treated with T.H.A.M., *p*H was not changed, arterial $P_{CO_2}$ increased from 37 to 88, arterial oxygen saturation remained 100 per cent and plasma catecholamine levels remained unchanged. Although anuria occurred early in untreated dogs, profuse diuresis occurred in the animals treated with T.H.A.M. The urine contained between 50 and 60 mEq. of carbon dioxide and the total carbon dioxide recovered in the urine during the one hour of apnea amounted to 25 per cent of the carbon dioxide produced by the animal. Most of the carbon dioxide excreted by the kidney was in the form of a bicarbonate-amine. The experiments made it apparent that the vicarious elimination of carbon dioxide by the kidney under conditions of acute hypercapnic acidosis buffered with T.H.A.M. is sufficient in magnitude to be of real therapeutic value. *(Nahas, G., and Jordan, E.: Neutralization of the Acute Effects of Hypercapnic Acidosis by T.H.A.M., Aerospace Medicine 31: 61 (Jan.) 1960.)*

**SWEATING** Clinical symptoms of carbon dioxide retention were studied during diffusion respiration in 163 completely apneic patients. Premedication consisted of meperidine and atropine; barbiturate-succinylcholine anesthesia was used. After 10 minutes of apnea when *p*H of the blood was about 7.1 and oxygen tension was normal, 25 per cent of the patients showed sweating. It is concluded that sweating in an anesthetized patient is not a dependable sign of respiratory acidosis. *(Barth, L.: Sweating During Carbon Dioxide Accumulation Under Anesthesia, Der Anaesthesist 9: 65 (Feb.) 1960.)*

**PULMONARY COMPLIANCE** Convalescent poliomyelitic patients and normal subjects show a decrease in pulmonary compliance of 26 to 40 per cent as measured in the tidal volume range during quiet breathing after a series of deep breaths. This change occurs in the prone, supine, lateral and sitting positions. Two or more deep breaths to the limit of inspiration, after the period of quiet breathing, produce an increase in compliance. This increase can be eliminated by forced expirations in the normal subjects. It is thought that these changes are probably due to the opening and closing of various units within the lung. *(Ferris, E. G., and Pollard, D. S.: The Effect of Deep and Quiet Breathing on Pulmonary Compliance in Man, J. Clin. Invest. 39: 143 (Jan.) 1960.)*

**VENTILATION** In the presence of normal myoneural transmission, the integrated diaphragmatic electromyogram is a direct expression of the inspiratory activity of the respiratory center. Disappearance and recovery of electrical activity of the diaphragm, produced by controlled increases and decreases of ventilation in 11 anesthetized patients, were correlated with end-tidal alveolar carbon dioxide tensions. The onset of apnea occurred at an average $P_{CO_2}$ of 38 mm. Hg. Recovery from apnea occurred at an average $P_{CO_2}$ of 43 mm. Hg. The discrepancy probably results from the slow equilibration of carbon dioxide between the blood and nerve cells of the respiratory center. *(Fink, B. R., and others: Monitoring of Ventilation by Integrated Diaphragmatic Electromyogram, J.A.M.A. 172: 1367 (March 26) 1960.)*

**VENTILATORY CAPACITY** An apparatus is described which consists of a rotating vane whose rotation against the restraint of a spring varies the orifice available for escape of gases blown against it. The instrument is called a Peak Flow meter and is used to record Peak Flow Rates (PFR). PFR is the highest expiratory flow that can be sustained by maximal effort for at least 10 msec. PFR seems to be a stable and useful measure of ventilatory capacity. Normal PFR values range from above 100 L./min. in four year olds to over 900 L./min. for healthy men. *(Wright, B. M., and McKerrow, C. B.: Maximum Forced Expiratory Rate as a Measure of Ventilatory Capacity, Brit. Med. J. 2: 1041 (Nov. 21) 1959.)*

**PULMONARY FUNCTION** Regional variations of pulmonary ventilation and blood-flow have been studied in 30 patients by means of a radioactive isotope of oxygen (oxygen-15). This substance has a half life of two minutes. Pairs of scintillation counters are placed on the chest wall to measure radiation from two regions simultaneously. By observation of counting-rates during breath-holding following