

WOHRC NEWS

WOMEN'S OCCUPATIONAL HEALTH RESOURCE CENTER

Scientists and Rights Groups Dispute Law

Epidemiologists say Connecticut statute protecting women can hamper research.

A recent Connecticut law written to protect women workers from discrimination based on reproductive ability has given rise to an interesting controversy between women's rights groups and epidemiologists.

In conversations with members of both groups, WOHRC has learned that a compromise is now being worked out.

The law, which also contains provisions protecting both men and women workers from reproductive hazards, specifically prohibits employers, employment agencies and labor organizations from requesting any information from a present or prospective employee "relating to the individual's child bearing age or plans, pregnancy, function of the individual's reproductive system, use of birth control methods, or the individual's family responsibilities, unless such information is directly related to a bona fide occupational qualification or need."

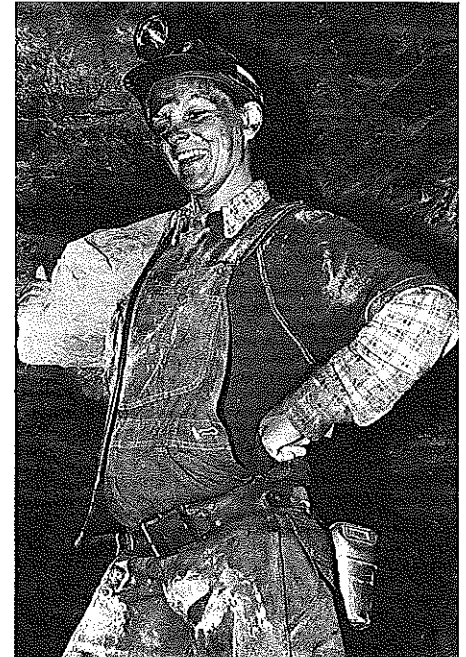
In such case, it stipulates, the employer "through a physician may request from an employee any such information which is directly related to workplace exposure to substances which may cause birth defects or constitute a hazard to an individual's reproductive system or to a fetus if the employer first informs the employee of the hazards involved in exposure to such substances."

This language, say the epidemiologists, can actually prevent the gathering of statistics that would show up previously unsuspected hazards. In addition, say the scientists — whose work depends upon studying health statistics — the law would prevent them from obtaining disease rates from unexposed control groups. This allows them to determine by comparison if exposed groups have higher levels of disease.

According to a spokesperson for the Society for Epidemiological Research (SER), "companies in many industries are carrying out, or preparing to carry out, programs in which employees are regularly queried about pregnancies, births, and birth defects in an attempt to assess the safety of their work environment. The data are to be used for epidemiological studies only, in the classical sense of comparing rates among employees with different exposures with appropriate control groups. The law in effect prevents employers from detecting workplace hazards to reproductive capability."

At its meeting in Cincinnati last summer SER passed a resolution expressing its concern, and established an ad hoc committee to examine the ramifications of the law, including the possibility that

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Marat Moore

A handbook for pregnant miners has been issued by the Coal Employment Project. (See page 5.)

Skin Cancer Linked to Fluorescent Lights

Malignant melanoma, a type of skin cancer, has been associated with exposure to fluorescent lighting in a study recently reported by English and Australian researchers.

Interviews with 274 women patients at the melanoma clinic at Sydney Hospital, Australia, showed that those exposed to fluorescent lighting at work seemed to have double the risk of developing the disease as those not so exposed. Critics of the report, however, noted that it did not include such data as the distance of the workers from the source of the lighting or the amount of time they were exposed each day. In addition, they pointed out, other research has shown that plastic diffuser covers placed over the lights

can prevent all dangerous radiation emissions.

The report, published in the British medical journal, *Lancet*, went on to say that "findings could not be explained by the differences in histories of sunlight exposure, in skin or hair colour, or in any other factor." When a group of 27 men with melanoma and 35 similarly aged controls were studied, a similar risk was found. A rise in melanoma risk was not associated with use of fluorescent lights in the home.

Commenting on the report, WOHRC director Dr. Jeanne Stellman said that she was "happy that people are beginning to ask questions about fluor-

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Similar Risks Face Clerical And Assembly Line Workers

Clerical workers, at the low end of the office hierarchy, are subject to health risks similar to those of assembly line workers, a senior WOHRC researcher reported to the American Psychological Association convention last August.

Dr. Gloria C. Gordon, a labor psychologist, was one of two WOHRC staff members who made presentations to the APA based on sections of a long-term study of the health effect of new office technology and design.

WOHRC researcher Dr. Barry Snow reported that the work environment may play as decisive a part as individual personality traits in the development of a type of work behavior that is often associated with heart attack.

Dr. Gordon said that female clerical workers, like male assembly line workers, exhibit psychological strain due to low utilization of skills and abilities, low participation in decision making, lack of social support at work, and job insecurity.

In the sample she studied of 315 women clerical workers employed at the main office of a utility company, 40 percent reported that they were "bored," 30 percent "burned out," 15 percent felt "isolated," and 15 percent had "trouble concentrating." In addition, an average of 19 percent described themselves "often"

or "almost all the time" as anxious, 18 percent as irritated, 12 percent as depressed, and 7 percent as feeling hopeless or helpless.

Social support by both supervisors and coworkers emerged as a key factor in the psychological well-being of the workers, noted Dr. Gordon. This fact, she said, "points up the dangers of eliminating person-to-person supervisors as part of the computerization of office work."

Dr. Snow, who based his report on the same sample of clerical workers, studied the difference in reactions among those who were classified as Type A and Type B personalities, according to standardized research scales. People with Type A personalities are usually described as intense, competitive and having a strong

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New Conflict Over Cotton Dust Heard By Gore Committee

Conflicting opinions about the validity of the present cotton dust standard came to a head in September at a hearing by a subcommittee of the House Committee on Science and Technology.

The hearing was held to help shed light on a growing debate between the U.S. Occupational Safety and Health Administration, which is reviewing the standard for possible changes, and the agency's critics, who have expressed fears that its review is based upon questionable studies that may result in the weakening of protective standards for textile workers against byssinosis or brown lung disease.

The hearing was held in Washington on September 22 by the investigations and oversight subcommittee headed by Rep. Albert Gore, Jr. of Tennessee.

A study most prominently in question was published last February by the National Research Council of the National Academy of Sciences. According to a statement by OSHA head, U.S. Assistant Secretary of Labor Thorne Auchter, which was presented at the House hearing, this report "raises doubt about the evidence of the progressive

nature of byssinosis. The study questions whether there are eventual, irreversible changes in lung function among employees exposed to cotton dust." The present standard, issued in 1978, is based on the assumption that the disease is progressive.

The Academy report was attacked at the hearing by several prominent scientists, among them Dr. J. Donald Millar, director of the National Institute for Occupational Safety and Health and Dr. James Merchant of the University of Iowa, a leading byssinosis researcher. Millar had previously characterized the report as "depressing and distressing, . . . depressing in its narrowness of viewpoint, in the superficiality of its review of the literature and in the glibness of its tone. It is most distressing from the point of view of public health and preventative medicine."

Dr. Merchant was one of a group of epidemiologists who signed a statement last March characterizing the study as "a misleading representation of the current state of knowledge of byssinosis." The researchers, reported the magazine *Science*, were particularly concerned because "the Academy study failed to state clearly that the disease, as a chronic ailment, is directly related to cotton dust exposure."

A spokesperson for the subcommittee told WOHRC NEWS that since Mr. Auchter himself did not appear because of illness, another hearing might be held. However, he indicated that the subcommittee felt that the new reports cited by OSHA offered little to add to present knowledge of byssinosis. Moreover, he said, economic data gathered by the subcommittee seemed to indicate that most employers are already in compliance with the standard. Much retooling has been done in the industry to keep it competitive, he reported, and the new machinery is not only more productive but creates less dust. □

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escent lighting." However, she noted, "I don't think they should become overly alarmed about these findings. WOHRC has discovered that other factors are of more immediate concern — factors such as harshness and glare of lighting, too much or too little of it. The introduction of new equipment, such as video display terminals may require major changes in lighting in the years ahead."

The report was published in the August 7, 1982 issue of *Lancet*. □



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WOHRC FACT SHEET

WOMEN'S OCCUPATIONAL HEALTH RESOURCE CENTER



Ethylene Oxide: How To Use It Safely

Ethylene oxide (EtO) is a chemical widely used in a gaseous form to sterilize medical supplies and equipment — usually that which cannot be subjected to intense heat. According to a recent survey by the National Institute for Occupational Safety and Health (NIOSH), there were approximately 10,000 EtO sterilization units in use in 8,100 hospitals in the United States. Not counted are others found in dental clinics and clinical laboratories. An estimated 75,000 health care workers are directly exposed to the gas, while another 25,000 — most of them working in hospital Central Supply areas where the sterilizers are usually

located — are indirectly exposed because of leaking equipment or improper ventilation or operating procedures.

Until recently, the accepted exposure for EtO was 50 ppm (parts per million parts of air), but recent research on its effects on animals and humans has led to warnings that it is a potent health hazard. In humans, it has been shown to be associated with leukemia, diseases of the circulatory system, upper respiratory complaints, and abnormal behavior of gene cells. In laboratory animals it is linked with leukemia, tumors, sterility and malformed fetuses.

Such evidence led California health authorities in the summer of 1982 to issue a warning on the use of EtO and to recommend a new legal exposure limit of only one part per million. The Women's Occupational Health Resource Center, several of whose staff members have been involved in an intensive study of EtO hazards, urges a limit of .05 ppm, with 1 ppm for short-term exposure.

For protection against EtO, WOHRC recommends the following safeguards:

■ FOR WORKERS

Operating procedures

The single greatest source of employee exposure to EtO occurs when the sterilizer door is opened at the completion of a cycle. Eighty percent of this contamination can be eliminated by an additional air-purging phase at the end of the cycle.

DO run an additional cycle, filtering the air twice rather than the conventional once.

DO also leave the sterilizer door open for a full 15 minutes after the end of the final cycle, before removal of the sterilized items.



Ethylene oxide sterilizers like this one are common in hospitals.

DON'T do the above, however, unless there is adequate local ventilation. (See below.)

DO wipe moisture from items prior to sterilization. If moisture is left on instruments the ethylene oxide will form ethylene chlorohydrin and ethylene glycol which are not removed, as is EtO, during the aeration process. Ethylene chlorohydrin, in

particular, is highly mutagenic and possibly carcinogenic.

DO sterilize items together that require common aeration time. The items can be pre-packaged so that contact with them is minimized.

DON'T retrieve some items while others are still being aerated. This leads to unnecessary exposure.

DO put sterilized items into the aerator *immediately* after the 15-minute open door period.

DON'T leave them unattended for any length of time because some can begin to release much of the EtO into the workplace air.

DO, if there must be a distance between sterilizer and aerator, pull the cart behind you to the aerator.

DON'T push it in front of you, thereby making it easier to inhale the EtO fumes.

Personal protective equipment

Personal protective equipment such as goggles, gloves and respirators are the least effective method of controlling EtO exposure. This is especially true while the worker is operating the sterilizer and aerator, since they res-

strict mobility and comfort. In fact, it is advised that protective gloves are not needed during transport of sterilized items to the aerator because baskets and carts used for sterilization are normally made of metal which does not absorb EtO. However,

DO use such equipment as goggles, heavy duty gloves and self-contained breathing equipment when changing gas cylinders in order to avoid contact with liquid sterilant remaining in the connecting lines.

Medical screening

DO have an annual medical examination if you are exposed to EtO at work. The exam should include a complete physical, blood cell count and urinalysis.

DON'T remain at the same job if adverse effects of working with the chemical are found. Ask your doctor to back you in seeking a change in working conditions.

■ FOR EMPLOYERS

Equipment

Ten percent of the institutions using EtO sterilizers recently surveyed did not use aerators, and almost half used EtO flash bags, an inherently dangerous process in which worker exposure to EtO is inevitable.

DO always provide aerators because EtO can condense and form a moist film on plastic. When this film is allowed to remain on hospital instruments after sterilization it is not only harmful to workers, but has been known to cause rashes in hospital patients. The aerator evaporates whatever traces of EtO remain on the instruments.

DON'T place the aerator across the room or at considerable distance from the sterilizer, as is common in many hospital Central Supply areas. This exposes workers to contamination from EtO when the items are being transferred from sterilizer to aerator.

DO make sure that each sterilizer has a properly installed vent line that leads outside the building.

DON'T allow sterilizers to vent into the workroom.

DO make sure that the building air duct emitting the EtO is located more than 25 feet away from any air ducts leading into the building.

DON'T allow EtO emitting ducts to have any contact with air conditioning ducts.

DO install exhaust devices in the workroom so that contaminated air is drawn out. Both exhaust fans and hoods over doors can be used. Canopy hoods over the tops of doors are usually sufficient, but sometimes side and bottom draft hoods may also be called for.

DON'T allow contaminated air to flow from the work site to other areas of the hospital or laboratory.

DO locate local exhaust pickups in areas where there is a strong possibility of leaks. The exhaust should be decontaminated by use of a catalytic converter or fire box or a decontamination furnace.

DON'T allow EtO to escape into the air when supply tanks in the sterilizer are changed.

DO enclose the tanks in ventilated cabinets, with chamber emergency valves connected to either an outside exhaust stack or the original ventilation system.

DO control EtO release from a sterilizer venting to a sanitary sewer. This can be done either by centrifugal liquid gas separators on the vacuum pump outlet, or by ventilating the drain area, which is probably less expensive.

DO provide closed carts which fit directly in front of the sterilizer so that items can be transferred to the aerator without the worker being exposed to EtO fumes.

DON'T use flash bags or any type of "flash" sterilization process unless it is carried out under a fume hood which chemically "scrubs" the air and draws it up and out of the room.

Ventilation

All EtO equipment and sterilized items should be kept in well ventilated areas.

DO ventilate aerators as carefully as the sterilizers themselves. Aeration cabinets should be vented by means of exhaust ducts which lead through decontaminating apparatus to the outside.

DON'T locate these ducts any closer than 25 feet from any air intake system.

Personnel policies

DO educate workers on how to operate EtO equipment with maximum safety and minimum exposure. Organize in-service and orientation programs to explain the dangers of the chemical and the best ways to handle all the equipment involved.

DO organize an "action team" with a high level of knowledge and expertise to handle emergency situations such as leaks and spills.

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60 Haven Avenue, B-1
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Canadian Women Win Transfer Rights

Pregnant workers can request temporary moves to other jobs.

A personnel policy published last June by the Canadian federal government gives a pregnant employee the right to request temporary transfer to another job if she fears her pregnancy will be affected by her work.

The policy specifically includes women working on video display terminals.

Although on the basis of the evidence supplied the government sees no reason to remove pregnant women from such jobs, said an official bulletin, "apprehensions have been raised by some VDT operators concerning the possible adverse effects of working with this equipment during pregnancy." Thus it instructs managers to apply the policy if a pregnant VDT operator requests such a transfer.

The policy, which also specifically mentions but is not limited to women inspecting construction sites and working on ships, defines "transfer" as a move to a similar position, not as a change of location.

In order to qualify, the employee must provide a medical certificate attesting to her pregnancy, and the department in which she works must have an appropriate position available. If it does not, or if the employee refuses the transfer available, she is permitted to take leave without pay in addition to other leaves to which she also may be entitled.

The policy was published by the Treasury Board of Canada which is the official employer for the federal government. For further information, write to Staff Relations and Compensation Division, Personnel Policy Branch, Treasury Board of Canada, Ottawa, Ontario K1A 0R5.

Canadians Urge Right To Reject Machine Monitors

Workers should have the right to reject the automatic monitoring of their performance by machines, says the Canadian Advisory Council on the Status of Women in a new report on the effects of computerization on women's employment and health.

Such monitoring is "inhuman" and "perhaps the major source of stress" in

the new automated service sector jobs, declares the council in its report, *Microtechnology and Employment: Issues of Concern to Women*.

The report also calls for decentralization of work in place of the assembly-line approach now being introduced into many offices, consultation by management with employees when new technology is being brought into the workplace, and further research and monitoring of health problems arising from computerization.

Women are particularly affected by microtechnology or computerization because it has most radically affected jobs in the service sectors — in offices, banks, supermarkets, telephone companies and the like — the vast majority of whose workers are female, notes the council. Rather than having their jobs enriched, most employees have found their work "fragmentized" and "deskilled." The work becomes "more repetitive, routinized and boring," leading not only to lower rates of pay but to "the absence of mental activity... [which] tends to make the jobs more demanding and stressful to the worker rather than easier."

In place of this, the council calls for

decentralization in which "'standalone' machines might be used rather than typing pools." In this system, all terminals would be connected to a central computer memory. Workers could then "use the new technology to free themselves from many of their routine and time-consuming tasks, and could possibly use the time gained to take on more executive and administrative roles. In this way, many clerical and service jobs can be value-added rather than down-graded," suggests the report.

Noting that video display terminals, automatic check-outs in supermarkets and other new equipment have been associated with a host of health problems, from backaches to cataracts and birth defects, the council called for increased research "carried out at the workplace and not just in the laboratory," and the development of an ongoing system of monitoring.

The report also discusses the increased risk of women's unemployment posed by computerization.

For further information, write to the Canadian Advisory Council on the Status of Women, Box 1541 Station B, Ottawa K1P 5R5. □

PUBLICATIONS

Pregnant and Mining: A Handbook for Pregnant Miners, by Brenda Bell and June Rostan. Coal Employment Project, 1982. 38 pages.

by Barbara Auflero

Pregnant and Mining: A Handbook for Pregnant Miners is more than just a handbook. It contains fascinating accounts of personal work experiences encountered by individual pregnant miners. These are valuable not only to women miners but to those who hold other nontraditional jobs. Women in occupations requiring personal protective equipment will most certainly relate to and commiserate with the measures adopted by some women miners to modify protective clothing and equipment to accommodate their changing sizes.

This admirable endeavor by Brenda

Bell and June Rostan is a useful contribution to the growing body of literature about pregnancy and work. It is comprehensive, including information about the federal Pregnancy Discrimination Act and the United Mine Workers contract language, as well as general health pointers on nutrition, exercise, choosing medical care and prenatal education classes. A complete set of references and resources is included.

This booklet does not pretend to find solutions to all of the controversial issues concerning pregnant working women, but provides a valuable discussion of issues to be considered by those deciding whether to work during pregnancy.

For ordering information, write to The Coal Employment Project, P.O. Box 3403, Oak Ridge, Tenn. 37830.

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similar legislation might be passed in other states.

Connecticut women's groups were amazed when informed of this.

"We saw the asking of such questions as a discriminatory hiring practice, not as a research instrument," commented Jane Fleischman, coordinator of the New Directions Program in Occupational Health and Safety at the University of Connecticut Health Center. Fleischman is a member of the Women's Issues Network, one of a broad coalition of women's, labor and civil rights organizations that worked for the law.

The section at issue was written, explained Jeanne Milstein, legislative director of the Connecticut Permanent Commission on the Status of Women, because of a number of cases in which women had been discriminated against in employment based on reproductive ability and because at least one obstetrician/gynecologist reported that sterilization procedures were being requested in order to help women keep their jobs.

The Connecticut Civil Liberties Union also worked for passage of the bill, said Fleischman, and when apprised of the issue, the Connecticut Business and Industry Association, a major business lobbying group, cooperated in drafting the final language.

Negotiations for compromise between the women and the epidemiologists began when Dr. Jennifer Kelsey of Yale University, past president of SER, contacted the rights groups to discuss the issue. She has since drafted language to add to the law which would specifically exempt from its

prohibitions "research to learn about causes of disease and surveillance programs."

Although governing boards for neither side had formally approved the compromise at this writing, both informed WOHRC that an agreement was imminent.

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sense of urgency about time in completing their work. Type A personalities develop heart disease twice as frequently as Type Bs, who do not as strongly exhibit these characteristics.

The research revealed, said Dr. Snow, that work situations typified by high demands and low supervisor support made Type A personalities significantly more depressed, anxious, and irritated, and gave them more sleep problems than the same situations did Type Bs. However, these differences between the two types were not found, he said, "for jobs that made slower paced demands or had higher levels of supervisor support."

In addition, said Dr. Snow, the data suggest that the work environment may even influence the initial assessment of a person as Type A or Type B. Type A scores were shown to vary as specific factors in the work environment changed.

This, he concluded, leads to the suggestion that occupational health specialists should address themselves to restructuring factors in the work environment that reinforce Type A behavior rather than "solely altering the lifestyle of a particular individual."

American Cyanamid Case Is Back Before Courts

A new Supreme Court ruling in the American Cyanamid case will bring the question of forced sterilization back before the courts.

Since five women at the American Cyanamid Company plant in Willow Island, West Virginia, revealed in October 1978 that they had had themselves sterilized in order to keep their jobs, a complicated series of legal developments has kept the case from final resolution. At question has been whether forced sterilization is a "health hazard" as defined by the Occupational Safety and Health Act of 1970 and whether a labor union, in this case, the Oil, Chemical and Atomic Workers (OCAW) of which the women are members, has the right to bring the case before the courts.

American Cyanamid had argued that since it was the Secretary of Labor who first issued a citation against the company, only he might act for the women in the ensuing legal developments. The Secretary of Labor in the Reagan Administration has taken no action.

In October, the Supreme Court refused to hear an appeal from American Cyanamid which sought to uphold this argument. Thus the Court of Appeals for the District of Columbia, which backed the right of the union to appear, is free to hear the original complaint that forced sterilization is a health hazard.

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