HYPOTHERMIA Hypothermic animals survived cardiotomy and inflow occlusion for 16 to 20 minutes when the coronary system was perfused with small volumes of oxygenated blood. Acetylstrophanthidin before inflow occlusion prevented myocardial failure and diminished the frequency of ventricular fibrillation. (*Lombardo, T. A., Radigan, L. R., and Morrow, A. G.: Myocardial Failure in Experimental Hypothermia, Circulation Res. 5: 22 (Jan.) 1957.*)

HYPOTHERMIA As body temperature was progressively reduced to 27 C. in the dog, mean blood pressure decreased progressively to approximately 75 per cent of the control values. This was associated with a progressive reduction in glomerular filtration rate and renal blood flow without significant alteration in urine or sodium excretion. The reduction in rate of glomerular filtration and in renal blood flow was not improved when the blood pressure was raised to control values with an infusion of norepinephrine. However, when body temperature was again increased to control levels, the mean blood pressure returned to control levels although the glomerular filtration rate and renal blood flow returned to only 75 per cent of the control levels. There was essentially no difference in these responses between dogs and man. (*Moyer, John H., De Bakey, M. E., and Morris, George: Hypothermia: Effect on Renal Hemodynamics and on Excretion of Water and Electrolytes in Dog and Man, Ann. Surg. 145: 26 (Jan.) 1957.*)

REWARMING Dogs lightly anesthetized, curarized, and maintained on artificial respiration were observed to rewarm in a temperature controlled room at 24 C. without evidence of striated muscle activity, indicating that factors other than shivering are a significant part of the rewarming process. (*Werner, A. Y., Dawson, Donald, and Hartenberg, Esther: Spontaneous Rewarming of Hypothermic Curarized Dog, Science 124: 3232 (Dec. 7) 1956.*)

COAGULATION DURING HYPOTHERMIA A decrease in proaccelerin, proconvertin, prothrombin and fibrinogen was demonstrated. This may have been due to intravascular clotting which also predisposed to thromboembolic phenomena. Heparin was used to minimize intravascular clotting. The depletion of coagulation factors in this heparin treated group of dogs was minimized. Also, no postwarming hemorrhage was seen. (*Ellis, P. R., Kleinsasser, L. J., Speer, R. J.: Changes in Coagulation Occurring in Dogs During Hypothermia and Cardiac Surgery, Surgery 41: 198 (Feb.) 1957.*)

BLOOD COAGULATION This is an extensive review of the recent work on the problem of blood coagulation with emphasis on the biological activation of prothrombin and the nature of thromboplastin forming reactions. Of particular interest to the anesthetist is the section on the effects of clotting. The initial, but temporary, arrest of the blood flow is probably achieved by primary factors other than clot formation, and firm clotting is essential to maintain hemostasis when the primary factors have ceased to operate. These primary hemostatic factors probably include vascular contraction and platelet agglutination. (*MacFarlane, R. G.: Blood Coagulation with Particular Reference to Early Stages, Phys. Rev. 36: 479 (Oct.) 1956.*)

CARDIAC RESUSCITATION In dogs 1 to 3 cc. of 15 per cent potassium chloride was used to convert fibrillation to cardiac standstill. After transient standstill, five dogs spontaneously reverted to normal rhythm. In the other 42, 2 to 3 cc. of 10 per cent sodium lactate was injected into the left ventricle while massage was continued. Coordinated contractions were produced by injecting 2 to 3 cc. of 25 × concentrated Ringer's lactate into the left ventricle. The first beats were felt in about twelve seconds, while effective beats required as long as five minutes of assisting contractions. If contractions were sluggish, a slow, intravenous drip of calcium gluconate was used (10 cc. of 10 per cent in 200 cc. 5 per cent dextrose in water). (*Schimert, G., and Cowley, R. A.: Defibrillation, Cardiac Arrest and Resuscitation in Deep Hypothermia by Electrolyte Solutions, Surgery 21: 211 (Feb.) 1957.*)

CARDIAC ARREST A solution of magnesium sulfate 2.47 per cent, potassium