

disease. A comparison of results obtained with the end tidal sampling technique in patients with asthma and emphysema indicates that the use of carbon monoxide in these two conditions enables an estimate to be made of the relative normality of the lung parenchyma. (Bates, D. V.: *Measurement of Pulmonary Diffusing Capacity in Presence of Lung Disease*, *J. Clin. Invest.* 37: 591 (April) 1958.)

RESPIRATOR The Pesty positive-negative pressure respirator with variable pause has been used successfully in a variety of conditions associated with prolonged respiratory inadequacy. Mixtures of anesthetic gases can be administered in place of oxygen or compressed air. The versatility of the apparatus is such as to permit control of minute ventilation, tidal volume, insufflation speed, expiratory pause, ventilation rate and positive and negative pressure values. Should the patient begin to initiate his own respiration, the automatic cycling stops and frequency and depth are instantly adjusted so as to allow him to breathe spontaneously without interference (one of the characteristics of an "ideal respirator"). (Trémolières, J.: *New Apparatus for Artificial Respiration*, *J. A. M. A.* 167: 1086 (June 28) 1958.)

IPPB Atelectasis remains the most common postoperative complication. The usual prophylactic measures (e.g., coughing, standing in the immediate postoperative period) may be feasible in some patients. It is particularly in these as well as in patients with previous bronchopulmonary disease that IPPB is of greatest benefit. The preferred method is: (1) gas mixture of 60 per cent helium and 40 per cent oxygen, (2) three to four treatments for 15 minutes each for five days, (3) positive pressure with 15 to 20 cm. water for adults and 10 to 12 cm. water for children, (4) 8-10 respirations per minute, and (5) aerosol therapy with 6 to 8 drops of a bronchodilator in 15 drops of water. (Rudy, N. E., and Crepeau, J.: *Role in Intermittent Positive Pressure Breathing Postoperatively*, *J. A. M. A.* 167: 1093 (June 28) 1958.)

VENTILATORY FAILURE The diagnosis of ventilatory failure is difficult from

signs and symptoms alone. The rapid infrared CO₂ analyzer using the "rebreathing method" offers a simple, reliable test for ventilatory failure which can be performed by a technician in less than 10 minutes. It can be performed on all types of patients, awake or unconscious. Carbon dioxide narcosis can be readily diagnosed and mechanical measures to increase ventilation quickly instituted. (Griggs, D. E., and others: *Rapid Diagnosis of Ventilatory Failure with Carbon Dioxide Analyzer*, *Am. J. Med.* 25: 31 (July) 1958.)

ASPHYXIA Ninety-eight experiments were carried out on puppies to study the effect and mechanism of action of intra-arterial infusions of blood and of hypertonic calcium chloride and glucose solutions in asphyxiation. Intra-arterial infusions of blood and of hypertonic calcium chloride and glucose solutions are effective methods for the treatment of severe asphyxiation; the effect is attained reflexly via stimulation of the receptor apparatus of the arteries. (Persianinov, L. S.: *Role of Vascular Interoception in Restoration of Vital Functions in Asphyxiation*, *Fiziol. Zh.* 42: 685 1956.)

POSTOPERATIVE HYPOVENTILATION A majority of patients in whom arterial oxygen, pCO₂, and pH determinations were made during the postoperative period, showed evidence of inadequate ventilation. Metabolic acidosis perhaps secondary to the respiratory acidosis persisted into the first postoperative day. Ventilation was improved by proper dosage of analgesic drugs correctly timed to relieve pain and splinting. (Mastio, G. J., and Albritten, F. F.: *Respiratory Function in Postoperative Patient*, *A. M. A. Arch. Surg.* 76: 732 (May) 1958.)

POSTOPERATIVE HYPOXIA Studies on 62 postoperative pulmonary resection patients revealed that arterial blood oxygen saturation was lowest on the second and third days after pulmonary resection with a gradual return to normal by the seventh or eighth day. There was no correlation between oxygen saturation and the pulse rate. (Siebecker, K. L., and others: *Postoperative Ear Oximeter Studies on Patients Who Have Undergone Pulmonary Resec-*