arteriovenous shunts secondary to the hemo-
dynamic effects of the Valsalva maneuver. Those patients who showed a large rise in satu-
rature had an abnormally large flow through
such shunts at rest. These observations con-
firm the hypothesis that transmural pulmonary
artery pressure is an important factor con-
trolling 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 con-
gestive 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 satu-
ration 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 Cer-
(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 resi-
dual 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-
pacity 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 posi-
tion 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 re-
latively retarded alveolar ventilation is not al-
ways restricted to a particular anatomic lo-
cation. (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 mea-
sured 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 sim-
plifying 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 re-
currences. Forcible cough or strenuous phy-
sical effort are generally thought to be immedi-
ate 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 Pneu-
mothorax, 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-