siding for two to 16 years at low altitudes. Natives of sea level in whom tetralogy of Fallot had been successfully corrected also exhibited respiratory insensitivity to hypoxia. These findings suggest that hypoxia in early childhood permanently reduces and irreversibly desensitizes the reflex response to acute hypoxia mediated by peripheral chemoreceptors. This trait is probably acquired rather than determined genetically. (Sørensen, S. C., and Severinghaus, J. W.: Respiratory Sensitivity to Acute Hypoxia in Man Born at Sea Level Living at High Altitude, J. Appl. Physiol. 25: 211 (Sept.) 1968; Irreversible Respiratory Insensitivity to Acute Hypoxia in Man Born at High Altitude, J. Appl. Physiol. 25: 217 (Sept.) 1968; Respiratory Insensitivity to Acute Hypoxia Persisting after Correction of Tetralogy of Fallot, J. Appl. Physiol. 25: 221 (Sept.) 1968.)

THERMAL PANTING Although pulmonary gas exchange is the primary function of the lungs, rapid ventilation of non-respiratory surfaces represents an important heat-loss mechanism in most mammals and birds. The role of the vagus nerves during normal respiration and thermal panting was examined in four species of mammals and in birds by lung-air sac inflation and cervical vagotomy. The Hering-Breuer reflex could be elicited in all mammals during normal respiration and panting. Section of one vagus nerve during hyperthermia reduced respiratory frequency and increased depth of breathing in most animals. Bilateral vagotomy had little further effect in the panting rabbit, lamb and pigeon, but abolished rapid breathing in the rat, guinea pig, fowl, duck and quail. Vagotomized lambs and pigeons started panting in response to increasing body temperature, although the rate attained was slower than in intact animals. Appropriate afferent vagal stimulation in vagotomized fowl maintained normal respiration or thermal panting. In many mammals and birds panting may be controlled by central mechanisms only, while in others it depends on extrinsic stimuli mediated by way of the vagi. (Richards, S. A.: Vagal Control of Thermal Panting in Mammals and Birds, J. Physiol. 199: 89 (Nov.) 1968.)

PULMONARY FUNCTION The single-breathe carbon dioxide washout test obviates the need for detailed instructions to the subject, as well as specific ventilatory maneuvers or a maximal effort. All that is required is for the patient to breathe normally into a mouthpiece. Flow is measured by an Electronics for Medicine 600-I pneumotachograph coupled to a Statham PA5 differential pressure transducer, while carbon dioxide concentration is measured by a Spinco CO₂ analyzer. The expired volume is determined by electronic integration of flow. Flow, expired volume and CO₂ concentration are displayed on the oscilloscope and recorded on photographic paper. This test should be ideal as a screening test where the interest and performance of the subject are uncertain. Good differentiation of patients with pulmonary disease from normal subjects was achieved. (Sobol, B. J., and others: The Single Breath Carbon Dioxide Washout Test, Amer. J. Med. Sci. 257: 140 (Feb.) 1969.)

ARTERIALIZED CAPILLARY BLOOD Capillary sampling in conjunction with electrometric micromethods has the greatest appeal in those situations where arterial blood is difficult to obtain or where only small samples of blood can be obtained. "ArterIALIZATION of capillary blood can be achieved by vigorously massaging or warming the area to be punctured. This blood usually has pH, PCO₂, PO₂ and bicarbonate values nearly identical to those in arterial blood drawn simultaneously. In patients with cardiovascular disease or peripheral circulatory failure, capillary blood values may differ significantly from those of arterial blood. (Sharp, J. T.: Measurement of pH and Blood Gases in Arterialized Capillary Blood, Med. Clin. N. Amer. 53: 137 (Jan.) 1969.)