

- 130 Comparative Responses of Elderly Persons to Aqueous and Depot Influenza Vaccines. D.W. Voth, H.A. Feldman, and A. Steinschneider. Arch. Environmental Health 13, 576-585 (Nov. 1966).

After randomly distributing 119 elderly persons into three groups, sera were obtained and each person was injected with either a saline placebo, aqueous, or adjuvant, polyvalent influenza vaccines. By means of the application of the law of initial values, serial HI (hemagglutinating-inhibiting antibodies) titers against nine influenza antigens over a 44-week period demonstrated a greater, more persistent, and broader immunologic response to the repository agent. No serious or residual reactions were observed. The maximal response to a single dose of influenza vaccine was not observed in all vaccinees until some weeks after its administration. Measurements of HI antibodies made on follow-up specimens obtained 14 days after vaccine administration provide incomplete information on the response to it. Antibodies to a 1963 strain of equine influenza virus was demonstrated in 34% of the subjects. There are 15 references. -- Authors' summary

- 131 Passive Immunization With Gamma Globulin. T.J. McDonagh. J. Occ. Med. 8, 567-572 (Nov. 1966).

The present concepts and recommendations on the use of human immune serum gamma globulin in passive immunization against measles, rubella, chickenpox, infectious hepatitis, and serum hepatitis are reviewed. Limitations of previously accepted procedures and newer areas of application are discussed, with particular consideration of the problems of immunization for industrial personnel sent to areas of endemic hepatitis. In a limited inquiry into industrial practices, it appears that not many industries have set up a definite program for immunization of their employees who are to visit or reside in areas of endemic hepatitis. A strong case can be made for giving prophylactic gamma globulin to employees under such circumstances. Certainly the policies of the World Health Organization, the Peace Corps, and Army, and the State Department could be cited in support of this proposal. The reports reviewed and the opinions of the majority of medical experts sampled also tend to agree with the use of prophylaxis. It is true, however, that the use of gamma globulin in short- and long-term residency in areas of endemic hepatitis is not as well documented in the literature as the use of gamma globulin in institutions and cases of exposure. Of importance is the absence of a recommendation for the use of gamma globulin in overseas travelers in the authoritative handbook Immunization Information for International Travel, published by the Public Health Service and used as a reference by many industries. However, the reporting of infectious hepatitis is not carried out by the health services of various countries with the same degree of dedication and one would have to define endemic, for the purposes of this potential program, as an incidence of infectious hepatitis many times greater than the rate in the United States. Although some data are available for this type of classification, it certainly is not adequate. Much more information is necessary before a definitive statement can be made about the use of gamma globulin in the modification of infectious hepatitis in overseas personnel. Since this problem affects industry, it may be time for industrial physicians to become more interested in this problem, and to aid in defining it further. An analysis of industrial records, combined with prospective studies of the problem of hepatitis in overseas activities and the results of gamma globulin usage, might add significant information to the literature on this problem, which at the present time is not very extensive. The Public Health Service has expressed an interest in working with industry along these lines.

- 132 The Main Functions of the Pulmonary Circulation. J.H. Comroe, Jr. Circulation 33, 146-158 (Jan. 1966).

The five main functions of the lung are discussed in some detail: (1) participation in pulmonary gas exchange, a function long known; (2) service as a blood reservoir for the left ventricle, demonstrated quantitatively only recently; (3) provision for the nutrition of the alveoli and alveolar ducts, discovered in the past two years; (4) filtration of particles from the mixed venous blood (this sometimes results in dysfunction, but is, instead, a function sometimes abused); and (5) removal of excess fluid from the alveoli, known for over 90 years. In the future, unsuspected functions of the lung and the pulmonary circulation may be found. Why, the writer asks, is the lung rich in histamine, heparin, adenosine deaminase, and in certain proteolytic enzymes? Why are leukocytes, separated briefly from blood and then reinjected, trapped preferentially in the pulmonary circulation? Why do certain bacteria, given intravenously, stay in fine pulmonary vessels although they are small enough to pass through any capillary bed? Why do certain diseases of the lung lead to inappropriate secretion of an antidiuretic hormone? Why is bronchial carcinoma often associated with clubbing of the fingers although there is no arterial hypoxia? The answers to these questions will be interesting.

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