OXYGENATOR A capillary membrane oxygenator utilizing Silastic capillary tubing for gas exchange in a closed, constant volume blood pool was constructed. Fourteen cardiac bypass perfusions were carried out on sheep at flow rates of 55 to 60 ml./kg. Blood oxygen tensions were excellent and hemolysis minimal. A pulsatile blood flow through the oxygenator increased its efficiency. (*Bodell, B. R., and others: A Capillary Membrane Oxygenator, J. Thor. Cardiov. Surg. 46: 639 (Nov.) 1693.*)

EXTRACORPOREAL CIRCULATION The life-span of erythrocytes is reduced to half of normal in extracorporeal circulation by absorption of denatured plasma to the surface of the red blood cell. The denaturation occurs because there is no membrane between gas and plasma in the machine. Sludging of red blood cells is the consequence. (*Schmidt-Mende, N., Frey, K. W., and Sebenini, F.: Life-Span of Erythrocytes in the Heart-Lung Machine, Thoraxchirurgie 10: 685 (June) 1963.*)

BLOOD FOR BYPASS Several advantages accrue to the Blood Bank from using reconstituted bank ACD blood rather than fresh heparinized blood for priming pump-oxygenators. Stored acid-citrate-dextrose blood up to four days old was subsequently heparinized and recalcified in the pump oxygenator. A comparison was made with cases in which fresh heparinized blood was used. Some postoperative clotting abnormalities were encountered in in patients, but there was no significant difference between the two groups. No evidence was found of any serious disadvantage in the use of ACD blood. (*Britten, A., and others: Use of ACD Bank Blood and Fresh Heparinized Blood in Open-Heart Surgery, Transfusion 3: 368 (Sept.–Oct.) 1963.*)

ARRHYTHMIA Effects of lidocaine and procaine amide on arterial pressure, myocardial contractile force, and ventricular excitability in 12 patients undergoing cardiac operations showed an increase in the stimulation threshold of the ventricle during diastole and neither drug caused a significant change in duration of the absolute refractory period. Lidocaine produced no significant circulatory depression but every patient given procaine amide evidenced a fall in arterial pressure and a decrease in the contractile force of the right ventricle. These physiologic observations and clinical experiences with the use of lidocaine indicate that it is an effective antiarrhythmic agent and that it is preferable to procaine amide in the management of ventricular arrhythmias that occur during and following cardiac operations. (*Harrison, D. C., and others: Antiarrhythmic Properties of Lidocaine and Procaine Amide, Circulation 28: 486 (Oct.) 1693.*)

CARDIAC ARRHYTHMIAS Effect of isoproterenol in producing abnormal cardiac rhythms has been investigated in dogs anesthetized by various anesthetics. Threshold doses of isoproterenol for induction of atrioventricular nodal rhythm by arterial injection into the left circumflex coronary artery did not differ in dogs anesthetized with cyclopropane, pentobarbital or ether. However, injections of isoproterenol or epinephrine into the anterior descending coronary artery did produce arrhythmia in dogs anesthetized with cyclopropane. Quinidine sensitized the atrioventricular node to induction of pacemaker activity following isoproterenol injection into the left circumflex artery. On the other hand, quinidine caused an increase in threshold for arrhythmias produced by isoproterenol injection into the anterior descending artery. (*Dresel, P. E., Hart, M. C., and Stromblad, B. C. R.: Cardiac Arrhythmias Induced by Injection of Isoproterenol into the Coronary Arteries, J. Pharmacol. Exp. Ther. 140: 67 (Apr.) 1693.*)

CUTANEOUS RESPIRATION A temperature of 22° C. and an oxygen pressure of 250 pounds/square inch permits optimal survival of fetuses in an incubator utilizing oxygen under pressure and fetuses with membrane and placenta intact bathed in an immersion solution. (*Goodlin, R. C.: Cutaneous Respiration in a Fetal Respirator, Amer. J. Obstet. Gynec. 86: 571 (July) 1963.*)

OXYGEN ERROR Apparently as a result of the Hamburger phenomenon, optical den-