COMMUNITY AIR HYGIENE

1188 An Air Pollution Rating Index System. S. Calvert.
J. Air Poll. Control Assn. 12, 185-186 (Apr. 1962).

The author proposes a simple indexing system to characterize both the magnitude of air pollution sources and the dispersing capacity of the air at specific source locations. The proposed source index is a quantitative measure of the seriousness of air pollution expressed in terms of the maximum rate of air flow which could be polluted by a given source. The proposed location index is a quantitative measure of the ability of the atmosphere to dilute pollutants between the source and the receptor. Both indexes are approximate as long as they are based on approximate data. The use of these, however, will constantly remind the user of the factors involved and will catalyze the gathering and evaluation of information regarding them. Several examples of the use of the method are given.
-- Public Health Eng. Abstr.

1189 A Survey for Chronic Respiratory Disease in an Industrial City. Preliminary Results.
O. J. Balchum, et al. Am. Rev. Resp. Dis. 86, 675-685 (Nov. 1962).

A case-finding survey for chronic respiratory disease employing a questionnaire and pulmonary function tests was successfully accomplished in an industrial setting, combined with a chest roentgenographic program to detect tuberculosis suspects. The success of such a survey rests on the cooperation of the local government, the health department, management, and labor. This was obtained by informing and educating all associated and interested parties in the aims and methods and the reasons for carrying out the study. Seventeen per cent, or 245, of the 1,456 men to whom the questionnaire and breathing tests were administered in addition to obtaining the chest films were suspected of having chronic respiratory disease. This conclusion was based on the criterion of a 1-second forced expiratory volume below 70% of the observed vital capacity. A confirmatory study is being carried out in 75 subjects. Thirty-five of these were selected from those termed normal, and the remainder from those termed abnormal by the survey criterion. An immediate 100% follow-up study of tuberculosis suspects was completed through the health department in the area of the workers' employment.
-- Authors' summary

1190 Epidemiologic Studies of Air Pollution. R. J. Anderson.
Diseases of Chest 42, 474-481 (Nov. 1962).

Supplementing existing data which indicate an association between disease and air pollution, new epidemiologic studies provide evidence on the relationship of malignant neoplasms of the lung to air pollution, the distribution of deaths resulting from emphysema and the apparent increase in this disease, the relationship of asthmatic attack rates to air pollution as measured by sulfur dioxide, and the effects of air pollution exposure on pulmonary function in a normal population. Since epidemiologic studies cannot provide "cause-and-effect" proof, the author postulates that they must be supplemented by laboratory and other studies to strengthen the evidence. In order to establish "proof" that air pollution adversely affects human health one must have: (1) statistical evidence that a certain disease condition exists in the population; (2) epidemiologic evidence of the association between this disease condition and a certain factor or factors present; (3) laboratory demonstration that such factors can produce a condition in experimental subjects similar to be found in the population; and (4) the ultimate demonstration that protection from such factors will lessen the amount or severity of the disease condition.
-- Author's summary