gradually throughout the heating period. Increased limb blood flow was confined to skin vessels and average increase in cutaneous blood flow during heating was 1.8 liters/m.^{2}/minute. (*Kororexedis, G. T., Shepherd, J. J., and Marshall, R. J.: Cardiovascular Response to Acute Heat Stress, J. Appl. Physiol. 16: 869 (Sept.) 1961.*)

CARDIAC ARREST Histological and histochemical changes in the myocardium of dogs after coronary artery ligation were compared with those in dogs subjected to extracorporeal circulation and induced cardiac arrest using potassium chloride, anoxia and anoxia with mild hypothermia. After coronary ligation, there was nuclear rarefaction and almost total loss of glycogen in 5 to 20 minutes. After only total cardiopulmonary bypass for one hour, essentially no changes occurred. After 30 minutes of anoxic arrest, severe functional impairment of the myocardium and abnormal nuclear morphology were noted comparable to that noted after coronary artery ligation of 5 to 15 minutes. After anoxia and local mild hypothermia, variable improvement of histology was noted, although there was some postperfusion impairment in cardiac function. One hour after potassium citrate arrest, there appeared to be no histologic changes. However, there was extensive necrosis of the myocardium in the recovery period. Decrease in histochemical glycogen was greatest after coronary artery ligation, less after hypoxia with or without hypothermia and least if cardiac arrest was due to potassium citrate. (*Miller, D. R., and others: Elective Cardiac Arrest. Its Effect on Myocardial Structure and Function, Ann. Surg. 154: 751 (Nov.) 1961.*)

CARDIAC MASSAGE The brachial arterial pulse was recorded during cardiac massage in a patient who had an asystolic cardiac ar-

rest consequent to coronary and cerebral embolism. These pressure tracings confirm Kouwenhoven's observation that a pulse is transmitted to the limbs, but it is conceded that a pressure pulse is not necessarily proof of blood flow. That the blood flow was adequate is presumed from the patient's speedy recovery from the cerebral lesion. The need for a prepared mind in the successful treatment of cardiac arrest is re-emphasized. Five phases are listed: (1) Lower the head; raise the legs; thump the precordium. (2) Closed-chest cardiac massage; mouth-to-mouth lung insufflation. (3) Tracheal intubation and artificial respiration from an anesthetic rubber bag. (4) Record the electrocardiogram to determine the nature of the arrest. (5) Apply definitive treatment to the arrested heart. (*Nixon, P. G. F.: The Arterial Pulse in Successful Closed-Chest Cardiac Massage, Lancet 2: 844 (Oct. 14) 1961.*)

EXPIRED AIR RESUSCITATION Clinical observations on 1,500 patients showed that with mouth-to-mouth breathing the stomach was inflated as a rule. With mouth-to-nose breathing this occurred only in rare instances. Since regurgitation of gastric contents would introduce an additional complication during expired air, resuscitation mouth-to-nose breathing is preferred. (*Ruben, A.: Considérations sur la Respiration Artificielle d'Urgence, Acta Anaesth. Belg. 11: 298 (Dec.) 1960.*)

ARTERIAL OCCLUSION Short periods of occlusion of the vascular supply to the forearm in man produced an oxygen debt in both deep and superficial tissues. This oxygen debt was repaid by both increased blood flow and increased extraction of oxygen from blood during the period of reactive hyperemia following resumption of circulation. Results suggested an absence of delicately balanced and efficient checks on mechanisms governing repayment of the oxygen debt incurred during atrial occlusion. (*Abramson, D. I., and others: Effect of Short Periods of Atrial Occlusion on Blood Flow and Oxygen Uptake, J. Appl. Physiol. 16: 851 (Sept.) 1961.*)

MESENTERIC OCCLUSION Superior mesenteric arteries of dogs were clamped. All control dogs died; 25 per cent of dogs given epidural block lived. Late autopsies showed that the blocked dogs developed extensive collateral circulation. Epidural block was thought to relieve vasospasm and promote collateral circulation. (*Liang, H., Bernard, H. R., and Dodd, R. B.: Effect of Epidural Block upon Experimental Mesenteric Occlusion, A. M. A. Arch. Surg. 83: 409 (Sept.) 1961.*)

CEREBRAL CIRCULATION Cerebral blood flow remains remarkably constant in the face of broad changes in arterial blood pressure and cardiac output, and it is only when blood pressure is lowered to half or less of normal value or cardiac output decreased by more than a third that cerebral perfusion becomes inadequate. Within these broad limits cerebral blood flow is then regulated by *intrinsic* factors, principally cerebrovascular tone. This, in turn, depends chiefly on chemical influences, *viz.*, the respiratory gas content of the blood, and only slightly upon neurogenic influences. The most marked dilatation of cerebral vessels results from an increase in blood P_{CO_2}, and sharp vasoconstriction with a reduced cerebral blood flow is caused by a lowered blood P_{CO_2}. Moderate changes in blood P_{O_2} do not affect cerebral blood flow, but markedly lowered blood P_{O_2} will greatly increase cerebral blood flow and increased blood P_{O_2} will moderately reduce cerebral blood flow through vasoconstriction. Only a marked elevation of intracranial pressure will result in reduced cerebral blood flow. (*Shenkin, H. A., and Novack, Paul: Control of the Cerebral Circulation, J. A. M. A. 178: 390 (Oct. 28) 1961.*)

FIBRINOLYSIS The intravenous injection of some pressor amines (epinephrine, norepinephrine, and phenylephrine) in man resulted in fibrinolytic activity as measured by the euglobulin lysis technique and whole plasma lysis time. Such activity could be repeatedly recalled or maintained by constant infusion. (*Genton, E., and others: Fibrinolysis Induced by Pressor Amines, Amer. J. Med. 31: 564 (Oct.) 1961.*)

THROMBOLYSIS PREVENTION Certain operations have been known to produce