PLATELET-POOR BLOOD A comparison of platelet counts, hemostasis during or after surgical operation, blood requirements, and mean perfusion time was made in matched groups of patients subjected to extracorporeal circulation and open-heart surgery. The blood component of the pump prime in one group was rendered platelet-poor by removal of 60 to 80 per cent of the original platelets from ACD blood within six hours of surgery. Whole blood used for the pump prime in the second group was collected into ACD and stored for 48 hours before operation. The mean preoperative platelet counts of the two groups did not differ significantly. Two hours after operation and on the first postoperative day the platelet count of the group which had received platelet-poor blood was decreased significantly. Nevertheless, there was no difference between groups with respect to hemostasis during or after operation, blood requirements, or mean perfusion time. These results suggest that platelet-poor and whole blood are equally effective as perfusion fluids in open-heart surgery. In addition, extraction of platelets from fresh blood for use in other thrombocytopenic patients prior to using the blood for perfusion may provide better overall use of blood components. *(Grindon, A. J., and Schmidt, P. J.: Platelet-poor Blood in Open-heart Surgery, New Engl. J. Med. 280: 1337 (June) 1969.)*

PLASMA EXPANDER The evolution to more liberal use of a plasma expander for treatment of operative and traumatic blood loss was evaluated in terms of use of whole blood. Restricting transfusion to situations resulting in hematocrit values below 30 per cent decreased blood consumption per patient admission by 35 per cent and decreased blood used by the surgical service 320 ml per patient operated upon. The relative use of plasma decreased 50 per cent. Calculated blood savings during a one-year period amounted to 3,863 units, with an estimated 81 transfusion reactions avoided. These data support the contention that plasma expanders can be used for patients suffering acute blood loss without detriment to the patients' conditions. The further advantage in terms of reduced blood needs is obvious. *(Rush, B. F., and Stewart, R. A.: More Liberal Use of a Plasma Expander, Impact on a Hospital Blood Bank, New Engl. J. Med. 280: 1202 (May) 1969.)*

DEXTRAN The effects of low-molecular-weight dextran (LMWD) upon blood viscosity and the characteristics of erythrocyte suspension were studied *in vitro* and compared with 5 per cent albumin in saline solution and commercial dextran. When one of these substances was added to the blood, the suspension medium (plasma) could be altered so that the hematocrit would not be changed. Blood viscosity was increased by commercial dextran and unaffected by either 0.85 per cent saline solution or LMWD. LMWD in 5 per cent glucose increased viscosity and hematocrit. In blood made hyperviscous, 5 per cent albumin and 0.85 per cent saline were as effective as LMWD or more effective in decreasing viscosity. LMWD did decrease erythrocyte aggregation and rouleaux formation. The evidence suggests that LMWD has no specific effect upon blood viscosity *in vitro*, and that any beneficial effect upon viscosity *in vivo* is due to its properties as a plasma-volume expander. *(Eisenberg, S.: The Effect of Low Molecular Weight Dextran on the Viscosity and Suspension Characteristics of Blood, Amer. J. Med. Sci. 257: 336 (May) 1969.)*

HYPERLACTEMIA Increased lactate and an elevated lactate:pyruvate ratio have been produced in well-oxygenated blood alone, *in vitro*, in a membrane oxygenator under conditions mimicking hyperventilation. This is prevented by adding five per cent CO_2 to the ventilating gas, or by the addition of THAM buffer, and does not occur in plasma alone. This lactate production is probably due to the effects of alkalosis on glucose metabolism by the erythrocytes. *(White, J. J., and others: Excess Lactate Production Due to Hyperventilation and Respiratory Alkalosis, Surgery 66: 250 (July) 1969.)*