

halation of pure oxygen, the respiratory minute volume decreased 39 per cent. If the inhalation of oxygen was pursued for a longer period, the minute volume returned to its value before inhalation. Based upon the "prolonged oxygen test" the authors conclude that half of the increase in ventilation at high altitudes is caused by the low oxygen tension and the carbon dioxide stimulus only partially controls the ventilation. (*Dejours, P., and others: Existence of Oxygen Stimulus to Ventilation after Acclimatization at 11,000 Feet in Man, Compt. rend. Acad. Sci. 245: 2534 (Dec.) 1957.*)

VENTILATION-PERFUSION Lobar spirometry was performed in nine normal men and 4 tuberculous patients in the supine and erect positions. In the normal subjects the distribution of ventilation was the same in the erect and supine positions. However, in the erect position the upper lobe O₂ uptake fraction decreased while that in the lower lobe increased. This interlobar ventilation-perfusion-ratio difference is apparently due to gravity. (*Martin, C. J., and Young, A. C.: Ventilation-Perfusion Variations Within the Lung, J. Appl. Physiol. 11: 371 (Nov.) 1957.*)

APPLICATION OF GAS LAWS Emphasis is given to Dalton's Law of partial pressure, to Henry's Law of diffusion of gases or the equalization of concentration on both sides of a semi-permeable membrane, and to the law of gases in solution. A very elementary discussion is presented on hemoglobin and its dissociation curve. (*Rose, J. C.: Air and Blood Oxygen, GP 16: 82 (Dec.) 1957.*)

INFANT RESUSCITATION At Cook County Hospital, no mechanical resuscitators are used in asphyxia neonatorum because of the delay and uncertainty as to how much oxygen is entering the tracheal tree. De Lee tracheal catheters are inserted without the aid of a laryngoscope, the tracheal tree aspirated, and oxygen puffed in through the catheter. Nalline or Lorphin is given into the umbilical vein for respiratory depression due to narcotics, and sometimes caffeine is given intramuscularly later if required. (*Helgason, R. E.: Obstetrics at Cook County Hospital, Canad. M. A. J. 78: 53 (Jan. 1) 1958.*)

EMPHYSEMA While a cure of this relentless disease is impossible, considerable benefit will derive from use of bronchodilator agents (Isuprel, aminophylline, and occasionally Demerol), aerosol therapy with IPPB devices, and avoidance of irritants (tobacco, strong floor cleansing agents, and dust). Antibiotics (especially during colder months), diaphragmatic control (aided by emphysema belts), management of emotional aspects, and use of steroids are all advised. Oxygen is used sparingly unless supplemented with mechanical respiratory aids. Intermittent use of a tank respirator sometimes supplemented with a tracheotomy has prolonged the life of some far advanced patients. Ablation of the thyroid has been successful in reducing oxygen demand and dyspnea. Pulmonary vagotomy has significantly increased the respiratory capacity of some emphysema patients. (*Blanton, W. B., Jr., and Patterson, J. L., Jr.: Management of Later Stages of Pulmonary Emphysema, South. M. J. 50: 1441 (Dec.) 1957.*)

OXYGEN TENSION With the aid of a small platinum electrode in a suitable electrical circuit, the changes of oxygen tension in normal human extremities were estimated *in situ*. In cutaneous vasoconstriction and with arterial occlusion, the oxygen tension of the skin was reduced often to a small fraction of that in normal vasodilated skin. The inhalation of oxygen and the use of various physical measures and drugs that increase cutaneous circulation increase the oxygen tension in the ischemic extremities. Studies were also conducted in determining the oxygen tension of resting skeletal muscles. The oxygen tension of muscles in normal man rises when oxygen is inhaled and decreases with the arterial arrest by a pressure cuff. The method actually measures the resultant of oxygen delivered through the tissues and utilized by the tissues rather than through total blood flow alone. (*Montgomery, H.: Oxygen Tension of Peripheral Tissue, Am. J. Med. 23: 697 (Nov.) 1957.*)

OVEROXYGENATION Overoxygenation of blood in heart-lung machines may have led in the past to sudden death in the postoperative phase. To prevent overoxygenation a polarograph was connected