stimulus is, therefore, good evidence of a change in ventilation–perfusion relationships even in the face of altered tidal volume. (*Read, J., and Lee, J.: Effect of Changes of Tidal Volume on Dead Space in Obstructive Lung Disease, J. Appl. Physiol. 26: 105 (Jan.) 1969.*)

**LUNG COMPLIANCE** Pressure–volume characteristics of the lungs of patients with emphysema or asthma were compared with values in a group of healthy controls. In emphysematous subjects, lung retractive force was very low and compliance (slope of the volume–pressure curve) was high. In asthmatic subjects, the magnitude of the lung retractive force was decreased but compliance was comparable to that in healthy subjects. In asthmatic subjects tested during remission, compliance increased and the decrease in lung retractive force persisted. (*Finucane, K. E., and Colebatch, H. J. H.: Elastic Behavior of the Lung in Patients with Airway Obstruction, J. Appl. Physiol. 26: 330 (March) 1969.*)

**HYPERBARIC OXYGEN** A Jehovah's Witness patient bled massively per rectum, but refused blood transfusion. A bleeding gastric leiomyoma was excised at eventual operation. Hemoglobin decreased to 2.2 gm/100 ml and on the third postoperative day the patient showed evidence of severe cerebral and myocardial ischemia and congestive heart failure. Hyperbaric oxygen therapy caused a reversal of all signs and symptoms of hypoxia and the patient recovered. Blood taken from a healthy subject breathing air at one atmosphere pressure has 0.3 vol per cent of oxygen dissolved in plasma; if the subject breathes 100 per cent oxygen at two atmospheres absolute pressure, the amount of oxygen in physical solution in plasma is 4 vol per cent. In a patient with greatly diminished hemoglobin, this increase in plasma oxygen may be adequate to sustain life. (*Amonic, R. S., and others: Hyperbaric Oxygen Therapy in Chronic Hemorrhagic Shock, J.A.M.A. 208: 2051 (June) 1969.*)

**HYPERBARIC OXYGEN** Intestinal obstruction produces dilatation of the bowel with fluid and gas. The gas is mostly nitrogen. Treatment with hyperbaric oxygen should reduce the dimensions of the distended bowel, aid in removal of nitrogen from the lumen, and improve viability in hypoxic areas of bowel. In this study, hyperbaric oxygen treatment did not improve the survival times of animals with experimental complete small-bowel obstruction. (*Hopkins, B. R., and Schenk, W. G., Jr.: Effect of Hyperbaric Oxygen on Experimental Intestinal Obstruction, Arch. Surg. 98: 228 (Feb.) 1969.*)

**REGULATION OF RESPIRATION** Respiratory responses to electrical stimulation of cervical sympathetic nerves were studied in 17 decerebrate cats. Tidal volume increased and end-tidal $CO_2$ fell within two to three breaths after stimulation of the peripheral cut ends of cervical sympathetic nerves. These respiratory responses were abolished by cutting the carotid sinus nerves and hence were attributed to activation of chemo- and baroreceptor afferents. Pentabarbitone or chloralose given intravenously depressed spontaneous ventilation and responses to sympathetic-nerve stimulation. Results indicate that activation of sympathetic pathways to the carotid body constitutes an effective stimulus to ventilation. (*Mills, E., and Sampson, S. R.: Respiratory Responses to Electrical Stimulation of the Cervical Sympathetic Nerves in Decerebrate, Unanaesthetized Cats, J. Physiol. 202: 271 (June) 1969.*)

**AIRWAY CONDUCTANCE** The effects of stimulation of cold receptors in facial skin on airway conductance and pulmonary functional residual capacity were studied in healthy young subjects with a body plethysmograph. Conductance is the reciprocal of resistance and has a normal value of 0.4 to 17 l/sec/cm $H_2O$. Cold-stimulation of the face caused a significant reduction in conductance but functional residual capacity was only slightly affected. Conductance decrease during exposure to cold probably results from bronchoconstriction due to: 1) stimulation of trigeminal cold receptors, and 2) pharyngeal and glottal