sents a signficant mechanism for adaptation to the lowered oxygen supply imposed by the cardiac lesion. A significant correlation between oxygen saturation of mixed venous blood, 2,3-DPG concentration, and P_{50} (*i.e.*, P_{O_2} at 50 per cent saturation and pH 7.4) was found. The authors imply that the level of deoxygenated hemoglobin is an important *in-vivo* determinant of 2,3-DPG synthesis and hemoglobin–oxygen affinity. (*Woodson, R. D., Torrance, J. D., Shappell, S. D., and Lenfant, C.: The Effect of Cardiac Disease on Hemoglobin–Oxygen Binding, J. Clin. Invest. 49: 1349 (July) 1970.*)

PULMONARY HYPERTENSION An acute increase of hydrogen-ion activity produced by infusion of hydrochloric acid was not associated with an increase in pulmonary vascular resistance in patients with mild bronchitis or patients with more severe bronchitis with attendant hypoxemia. A chronic increase in blood hydrogen-ion activity produced by ingestion of ammonium chloride produced no change in pulmonary vascular resistance in patients with mild bronchitis. A small increase in pulmonary vascular resistance occurred in the group with severe bronchitis when inspired O_2 was decreased from 21 to 12–13 per cent. The increase in blood hydrogen-ion activity of the degree found does not appear to be a significant factor in the genesis of pulmonary hypertension, whether or not the patient is chronically hypoxic. (*Hansley, E., Clarke, S. W., Hedworth-Whitty, R. B., and Bishop, J. M.: Effect of Acute and Chronic Acidaemia and Associated Hypoxia on the Pulmonary Circulation of Patients with Chronic Bronchitis, Cardiovasc. Res. 4: 482 (Oct.) 1970.*) EDITOR'S COMMENT: It is possible that pulmonary hypertension becomes fixed and vascular reactivity to changes in hydrogen ion activity, though once present, may no longer be apparent.

HYPOXIA Mice were subjected to subatmospheric pressure for continuous periods as long as 33 days. After different durations of exposure, nine mice were selected randomly from an initial group of 125 and weight, hematocrit, blood hemoglobin concentration, erythrocyte and reticulocyte counts, and blood volume were measured. Each animal was used for only one set of determinations. Total circulating hemoglobin, total circulating erythrocyte volume, total plasma volume, total blood volume, and the erythrocytic indexes were calculated. Data were obtained at air pressures of 510, 440, and 360 mm Hg, corresponding to altitudes of 10,500, 14,500, and 19,000 feet, respectively. At least two runs were made at each pressure. During the first few days of exposure, plasma volumes decreased 9, 15, and 19 per cent below control values at these pressures. At the same pressures, total circulating erythrocyte volumes increased to steady-state values of 23, 43 and 135 per cent above control. Mean corpuscular volume increased at all three pressures, with most of the increases occurring during the first few days of exposure. (*Mylrea, K. C., and Abbrecht, P. H.: Hematologic Responses of Mice Subjected to Continuous Hypoxia, Amer. J. Physiol. 218: 1145 (April) 1970.*)

ISUPREL Pulmonary mechanics were investigated in eight healthy men. Flow–volume, pressure–volume, resistance–volume, and pressure–flow curves, in addition to forced expiratory volume (FEV_1), were measured. Isoproterenol produced a considerable decrease in airway resistance but only small changes in maximum expiratory flow. Measurements of static pressure–volume curves showed isoproterenol caused temporary decreases in the elastic pressure of the lungs. Five of the men had a mean decrease in recoil pressure of 4.1 cm H_2O at 50 per cent TLC. The relatively small increments in maximum expiratory flow after isoproterenol may be primarily due to the fact that the effects of airway dilatation are negated by the reduction in lung recoil pressure, which results in a decrease in the maximum effective driving force for expiratory air flow. In addition, there is probably an increase in the compliance of the flow-limiting airways. These studies emphasize that tests of maximum flow and of airway resistance should not be regarded as being invariably inter-