and giant cell reaction in testis; necrosis, ulcers, inflammation, and hemorrhage in the intestines; and necrosis of bone and hyaline droplet change in renal tubular epithelium. Cavitation, probably due to the accumulation of bubbles of gas, was not observed in livers or other tissues of living animals that were treated. The change was produced in the livers of animals treated in situ after death and in livers removed from the body and treated. There are 45 references.

-- Aerospace Med. Absts.

491 Hearing Protection in Industry — One Way to Solve the Noise Problem Immediately. R. B. Maas. J. Am. Soc. Safety Eng. 9, 21-26 (April, 1964).

The injurious effect of excessive noise on the industrial worker in this country has been a growing problem for the past 10 or 15 years. It is known that prolonged exposure to hazardous noise can destroy man's hearing unless preventive measures are taken. Recent additions to state safety rules and orders in both Wisconsin and California make the wearing of hearing protection mandatory under certain conditions. The logical time to acquaint a new worker with hearing protection is at the very beginning when he is also briefed on the physical examination, group health insurances, first-aid facilities, safety glasses, respirators, etc. It is explained that management provides this equipment for his protection and welfare. Hearing protection is much more successful if the nurse or doctor explains the purpose for wearing ear protection and fits the worker properly. The nurse handles this type of protection the same way she promotes other safety and health measures. Like any other aspect of safety and health maintenance, the hearing conservation effort must have unqualified management direction. Management has much to offer the worker in providing hearing protection to its workers because no one gains more than the individual who protects his precious hearing ability from noise until retirement. The safety engineer should soon learn that the problems involved in the promotion of wearing this type of protection is probably no different than the difficulties encountered in the promotion of all other safety devices and equipment. Most protective equipment requires long-range, educational emphasis. There are 16 references.

492 Weather and Cough. R. G. Loudon. Am. Rev. Resp. Dis. 89, 352-359 (March, 1964).

Variation in the frequency with which antitussive prescriptions are written has been related to weather over a 2-year period in the city of Dallas, Texas. Nine meterologic measurements were selected and multivariate statistical analysis was applied, using monthly means to seek broad relationships. A simple correlation matrix shows high correlations between antitussive prescription frequencies in the two hospitals studied, and between them and mortality in Dallas from respiratory diseases other than tuberculosis and cancer. Several of the weather variables, particularly temperature, correlate well with all three. Multiple linear regression equations were obtained to express the prescription frequencies and respiratory mortality in terms of the weather variables. Good fits were obtained; when a one-month time lag was introduced, the "fits" were less good. As the weather variables are interrelated, factor analysis was conducted on the correlation matrix. Three independent factors were extracted; together they account for 83% of the common variance of the correlation matrix. Factor I, the most important, correlates best with temperature, sunshine, and (negatively) north wind; it may be called the "good weather factor." Factor II is a humidity factor, most closely associated with relative humidity and total precipitation, and related negatively to antitussive prescription frequency and respiratory mortality. Factor III, remaining when the effects of Factors I and II have been removed, is a barometric pressure factor, unrelated to prescription frequency or respiratory mortality. -- Author's summary

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