tion of time, by six collimated scintillation probes placed over the subject's head. The recording subsequent to the first injection reflected a) the arrival of the labeled oxygen in the tissues; b) its partial conversion into water of metabolism; c) the washout of labeled water from the brain. The ratio of the amount of labeled water formed to the amount of oxygen perfusing the tissues was a measure of fractional oxygen utilization. The second injection provided a measure of blood flow by the interpretation of the washout of the labeled water from brain tissues. The product, fractional utilization × blood flow × arterial oxygen content, gave a value for oxygen utilization rate. The validity of this method was tested by an injection of a nondiffusible indicator, carboxyhemoglobin-^{15}O. Oxygen uptake measurements by these methods were slightly higher (6 per cent) than the values for the whole brain in normal subjects previously reported. *(Ter-Pogossian, M. M., and others: The Measure in Vivo of Regional Cerebral Oxygen Utilization by Means of Oxyhemoglobin Labeled with Radioactive Oxygen-15, J. Clin. Invest. 49: 381 (Feb.) 1970.)*

FUNCTION OF STORED BLOOD Normal hemoglobin function depends on adequate erythrocytic levels of 2,3-diphosphoglycerate (2,3-DPG), a compound that is poorly maintained during bank storage of blood in acid–citrate–dextrose (ACD). Since 2,3-DPG is better maintained at the higher *p*H afforded by citrate–phosphate–dextrose (CPD), degrees of hemoglobin function during storage of blood in CPD and in ACD were compared. Hemoglobin function, expressed as the P_{50} or the P_{O_2} at which blood is 50 per cent oxygenated (an inverse but direct measure of oxygen affinity), was considerably better maintained during storage in CPD than in ACD. The hemoglobin function or P_{50} of blood stored in CPD–adenine was not maintained as well as the Hb function of blood stored in CPD without adenine, but the oxyhemoglobin dissociation curves showed only a small difference compared with the difference between ACD and CPD. Blood stored in CPD–adenine with inosine present initially or added at day 25 had higher P_{50} values late in storage, thus providing better hemoglobin function for more of the storage period. The concentration of 2,3-DPG of erythrocytes might be altered favorably in stored blood to provide the recipient with hemoglobin which functioned more normally. *(Dawson, R. B., Jr., and Ellis, T. J.: Hemoglobin Function of Blood Stored at 4 C in ACD and CPD with Adenine and Inosine, Transfusion 10: 113 (May) 1970.)*

STORED WHOLE BLOOD In extensive tests of the effects of temperature and mechanical agitation of blood with and without plasma, it was found that temperature variation commonly encountered in the clinical blood bank (4 C to 10 C, and short exposure to 22 C prior to transfusion) did not appear to contribute significantly to erythrocytic damage—unless the units were in the oldest stages of storage or had been exposed to warm temperatures for longer than 24 hours. Mechanical stress had minimal adverse effects, but they became more evident when blood was stored as packed cells or when blood had been stored for 21 days or more. However, present blood bank standards provide safeguards to protect stored and shipped blood from excessive temperatures and physical stress. These safeguards must be maintained, especially with longer periods of storage of the blood. Furthermore, despite the apparent resistance of erythrocytes to stress, unreasonable demands can readily produce harmful changes, rendering the blood unusable for transfusion. *(Shields, C. E.: Studies on Stored Whole Blood: IV. Effects of Temperature and Mechanical Agitation on Blood with and without Plasma, Transfusion 10: 155 (July) 1970.)*

MAGNESIUM BLOCKADE Effects of magnesium ion blockade on peripheral circulation were studied in 20 dogs anesthetized with pentobarbital. Following tracheal intubation, the lungs were ventilated mechanically. Superior mesenteric or renal arteries were then exposed and isolated through a midline abdominal incision. In 14 dogs, known concentrations of KCl, adrenergic vasoconstrictors (neosynephrine, norepinephrine and epinephrine) and nonadrenergic vasoconstrictors (angiotensin and pitressin) were infused into either the superior mesenteric or renal arteries in amounts sufficient to cause decreases in