output more than peripheral resistance. (*Murray, J. F., and Young, I. M.: Regional Blood Flow and Cardiac Output During Acute Hypoxia in the Anesthetized Dog, Amer. J. Physiol. 204: 963 (June) 1963.*)

CORONARY VENOUS OXYGEN Oxygen content of the coronary venous blood of man and dog is about 5 volumes per cent (25 per cent saturation), the lowest of all body tissues. This condition is related primarily to the myocardial contractile activity which augments the demand and curtails the supply of oxygen through the compression of intramural vessels during systole. (*Badeer, H. S.: Physiologic Basis for the Normally Low Oxygen Content of Coronary Venous Blood, Amer. Heart J. 65: 844 (June) 1963.*)

CAROTID-SINUS STIMULATION Carotid sinus stimulation resulted in atrial and nodal tachycardia followed by transient ventricular fibrillation which may have been due to a late manifestation of digitalis intoxication. Carotid sinus massage is occasionally hazardous in patients with evidence of digitalis intoxication. However, carotid sinus massage should continue to be used in the differential diagnosis of an arrhythmia that may be digitalis induced. (*Porus, R. L., and Marcus, F. I.: Ventricular Fibrillation During Carotid-Sinus Stimulation, New Engl. J. Med. 268: 1338 (June 13) 1963.*)

HYPOTHERMIA Decreased plasma volume and increased arterial hematocrit after hypothermia were confirmed in a series of dogs. There was a delayed mixing of injected, labeled red cells, indicating a slowly moving volume of red cells. The rapidly circulating red cell volume was calculated using compartmental analysis; this volume was found to be greatly reduced after total body cooling. Only 76 per cent of the animal's red cells were circulating rapidly enough to be mixed with the labeled red cells in the usual 10 minute equilibration period. This failure of red cell circulation is similar to that observed in hemorrhagic shock and thermal injury. (*Chang, C. B., and Shoemaker, W. C.: Effect of Hypothermia on Red Cell Volumes, J. Thor. Cardiov. Surg. 46: 117 (July) 1963.*)

BLOOD TRANSFUSION Review of the records of patients receiving blood transfusions over a two year period revealed that 409 or 12 per cent of 3,356 transfusions were of pint volume. Of these, 298 had hemoglobin values of 10 g. or more. Of the nonsurgical patients, 49 out of 91 had hemoglobin values under 9 g. and possibly required transfusion. Ninety-three per cent of the transfusions were given either in the operating room or postanesthesia room. Of these, 56 per cent (105 patients) had hemoglobin values of 12 g. or more and 88 per cent (164 patients) had hemoglobin values of 10 g. or more. Surgeons and anesthesiologists are too often inclined to order transfusions before estimating the exact amount of blood loss. (*Mitty, W. F., and Echemendia, E. M.: Misuse of Blood Transfusions, Geriatrics 18: 368 (May) 1963.*)

SHOCK Changes that occur in extraction of pyruvate and lactate by the heart in dogs during hemorrhagic shock return to normal if a transfusion is administered within 60 to 75 minutes of onset of shock. Such changes become irreversible to transfusion if the shock period is prolonged to 180 or more minutes. The extraction of oxygen by the heart is greatly elevated in hemorrhagic shock but returns to normal within 60 to 75 minutes after a blood transfusion. The extraction of oxygen is depressed to very low abnormal levels if a transfusion is given after prolonged hemorrhagic shock. Myocardial enzyme systems are depressed after prolonged shock. (*Hackel, D. B., and Breitenecker, R.: Time Factor in Reversibility of Myocardial Metabolic Changes in Hemorrhagic Shock, Proc. Soc. Exp. Biol. Med. 113: 534 (July) 1963.*)

COMPLIANCE In 42 patients subjected to a standard posterolateral thoracotomy incision, the force developed by a mechanical retractor was measured electronically. Adaptation of the thoracic cage to rib separation developed as a function of time. Altered only by periods of light anesthesia, bronchial suction, or extrinsic pressure, the maximal degree of compliance was achieved, on the average, in 17 minutes, and was reflected in the 24 pound average drop in thoracic retractor pressure. This compliance, manifested by the