

- 217 Pathology in Respiratory Disease Mechanism Studies. J. Gough.
Arch. Environmental Health 6, 123-128 (Jan. 1963).

Gough-Wentworth paper-mounted sections of inflated lungs demonstrate pathological changes difficult to identify in lungs cut at the time of autopsy and allowed to collapse. Focal dust emphysema occurs in mining and other industries but also in the general population due to atmospheric pollution. Centrilobular emphysema is due to bronchiolitis and is an important form of "obstructive lung disease". Post-mortem angiography and bronchography give valuable information in the interpretation of pathological changes. The mechanical properties of the lung can be studied post-mortem by a variety of techniques including a modification of the Tiffeneau test.

-- Author's summary

- 218 Vaccination Against Influenza. J. Simpson and W. Taylor.
Trans. Assn. Ind. Med. Officers 12, 90-92 (Oct. 1962).

A vaccination program in a working population of 10,649 (in England) is described. The incidence of influenza during the winter months of January 1962-March 1962 in Dundee was slight: 10.07 per 1,000 population. Wright-Fleming vaccine was used with disposable syringe. The program suggested that vaccination does reduce the incidence of influenza in an inoculated population and that as low a vaccination rate as 40% is still sufficient to reduce materially the epidemic potential of a total vaccination program population. Vaccination does result in a material saving of working days.

-- Authors' summary

- 219 Effect of a Simulated Altitude Change on Asthma. V. V. Chambers, M. R. Allansmith and H. J. Simon. Ann. Allergy 20, 666 (Oct. 1962).

Both going to the mountains and taking short rides in an airplane have been reported to bring relief to the asthmatic patient. In order to investigate one factor of this situation, the authors studied the effect of a simulated altitude of 2,440 meters (8,005 ft.) for 6 hours on 14 chronically wheezing asthmatics. Nine of the 14 were under 12 years of age. All patients had been observed for 6 months or longer. Each patient was checked by questioning as to symptoms and by stethoscope examination of the chest before and after each altitude run, and weekly for one month following the run. One half of the patients kept a daily post-run diary of their wheezing and amount of medication used. No beneficial effect was noted during the one-month follow up by 13 of the 14 patients. One patient who noted remarkable absence of wheezing for 6 weeks following the test resumed wheezing after a 2-week vacation trip in a dusty trailer. When the chamber run was repeated without a pressure change, a fact unknown to the patient and his parents, the same remarkable absence of wheezing was noted.

-- J. Am. Med. Assn. References & Reviews

- 220 Pulmonary Mechanics. Some Physical and Biochemical Factors. R. M. Mendenhall.
Arch. Environmental Health 6, 74-79 (Jan. 1963).

Dynamic studies of biologic surfactants derived from lung tissue have shown that wide hysteresis loops are obtainable with a dynamic model which vary in surface tension from about 46 dynes per centimeter on expansion (corresponding to inspiration) to nearly 0 dyne per centimeter on compression (corresponding to expiration). Such a film on the surface of the alveolus could, because of its control over the amount of liquid in the alveolus, serve to facilitate passage of fluid laden with respiratory gases between the lumina of the capillaries and the lumina of the alveoli. Since continual replenishment of the surfactant is required in the model, it may be hypothesized that the old material in the lung may be forced toward cilia which then carry it toward the esophagus, serving to cleanse the alveolar surface. Continual replacement or turnover in biologic systems implies feedback mechanisms. Hence, such mechanisms may be impaired when toxic agents alter pulmonary mechanics or the fluid dynamics of the lungs.

-- Author's summary

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