aerosol restored all measurements to control values or better. (*Lovejoy, F. W., and others: Measurement of Gas Trapped in Lungs During Acute Changes in Airway Resistance in Normal Subjects and in Patients with Chronic Pulmonary Disease, Amer. J. Med. 30: 884 (June) 1961.*)

PULMONARY FUNCTION Ventilation tests are sensitive indicators of incipient or frank left ventricular failure and its response to therapy. Acute left ventricular failure can be differentiated from other causes of dyspnea with ventilation tests. The ventilation studies are of limited value in right ventricular failure except in following the response to therapy. (*Horton, G. E., and others: Pulmonary Function in Cardiac Disease, Dis. Chest 39: 656 (June) 1961.*)

CONTROLLED VENTILATION Comparisons were made in the dog of ventilation efficiency during anethesia under the following conditions: (1) spontaneous respiration; (2) positive pressure inflation with ambient deflation of the lung; (3) positive pressure inflation with vacuum deflation of the lung, and (4) ambient airway pressure with the thoracic cage in a tank respirator. Respiratory acidosis developed in the first group. The total ventilation and alveolar ventilation were always greater at plus 15 mm. of mercury than at plus 11 and minus 4 mm. of mercury. With the thorax open or closed, total ventilation was greater with the Bennett Assister than with the tank respirator at comparable pressures. The most efficient system was the Bennett Assister at plus 15 and 0 mm. of mercury with the thorax open. (*Burris, O. F., and others: Efficiency of Ventilation with Various Methods of Controlled Ventilation, J. Thor. Cardiov. Surg. 42: 12 (July) 1961.*)

EMPHYSEMA The effects of hyperventilation with intermittent positive pressure breathing with and without aerosolized isoproterenol and with and without intravenous aminophylline on alveolar ventilation were assessed by changes in alveolar nitrogen clearance in 12 emphysematous patients. Aminophylline produced no change, the hyperventilation alone some increase in alveolar ventilation, and Isuprel an additional modest increment. The action of the Isuprel was thought due to its shrinkage of the bronchial mucosa rather than to any changes in bronchial constriction. (*Cohen, A. A., Hemingway, A., and Hemingway, C.: Effect of Intermittent Positive Pressure Breathing and Bronchodilator Drugs on Alveolar Nitrogen Clearance in Patients with Chronic Obstruction and Pulmonary Emphysema, Amer. Rev. Resp. Dis. 83: 340 (Mar.) 1961.*)

PULMONARY EMBOLUS An increase in the rate and minute volume of ventilation occurred following experimental pulmonary embolization in dogs. The magnitude of these changes was not related to the degree of embolization. An arterial-alveolar carbon dioxide gradient, indicating increased dead space ventilation, also occurred and was related to the extent of embolization. Arterial anoxemia which failed to improve with the administration of oxygen indicated a right-left shunt of blood as a result of the emboli. This shunt is postulated as a possible compensatory mechanism to relieve right heart strain and permit the return of venous blood to the systemic circulation. (*Stein, M., and others: Gas Exchange after Autologous Pulmonary Embolism in Dogs, J. Appl. Physiol. 16: 488 (May) 1961.*)

OXYGEN THERAPY The efficiency of various methods for the administration of oxygen has been investigated in 10 patients with pulmonary emphysema. Samples of arterial blood were withdrawn while the patients were breathing air and after breathing oxygen by the various methods tested. Oxygen was administered either by oxygen tent (8 liters per minute flow), oxygen mask (4 liters per minute flow), or the "Tudor Edwards oxygen spectacles" (4 liters per minute flow). Using the level of arterial oxygen saturation as criterion, the mask was found to be significantly better than either tent or spectacles. However, the spectacles were found to raise oxygen saturation more than did the tent. (*Ball, J. A. C.: Administration of Oxygen, Lancet 1: 591 (Mar. 18) 1961.*)