**BRONCHOGRAPHY** Bronchography reduced lung capacities and interfered with alveolar aeration and intrapulmonary gas exchange. In a patient with poor pulmonary function, the interference with pulmonary function caused severe dyspnea. The extent of reduction in pulmonary function was most likely directly related to the proportion of the bronchial tree filled with the contrast medium. There was a greater reduction in pulmonary function in the group of patients in whom bilateral bronchograms were performed than in the group which had unilateral bronchograms. Lung capacities were restored to 85 to 90 per cent of the prebronchographic level within three hours following the procedure. Topical anesthesia and sedation did not influence the results of the voluntary pulmonary function tests. (*Christoforidis, A. J., Nelson, S. W., and Tomashefski, J. F.: Effects of Bronchography on Pulmonary Function, Amer. Rev. Resp. Dis. 85: 127 (Jan.) 1962.*)

**HYALINE MEMBRANE** Hyaline membrane disease can occur in adults as well as in children. Two cases in post-thoracotomy patients are reported. Clinical signs appeared almost identical to those of acute pulmonary edema with cor pulmonale. Since the membrane appears to be composed of closely packed layers of fibrin produced in the absence of profibrinolysin activator and since the disease seems to be treatable with nebulized thrombinolysin such treatment is recommended if the syndrome is suspected. (*Holland, R. H., and Capers, T. H.: Pulmonary Hyaline Membrane Disease in Adults, Amer. Rev. Resp. Dis. 84: 719 (Nov.) 1961.*)

**IATROGENIC ATELECTASIS** Several workers have suggested that oxygen breathing of relatively short duration might cause diffuse pulmonary atelectasis due to absorption of trapped gas distal to temporarily occluded structures. Such atelectasis should be manifested by diminished pulmonary compliance. In the present study the time course of atelectasis during prolonged periods of oxygen breathing was identical with that during comparable periods of air breathing in both dogs and human subjects. Compliance after varying periods of apnea following respiration of air, oxygen, or an oxygen-nitrous oxide mixture did not vary with the composition of the respired gas. It is concluded that breathing pure oxygen at atmospheric pressure for several hours does not promote the development of pulmonary atelectasis in normal subjects. (*Griffo, Z. J., and Rees, A.: Effect of Oxygen Breathing on Pulmonary Compliance, J. Appl. Physiol. 17: 233 (Mar.) 1962.*)

**ATELECTASIS** The oxygen partial pressure in the alveoli of a given portion of the lung tissue falls when this portion assumes the state of physiological atelectasis, and its ventilation ceases. This produces constriction of pulmonary arterioles and reduction or cessation of the blood flow through the alveolar capillaries. With the resumption of ventilation in the atelectatic portion, the partial pressure of oxygen in the alveoli rises, the arterioles dilate, and the blood flow increases again. This relation between the ventilation of the pulmonary tissue and its blood circulation is a product of evolution and constitutes an essential condition of a normal saturation of the blood with oxygen. (*Parin, V. V.: Influence of Pulmonary Ventilation on the Blood Circulation in the Lesser Circuit, Patol. Fiziol. i Eksper. Terap. 4: 7, 1960.*)

**HEROIN AND MORPHINE** Heroin was approximately two to four times as potent as morphine with respect to relief of moderate, severe or very severe postoperative pain during the first 150 minutes after injection in 522 patients with steady incisional pain due to major thoracic, abdominal or orthopedic surgery. The amount of heroin needed to match the analgesic potency of morphine (10 mg.) in the group comparisons ranged from 2.3 mg. to 5.2 mg. That variation was due partly to the fact that the analgesic power of heroin, relative to that of 10 mg. morphine, was greater early during the postinjection period than it was late during the postinjection period. The difference between heroin and morphine with respect to analgesic time course indicates that there is no single value of heroin which is equianalgesic to 10 mg. of morphine. (*Reichle, C. W., and others: Comparative Analgesic Potency of Heroin and Morphine in Postoperative Patients, J. Pharmacol. Exp. Ther. 136: 43 (Apr.) 1962.*)

The most definite subjective effects of both morphine phosphate (10 mg./70 kg.), and heroin hydrochloride (4 mg./70 kg.), were mental clouding, mental and physical "deactivation" and "somatic" effects such as dizziness, itching, sweating, numbness, nausea and visual difficulties. Although most subjects reported unpleasant emotional effects, two of the 24 men reported pleasant ones. The effects of the two opiates were similar; the main differences were that the heroin effects were stronger and reached peak degrees earlier than the morphine effects. Both opiates produced unpleasant physical and emotional side effects, but the heroin effects were even more unpleasant than those of morphine. (*Smith, G. M., and Beecher, H. K.: Subjective Effects of Heroin and Morphine in Normal Subjects, J. Pharmacol. Exp. Ther. 136: 47 (Apr.) 1962.*) Comparison of morphine (10 mg.), heroin (4 mg.) and placebo showed that heroin and morphine can produce statistically significant impairment of certain aspects of mental performance, and the overall effect of each drug is definitely one of mental impairment. The impairment is primarily one of speed rather than accuracy. The impairment produced by 4 mg. of heroin appears earlier and is somewhat greater than that produced by 10 mg. of morphine. Significant mental impairment can be demonstrated as early as 40 minutes and as late as five hours and 40 minutes after administration of 10 mg. of morphine. (*Smith, G. M., Semke, C. W., and Beecher, H. K.: Objective Evidence of Mental Effects of Heroin, Morphine and Placebo in Normal Subjects, J. Pharmacol. Exp. Ther. 136: 53 (Apr.) 1962.*)

**OXYMORPHONE** Effects were studied of oxymorphone administered alone or preceded or followed by levallorphan upon the respiration of 30 patients. Oxymorphone produces marked respiratory depression which can be counteracted by levallorphan, no significant circulatory effects except bradycardia, and the foregoing effects only when administered intravenously. Oxymorphone is about 33 times more potent than meperidine as a supplementation of nitrous oxide-thiopental anesthesia, which is believed to be due to longer duration of action. (*Foldes, F. F., and others: Respiratory Effects of Oxymorphone Administered Alone or in Combination with Levallorphan, Amer. J. Med. Sci. 243: 480 (Apr.) 1962.*)

**RESERPINE** Membrane potential changes were recorded from single smooth muscle cells of the guinea pig vas deferens. Both spontaneous potentials and junction potentials arising from stimulation of the sympathetic nerves were observed. Recording following the section of the hypogastric nerve resulted in a reduced frequency but not amplitude of the discharge of spontaneous potentials. Junction potentials were smaller and a greater frequency of nerve stimulation was required for spike potentials to be evoked and a contraction to occur. Recordings were then made from muscle cells from chronically reserpinized guinea pigs with depleted local stores of catecholamines. Both frequency and amplitude of spontaneous potential were reduced. Junction potentials were smaller and facilitation slower so that many stimulating pulses were required before spike was evoked and a contraction occurred. These results are taken to support the view that the relationship between junction potentials and spontaneous potentials in sympathetically inervated smooth muscle cells are essentially the same as that found at other neuroeffector junctions and that norepinephrine is the transmitter released both spontaneously from local stores and in response to nerve stimulation. (*Burnstock, G., and Holman, M. E.: Effect of Denervation and of Reserpine Treatment on the Transmission at Sympathetic Nerve Endings, J. Physiol. 160: 461 (Mar.) 1962.*)

**METARAMINOL** In rats, subcutaneous administration of metaraminol at dosages between 2 mg. and 6 mg. was followed by the development of renal necrosis and vascular lesions. These lesions predominantly affected arteries, including renal arteries, which showed focal distention and muscle necrosis. These pathologic changes were prevented by simultaneous treatment with hydrolazine at dosages that do not significantly inhibit the pressor effect of metaraminol. (*Masson, G. M. C., and Kawakita, S.: Experimental Production of Renal and Vascular Lesions with Metaraminol, Cleveland Clin. Quart. 29: 38 (Jan.) 1962.*)