DEXTRAN Dextran has proven useful in the management of all forms of shock and low perfusion states, in conjunction with cardiovascular operations and in the treatment and prevention of thromboembolism. It must be used early in the course of the disease or injury before secondary pathologic changes are fully established. Dextran 70 is preferred for volume expansion and Dextran 40 for improving flow. The maximum recommended dosage of Dextran over 24 hours is 15 μg/kg body weight. (*Atik, M.: The Uses of Dextran in Surgery: A Current Evaluation, Surgery 65: 548 (March) 1969.*)

SHOCK Hemodynamic effects of dopamine and isoproterenol were compared in 22 patients in shock. On the basis of responses to the drugs, the patients were divided into five groups: Group I—six patients who failed to respond to either drug. The pre-drug hemodynamic values were no different from those in the other groups and the reasons for lack of responses are unclear. Group II—three patients whose responses to isoproterenol were greater than those to dopamine. Group III—seven patients who responded better to dopamine than to isoproterenol. Group IV—four patients responding adequately to both. Group V—two patients responding best to a combination of the two drugs. Although both drugs increase cardiac output and decrease total peripheral resistance in normal subjects, their effects on peripheral circulation are different. Isoproterenol acts upon beta-adrenergic receptors to produce vasodilation, predominantly in skeletal muscle and mesenteric vascular beds. Renal blood flow usually does not increase. Dopamine causes renal and mesenteric vascular dilation via a non-adrenergic mechanism and skeletal muscle vascular constriction via alpha-adrenergic stimulation. Because of the diversity of the actions of the two drugs, and variability of patient response to them, identification of the optimal sympathomimetic amine for shock may require analysis of patient response to several drugs. (*Talley, R. C., and others: A Hemodynamic Comparison of Dopamine and Isoproterenol in Patients in Shock, Circulation 39: 361 (March) 1969.*)

Respiration

TRACHEOSTOMY Late complications after tracheostomy, such as granulomas and, particularly, cicatrical stenoses, occur more frequently than generally suspected. During a five-year period, 358 tracheostomies were performed; 109 patients survived, and, for these, 63 records were available for review six weeks to five years after discharge from the hospital. The patients came from various surgical services; seven were victims of tetanus. Tracheostomies in infants or small children and in cases of drug poisoning were not included in the series. Of the 63 patients, eight had respiratory symptoms; these necessitated prolonged surgical treatment in three. The tracheal lumen was decreased by 33 per cent or more in 20 patients. A decrease in tracheal lumen of greater than 50 per cent was always symptomatic and occurred in six patients, *i.e.*, in one of every ten patients who had had a tracheostomy. Plastic repair was necessary in two patients with dysphagia. The site of the tracheal stenosis implied that cuffed tubes were the most common cause of the complication. In three patients granulomas were encountered; these necessitated surgical removal in two. Patients who had dyspnea on exertion or stridor were examined by tracheoscopy. (This should rule out "asthmatic bronchitis" and other misdiagnoses.) Radiologic (tomographic) investigation should be performed routinely, since symptoms often develop several weeks after decannulation, except in cases of granuloma where symptoms are acute when they appear. Long-term ventilation and local infection contribute to the severity of the complications. It is advisable, therefore, not only to practice strictly aseptic tracheobronchial toilet but to isolate tracheotomized patients in an aseptic room. Endotracheal cuff pressure, cannula material, and mode of fixation of the cannula between ventilator and trachea are all important factors in the etiology of complications. Less rigid thermoplastic cannulas may be preferable to conventional "hardware." The use of cuffs should be restricted to the period of positive-pressure breathing. (*Stoeckel, H., and Beduhn, D.: Late Complications Following Tracheostomy, Langenbeck. Arch. Klin. Chir. 323: 18 (Nov.) 1968.*)