AOMA Report

DECEMBER, 1981 Doris Flournoy, Editor

NIOSH REAFFIRMS POTENTIAL CARCINOGENICITY OF ETHYLENE DIBROMIDE

In a revised current intelligence bulletin, the National Institute for Occupational [illegible] Health has reaffirmed its 1977 recommendation that ethylene dibromide (EDB) be treated as a potential occupational carcinogen in the workplace. The revised bulletin includes information about recent animal studies in which statistically significant increases in tumors of the respiratory tract, mammary gland, spleen, and nasal cavity were observed in animals exposed to ethylene dibromide by skin application, oral administration, and inhalation.

The Occupational Safety and Health Administration's current standard for occupational exposure to EDB is 20 ppm as a time-weighted average concentration for an eight-hour work shift, with an acceptable ceiling concentration of 30 ppm. A maximum peak above the acceptable ceiling concentration for an eight-hour work shift of 50 ppm for not more than five minutes is also permitted. In 1977, NIOSH recommended that occupational exposure to EDB be limited to a ceiling concentration of 0.13 ppm (1.0 mg/m^3), as determined over any 15-minute sampling period. In the revised bulletin, NIOSH cited the following recent studies as the basis for its reaffirmation of its earlier recommended workplace environmental limit:

In 1979, Van Duuren, et al, reported that treated male and female noninbred Ha:ICR Swiss mice that had received repeated skin applications of EDB three times weekly for 40-594 days at 25 or 50 mg/application/mouse showed an increased incidence of skin papillomas, skin carcinomas, and lung tumors. This was the first reported study demonstrating EDB to be carcinogenic by skin application.

In another study, the National Toxicology Program and the National Cancer institute recently reported the results of a carcinogenesis bioassay of EDB by the inhalation route. Groups of rats and mice of each sex were exposed to airborne EDB at concentrations of 10 and 40 ppm, levels below and above OSHA's permissible exposure limit of 20 ppm. Animals were exposed six hours/day, five days/week for 78-103 weeks. In this bioassay, EDB was found to be carcinogenic for rats at both the 10 and 40 ppm dosages, causing increased incidences of tumors of the nasal cavity and adenomas of the pituitary gland in males and females, hemangiosarcomas of the circulatory system and mesotheliomas in the tunica vaginalis in males, and fibroadenomas of the mammary gland in females. Likewise, EDB was carcinogenic for mice at both dosages, causing increased incidences of alveolar/bronchiolar carcinomas in males and females, and fibrosarcomas in the subcutaneous tissue, hemangiosarcomas of the circulatory system, tumors of the nasal cavity, and adenocarcinomas of the mammary gland in females.

Concurrent with the NTP and NCI study, NIOSH sponsored a study in which rats were exposed seven hours/day, five days/week, for 18 months to simulate occupational exposure to EDB. The results showed a high mortality rate and a statistically significant increase in the incidence of benign and malignant tumors of the spleen, mammary gland, and nasal cavity for rats exposed by inhalation to EDB at 20 ppm and fed the standard rat diet. The data also show that the addition of disulfiram to the diet resulted in approximately a ten-fold increase in the incidence of hepatocellular carcinomas over exposure to EDB alone. This increased interaction may not necessarily be restricted to disulfiram, but may occur with similarly structured compounds such as Thiram,® a fungicide and seed disinfectant.

BLS REPORTS DROP IN OCCUPATIONAL INJURY AND ILLNESS RATES

Finally, the Occupational Safety and Health Administration has received encouraging news from the Bureau of Labor Statistics regarding the incidence of occupational injuries, illnesses and deaths. Results of the latest BLS survey indicate that one out of every 12 workers in the private sector experienced a job related injury or illness during 1980. For the previous five years, this ratio had remained steady at one out of every 11 workers.

In 1980, there were 4,400 work-related deaths at units with 11 or more employees, down from 4,950 in 1979. The fatality rate dropped from 0.86 per 10,000 workers in 1979 to 0.77 in 1980. Car and truck accidents were responsible for 30 percent of the job-related deaths. The other 70 percent were attributed to heart attacks; accidents involving industrial vehicles or equipment; falls; electrocutions; aircraft crashes; being struck by objects other than vehicles or equipment; or as a result of plant machinery operations, gun shots, fires, explosions, gas inhalation, or being caught in, under, or between objects.

The survey reveals an overall incidence rate of 8.7 injuries and illnesses per 100 full-time workers compared with 9.5 in 1979. The number of injuries and illnesses decreased from 6.1 million to 5.6 million from 1979 to 1980. About 10 percent of this decrease was attributed to a decrease in the number of workers employed and their hours on the job. The total number of lost workdays from occupational injuries and illnesses declined from 43.6 million in 1979 to 41.8 million in 1980.

The incidence rate for occupational injuries (excluding illnesses) dropped from 9.2 per 100 full-time workers in 1979 to 8.5 in 1980. The total number of cases of occupational injury in 1980 was nearly 6 million as compared with 5.5 million in 1979. The injury incidence rates by size of company is as follows:

	1979	1980
1 - 19 employees	3.9	3.6
20 - 49 employees	8.8	8.3
50 - 99 employees	11.8	10.9
100 - 249 employees	12.9	12.1
250 - 499 employees	12.2	11.7
500 - 999 employees	10.6	9.9
1,000 - 2,499 employees	8.5	8.0
2,500 or more employees	7.1	6.5

The total number of illnesses declined from 148,900 to 130,200 (new illness cases occurring during the year). Lost work days from illnesses dropped from 939,600 in 1979 to 922,000 in 1980.

NIOSH SCHEDULES MEETINGS ON HEALTH COMMUNICATION AND NOISE MEASUREMENT

Protocol for acoustic measurements of industrial impulse/impact noise exposure will be discussed at a meeting scheduled by the National Institute for Occupational Safety and Health on December 18. Additional information may be obtained from Dr. John Erdreich, Division of Biomedical and Behavioral Science, NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226. At another meeting to be convened by NIOSH on the same day, conferees will review the scope of a contractual study to evaluate alternative forms of composing/conveying health messages to workers for the purpose of enhancing their recognition of chemical hazards in their workplace environments and their compliance with established safe work procedures. Additional information may be obtained from Dr. Alexander Cohen, Division of Biomedical and Behavioral Science, NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226.

NATIONWIDE SCREENING OF ASBESTOS WORKERS LAUNCHED IN CHICAGO

A nationwide program to screen asbestos workers for early detection of cancer was launched in Chicago in November. The study, which is sponsored by the American Cancer Society and

the Cancer Prevention Institute at Mount Sinai Hospital in New York City, is expected to last three years and eventually will involve 2,500 asbestos workers throughout the country. Persons eligible for screening are those who are 50 years of age, or older, and who have worked with asbestos for at least 30 years.

One of the main goals of the screenings will be to encourage asbestos workers to quit smoking according to Irving J. Selikoff, M.D., Director of the Cancer Prevention Institute. Asbestos workers who quit smoking have only one-third the chance of developing lung cancer as asbestos workers who continue to smoke, it was pointed out by Dr. Selikoff.

AVAILABILITY OF FUNDS FOR TRAINING GRANTS ANNOUNCED BY NIOSH

Funds for training grants in occupational safety and health for fiscal year 1982 have been announced by the National Institute for Occupational Safety and Health. The objective of the grant program is to award funds to eligible institutions or agencies to pay part of or all of the costs of the combination of long-term and short-term training activities in occupational safety and health. NIOSH estimates that between $6 and $7 million will be available in fiscal year 1982 for competing and continuation Educational Resource Center grants which provide for multidiscipline and multilevel training and continuing education in occupational safety and health under a single grant serving a geographic area. Grant applications to be considered for funding during fiscal year 1982 must be received not later than January 2, 1981. Grants are usually awarded for a three to five year project period. Continuation awards within the project period are made on the basis of satisfactory progress in meeting project objectives and on the availability of funds.

Program guidelines, information on applications and review procedures, and deadlines may be obtained from Dr. Alan D. Stevens, Director, Division of Training and Manpower Development, NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226; (513/784-8221).

COMMITTEE ORGANIZED TO COMBAT OCCUPATIONAL EYE INJURIES

Noting that an estimated 1,000 eye injuries occur each working day, the National Society to Prevent Blindness has convened a body of prominent safety and eye care specialists from across the country to serve as members of the Society's Committee on Occupational Eye Health and Safety. Chairman of the Committee is Aldo P. Osti, Director of Corporate Safety and Environmental Health for Pfizer, Inc. Other committee members are representatives from labor, insurance, federal and state government, construction, manufacturing, medicine and education.

After identifying specific eye health and safety needs in their respective fields, the committee will explore opportunities for implementing accident prevention programs according to Mr. Osti, who noted that a U.S. Department of Labor survey shows that almost three out of five industrial workers who suffered impact injuries or chemical burns to the eye were not wearing protective eye wear at the time of the accident. Methods of remedying this situation will be studied.

COMPREHENSIVE CORPORATE HEALTH-CONTROL PROGRAMS ONLY BEGINNING TO EMERGE

According to a recent research report from The Conference Board, full-fledged corporate health-control programs are still in their infancy, but they are growing in both size and scope. Audrey Freeman, senior research associate at The Conference Board, is author of the report which is based on interviews with more than 100 corporate, union and industry association executives. The object of the study was to determine what corporate efforts are being made to organize and manage health control programs.

Some company health departments have tripled in size during the last two years, the study finds. A variety of new specialists, including epidemiologists and toxicologists, are being added to corporate staffs, as private industry is being increasingly held accountable for sustaining a level of healthfulness. Since health-related programs involve cost but not profit, the tablishment of health-surveillance systems require philosophic shifts in many firms, it is oted. The report states "A major constraint facing company doctors is that they are not

producing a marketable product. The suppression of lead in battery production workers' blood does not 'sell' on its own, nor does it sell batteries of higher price, nor does it improve the battery product. It adds costs in engineering time, and additional technology for shielding workers -- not to overlook the initial investment costs associated with pinpointing and measuring the exposure in the first place."

The study reveals widespread differences among companies in opening medical records to employees. The report says "Company medical directors, in particular, feel that employees are too unsophisticated to be able to understand their own health measurement and records, and that giving such data to an individual could cause distress." Some companies are also concerned that employee health data will end up in union hands, a concern felt especially in firms where unions have made occupational health a major issue. Copies of the 72-page report (No. 811, entitled "Industry Response to Health Risk") are available at $45.00 per copy from The Conference Board, 845 Third Ave., New York, NY 10022.

CORPORATE HEALTHCARE CONFERENCE TO BE SPONSORED BY McGRAW-HILL

Pragmatic and innovative strategies for containing the cost of corporate healthcare programs will be discussed at a conference on "Corporate Health Care Cost Containment" to be presented March 15-16 at the Sheraton Washington Hotel in Washington, D.C., under the sponsorship of Business Week and McGraw-Hill's Washington Health Letters.

Corporate representatives will focus on specific techniques now in use and will discuss how to implement or adapt these techniques. Keynote speakers will be David Durenberger, Chairman of the Senate Finance Committee's Subcommittee on Health; Richard A. Gephardt, member of the House Ways and Means Committee; and Richard S. Schweicker, Secretary of Health and Human Resources. The program will be comprised of major panels followed by concurrent workshops. For further information, contact: McGraw-Hill Conference Center, 1221 Avenue of the Americas, Room 3677, New York, NY 10020 (212/997-2855).

INTERNATIONAL MEETING ON MEASUREMENT AND CONTROL OF TEMPERATURE

A new international temperature scale which is anticipated by the end of this decade will be based on research to be presented at a major forum in Washington, D.C., March 15-18, 1982. The Sixth International Symposium and Exhibit on "Temperature: Its Measurement and Control in Science and Industry" will be convened at the Washington-Hilton Hotel under the sponsorship of the American Institute of Physics, the Instrument Society of America, and the National Bureau of Standards. Program information may be obtained from Dr. James F. Schooley, National Bureau of Standards, B130 Physics, Washington, DC 20234 (301/921-3315).

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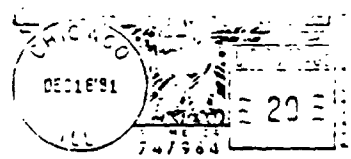

First Class Mail

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