

two hours. The perfusion equipment can be calibrated to deliver flows of 50, 60 and 75 cc. per kg. body weight per minute, and for infants and patients with cyanotic heart disease these perfusion rates are increased to as high as 100 cc. per kg. per minute. During perfusion the response of the individual to a particular flow rate is monitored by means of continuously recorded encephalogram and systemic blood pressure, and surgical corrections are made or perfusion flow rates altered so as to maintain these variables normal or near normal. As a result of these precautions, it is uniformly possible to achieve, at the conclusion of perfusion, an arterial pH of 7.36 or higher, even though the patient may have been on the bypass for as long as one and one-half hours. (DeWall, R. A., and others: *Physiological Responses During Total Body Perfusion with Pump-Oxygenator*, J. A. M. A. 165: 1788 (Dec. 7) 1957.)

**HEART ABDOMINALIZATION** The absence of successful and fundamental methods of treatment of coronary disease and the high mortality among patients as a result of excessively complicated and difficult operations compels the quest for new methods of treatment for such patients. Analysis of the working conditions of the heart leads to the conclusion that a considerable part of this work is spent in overcoming the negative pressure of the thoracic cavity. On this basis partial lightening of the activity of the heart and creation of a state of relative functional competence by removal of this excessive load using an original method of functional abdominalization of the heart is suggested. The method consists of making a small sagittal incision in the central tendon of the diaphragm as a result of which the pericardial cavity is converted from a closed section of the thoracic cavity with its negative pressure into a distinct part of the peritoneal cavity with an indifferent neutral pressure. This operation, named abdomino-pericardiostomy, was performed on 3 patients and completely freed them from angina pectoris and attacks of cardiac asthma. (Reinberg, G. A.: *Abdominalization of Heart; New Principle in Surgical Treatment of Coronary Disease*, *Khirurgiia* 1: 16, 1957.)

**TERMINAL TEMPERATURES** Dogs anesthetized with pentobarbital and subjected to acute progressive hypothermia die in one of three ways: 60 per cent terminate in ventricular fibrillation at heart temperature of 25 to 19 C., 15 per cent in asystole at 18 to 15 C., the remaining 25 per cent show a period of asystole or exceedingly slow heart rate, either of which is followed by ventricular fibrillation. The investigation was instituted to discover whether each group represented a distinct segment of the population or whether each type of death was a direct consequence of the terminal temperatures distributed along a predictable curve. The data from over 100 dogs could be expressed by a log-normal distribution without evidence of heterogeneity. This suggests that the terminal events (fibrillation versus asystole) are determined by the terminal temperatures. (Angelakos, E. T.: *Distribution of Terminal Temperatures in Hypothermic Dogs*, *Proc. Soc. Exper. Biol. & Med.* 97: 107 (Jan.) 1958.)

**HYPOTHERMIA** Clotting times, platelets, thromboplastin generation, prothrombin consumption, prothrombin time, concentrations of prothrombin, accelerator globulin, proconvertin and fibrinogen were measured in 10 patients during induced hypothermia. Different from the dogs, hypothermia in man was not associated with a fall in concentration of clotting factors; the one significant difference was a decrease in prothrombin consumption. (Bunker, J. P., and Goldstein, R.: *Coagulation During Hypothermia in Man*, *Proc. Soc. Exper. Biol. & Med.* 97: 199 (January) 1958.)

**HYPOTHERMIA** In dogs cold acclimatization occurs in 4 weeks. When these dogs were subjected to hypothermia, terminal rectal temperatures were lower, and the incidence of ventricular fibrillation was reduced compared to control and less completely cold acclimatized dogs. A state of acidosis and low plasma potassium levels were present during hypothermia in the acclimatized and control dogs. (Covino, B. G., and Beavers, W. R.: *Cardiovascular Response to Hypothermia: Effect of Cold*