

TRAUMA AND METABOLISM The body's needs for foodstuffs may be listed in decreasing order of importance. (1) Obligatory for immediate survival: "two-carbon fragments" for the Krebs tricarboxylic acid cycle to provide usable energy; a continuous supply of intermediates for the Krebs cycle; and maintenance of blood glucose levels. (2) Obligatory for ultimate survival: synthesis of body protein which seems to have its own spectrum of importance ranging from hemoglobin and certain enzymes and hormones to plasma protein, and ultimately to a variety of cell proteins. (3) Energy storage in the form of glycogen in liver and muscle, and in fat depots. The results of indirect calorimetry in 18 patients with various forms of surgical disease and injury indicate that the total caloric expenditure in these patients does not increase postoperatively. However, the basal metabolic expenditure does increase. Hence, post-traumatic nitrogen loss is not for the purpose of providing fuel, but to provide carbohydrate intermediates during a period of potential or actual starvation. During such time, fat can supply fuel but not these intermediates which are obligatory for immediate survival. In this period, intake of calories and protein greatly exceeding postoperative needs is required to approach protein balance. (Kinney, J. M.: *Consideration of Energy Exchange in Human Trauma*, Bull. New York Acad. Med. 36: 617 (Sept.) 1960.)

RESPIRATORY OBSTRUCTION A known hemophilic developed a large sublingual-intraliquinal hematoma. After attempts to arrest the growing tumor with fresh blood had failed, respiratory embarrassment became evident and progressed. When awake oral and nasal intubation could not be performed, the patient was put to sleep to perform tracheotomy, but died before this could be accomplished. In general no operative procedure should be attempted unless the most active antihemophilia measures have been employed, i.e., administration of animal antihemophilic globulin. In 12 instances of potential airway obstruction by expanding hematomas, no symptoms developed in any case in less than 12 hours after onset of bleeding. Thus, there is sufficient time to attempt to stop the bleed-

ing by antihemophilic therapy. (Leatherdale R. A. L.: *Respiratory Obstruction in Haemophilic Patients*, Brit. Med. J. 1: 1316 (April 30) 1960.)

PULMONARY EDEMA Salicylate intoxication may produce respiratory alkalosis, hypoprothrombinemia, hemorrhagic gastritis, acute renal failure, hypocalcemia, and depression of the central nervous system. Pulmonary edema has also been reported as a complication. A 32 year old man took 100 to 200 grains aspirin daily for 10 days, at which time he was mentally confused, drowsy, with slurred speech, sweating profusely and breathing deeply. His serum salicylate level was 44 mg./100 ml. He developed pulmonary edema which improved as the salicylate level declined. The most likely mechanism thought to cause the pulmonary edema was sodium retention. (Grancville-Grossman, K. L., and Sergeant, H. G. S.: *Pulmonary Oedema Due to Salicylate Intoxication*, Lancet 1: (March 12) 1960.)

OXYGEN THERAPY A polyethylene mask, the "polymask," is used with oxygen flows of 2-4 liters per minute for oxygen therapy. The mask has no valves, but only strategically placed holes to allow the escape of exhaled air. Since it is soft and light, it is easily displaced by the user's movement and kinked by the relatively heavy oxygen delivery tube. When in ideal position, it delivers 46 per cent oxygen at 2 liters per minute flow and 77 per cent oxygen at 8 liters flow. Carbon dioxide never rises to 1 per cent concentration. (Catterall, M., and Snow, M.: *The Polymask as Means of Administering Oxygen*, Brit. Med. J. 1: 1254 (April 23) 1960.)

CARDIAC OUTPUT Cardiac output, heart rate and stroke volume were measured in healthy young men at rest in the supine position, at rest standing and during exercise in the upright position. Cardiac index in subjects at rest in the supine position averaged 3.5 liters and the stroke index averaged 54 ml. Standing resulted in a fall in cardiac output and an increase in heart rate. The average fall in stroke index is 41 per cent. Mild exercise is sufficient to restore the stroke index