

arteriovenous shunts secondary to the hemodynamic effects of the Valsalva maneuver. Those patients who showed a large rise in saturation had an abnormally large flow through such shunts at rest. These observations confirm the hypothesis that transmural pulmonary artery pressure is an important factor controlling flow through these shunts, and that an abnormally large shunt may develop in patients with chronic pulmonary hypertension. Evidence of shunt flow at rest was found in eight of nine normal subjects and averaged one per cent of total pulmonary blood flow. In patients with cardiac or pulmonary disease but without intracardiac shunts or signs of congestive heart failure, there was evidence of shunt flow at rest. Two patients with congestive heart failure showed no change in saturation, presumably because the Valsalva maneuver produced no hemodynamic change in the pulmonary circulation. In patients with congenital intracardiac shunts the arterial saturation changes represented a summation of changes in shunt flow within the lungs and across the congenital defect. (Jose, A. D., and Milnor, W. R.: *The Demonstration of Pulmonary Arteriovenous Shunts in Normal Human Subjects, and Their Increase in Certain Disease States*, *J. Clin. Invest.* 38: 1915 (Nov.) 1959.)

LUNG NITROGEN CLEARANCE Subjects breathing oxygen had a slower clearance of pulmonary nitrogen in the lateral decubitus position than when they were supine. This is the result of two factors. The total functional residual capacity is increased without an accompanying increase of total effective minute volume. The proportion of the total effective minute volume distributed to the underventilated fraction of the functional residual capacity is further reduced in the lateral positions. In the supine position, the tidal volume, dead space and functional residual capacity were greater for the right lung than for the left, but clearance rates and relative magnitude of slowly and rapidly ventilated regions of both lungs were similar. In lateral decubitus positions, the ventilatory pattern of the dependent lung was similar to that of the lung in the supine position. The superior lung had an increased functional residual ca-

capacity and a decreased tidal volume. The clearance rates of both rapidly and slowly ventilated components of a lung were only half as great when it was in the superior position as they were in the same lung when the subject was supine. The slow clearance rates of the superior lung appear to be responsible for the retardation of nitrogen clearance from the total lung observed in the lateral positions. This represents a regional type of uneven alveolar ventilation. These variations between lungs with change in position show that relatively retarded alveolar ventilation is not always restricted to a particular anatomic location. (Lillington, G. A., and others: *Nitrogen Clearance Rates of Right and Left Lungs in Different Positions*, *J. Clin. Invest.* 38: 2026 (Nov.) 1959.)

CYCLOPROPANE UPTAKE The measured concentrations of cyclopropane in expired air were compared with those predicted by Kety's equation describing the uptake of inert gases. Although fair agreement was found between the measured and predicted data, it was noted that the measured values increased more rapidly than theory predicted. This difference apparently resulted from Kety's simplifying assumption that the body consists of a homogeneous tissue mass. (Sechzer, P. H., Dripps, R. D., and Price, H. L.: *Uptake of Cyclopropane by the Human Body*, *J. Appl. Physiol.* 14: 887 (Nov.) 1959.)

SPONTANEOUS PNEUMOTHORAX Among 43 patients there were 19 with tension pneumothorax. Twenty-five per cent had recurrences. Forcible cough or strenuous physical effort are generally thought to be immediate causes; but in this series only three patients related onset to a fit of coughing and 11 patients related it to physical effort. Over half the patients developed the condition while at rest or asleep. (Anderson, I., and Poulsen, T.: *Surgical Treatment of Spontaneous Pneumothorax*, *Acta Chir. Scandinav.* 118: 105 (Dec.) 1959.)

ATROPINE SMOKE Atropine smoke from specially prepared low nicotine cigarettes was found to increase vital capacity significantly and provide subjective relief in trained sub-