

WOHRC NEWS

WOMEN'S OCCUPATIONAL HEALTH RESOURCE CENTER

Cancer Risks Found for Hospital Workers

First study of mortality for nonprofessional workers is completed.

The first study of mortality among nonprofessional health care workers has found that they may be at elevated risk for certain kinds of cancer. Certain cancers were particularly prevalent among white female employees and blacks of both sexes, according to the study by WOHRC executive director Dr. Jeanne Stellman and staff associate Teresa Schnorr, who reported the results at the recent Society of Epidemiological Research annual meeting in Cincinnati.

Union supplied records

The study is part of a larger ongoing WOHRC research project based on records kept by District 1199, National Union of Hospital and Health Care Employees. The union has a membership of over 100,000 pharmacists, drug store, hospital maintenance, service, nursing, technical and clerical employees as well as some professional nurses. Its labor-management health plan keeps detailed records of employee illnesses and deaths.

The research on the causes of union members' deaths between 1973 and 1979 found that blacks showed more cancers of the stomach and large intestine, while whites, both male and female, had more cancer of the pancreas. Liver cancer was particularly high among black men and breast cancer among black women. Both black and white women were more likely than men to die from cancer of the lymph-producing tissues.

A breakdown of job categories by race and sex showed that most black women were in nursing and service work such as dietary, housekeeping, central service and laundry jobs. The largest number of white women were in nursing, service and clerical work. Black men tended to be service workers, with other significant



A hospital laundry worker operates a machine that folds and dries linen.

numbers in maintenance and nursing. White men predominated among pharmacists, with other large numbers in maintenance and service work.

The excess of liver cancer among service workers deserves further study, said the researchers. This malignancy has been shown to be associated with the

Hepatitis B virus infection. Many service workers do cleaning, handle patients' laundry, and are in other ways exposed to hepatitis.

It is impossible to ascribe specific cancers to specific chemicals and other substances, they noted, because most

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California Issues Warning on Use of ETO

California health authorities this summer notified hospitals and other institutions that ethylene oxide (ETO), a chemical widely used to sterilize medical supplies and equipment, has been shown to cause cancer and genetic defects in laboratory animals.

The warnings, based on long-term tests, were issued by the California Hazard Evaluation System and Information Office, a joint project of the State Health Department and Occupational Safety and Health Administration. The chemical is frequently used in gas form on

materials that cannot be sterilized by conventional high temperature steam.

Most large California hospitals have already changed their sterilizing practices so that exposure to workers is below the legal limit of 50 parts ETO per million parts of air. However, Dr. Richard Wade, deputy chief for health at the California Occupational Safety and Health Administration, said that the agency believes that the legal exposure is no longer appropriate. "We are urging all users to cut exposure levels down to a range of

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one to ten parts per million," he said. The state has recommended a new legal exposure limit of only one part per million.

In New York, a spokesperson for the National Union of Hospital and Health Care Employees said that publicity about the hazards of ETO was leading to increased worker education on the subject and that hospitals in other states also seemed to be cutting down on their usage.

Ethylene oxide at room temperature is a colorless gas that smells like ether. When used in relatively high concentrations it can cause irritation of the eyes, nose and throat as well as damage to the nervous system. □

59 Major Companies Will Begin Screening For Genetic Traits

Fifty-nine major U.S. industrial companies have informed the Congressional Office of Technology Assessment that they intend to begin genetic screening of their employees in the next five years, according to *The New York Times*.

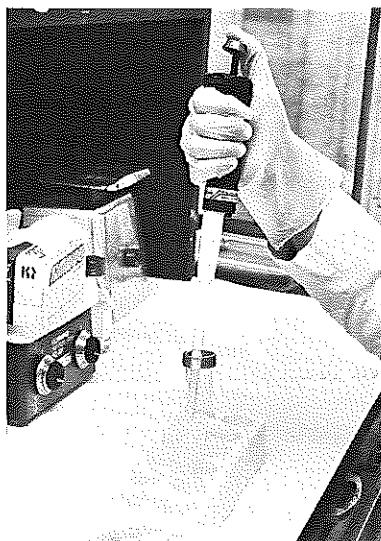
At least 17 companies have carried out such testing in the last five years, and five of these plus one other are now conducting screening, said the agency, which is undertaking a comprehensive study of the practice. (See WOHRC NEWS May/June 1982.)

Genetic screening involves testing of workers' blood samples in order to reveal what proponents say are predispositions to illnesses which might be triggered by workplace substances. Critics of the practice, who include many prominent scientists and physicians, protest that it incorrectly focuses attention on removing the susceptible worker rather than on cleaning up the workplace so that it is safe for all. WOHRC director Dr. Jeanne Stellman was among those who testified against the practice at Congressional hearings last fall. (See WOHRC NEWS, November/December 1981.)

The Congressional office was informed of the companies' plans through anonymous questionnaires being used in its study. The information has been requested by the Subcommittee on Investigations and Oversight of the House Committee on Science and Technology which is investigating the practice.

Subcommittee chairman Representative Albert Gore of Tennessee said he found the information "surprising" and

WHAT'S WRONG WITH THIS JOB?



Arthur Pease

Continual flexing and extension of the thumb by laboratory workers who use automatic pipettes can result in "pipetter's thumb" — a form of osteoarthritis — report doctors at the National Institutes of Health. Many workers in research labs use this type of pipette which sucks up microsamples of fluids.

Readers are invited to send in their own suggestions and photos for this feature.

predicted that the screening "is likely to become the source of legal concerns very soon."

Of the companies answering the questionnaire, those in the chemical industry showed the most interest in the procedure, with utilities also highly interested.

The OTA report is due this fall. □

Skin Cancers Found in Workers at Nuclear Research Facility

A significant number of skin cancers have been found in workers at the Lawrence Livermore National Laboratory, a nuclear research facility in California. Until now, few occupations have been associated with an elevated risk of this kind of cancer.

Researchers from the laboratory and the California Department of Health Services found 19 cases of malignant melanoma of the skin among approximately 5,100 workers from 1972 to 1977. The number is significantly higher than

that expected in a comparable population in a nearby community.

Eleven of the 19 cases occurred in the 40 to 49 age group, while only three occurred in workers 39 years old or younger. Seventeen of the 19 were men—an incidence three times higher than normally expected. Four of the victims were chemists compared to 3 out of 76 in a comparison group.

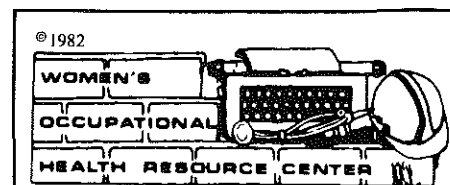
The data suggested, however, that risk of the disease was not associated with length of employment nor with radiation exposure. The length of time of the employment and exposure of a comparison group of workers was not significantly different.

The study was considered too limited to draw definite final conclusions. □

IBM Will Remove TNF

The IBM corporation will complete the removal of trinitrofluorenone (TNF) from those of its photocopying machines that use it by December 1982. All existing photoconductors using the chemical will be replaced at the company's expense, said a spokesperson. No new equipment will be manufactured that relies on a TNF-based system.

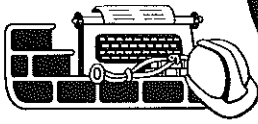
TNF is a chemical which has been shown in laboratory tests to cause genetic changes in bacteria—a fact which makes it suspect of being cancer causing. It was formerly used in the photoconductor that helps to produce the image on the copy paper. □



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WOHRC FACT SHEET

WOMEN'S OCCUPATIONAL HEALTH RESOURCE CENTER

Job Burnout in the Helping Professions

Job burnout is a kind of exhaustion—both physical and emotional — that has become epidemic in the helping professions. Those who experience it describe it as a feeling of emptiness or depletion, a sense of being weighed down or trapped.

A large number of nurses, teachers, day care and social workers simply give up and leave their jobs. But many others cope by becoming more and more detached from their students or clients. They start to keep them at a distance, to shorten the time of their contacts. They begin to “go by the book,” become petty bureaucrats. Others take the problems home, where they interfere with their family relations.

Causes of burnout

The causes of burnout are many, but clearly in the helping professions much has to do with the work itself. Helping people with problems is emotionally draining. Surveys have established the not-surprising fact that emergency room nurses, for instance, suffer from more burnout than those in pediatrics or general service. Workers who have constant contact with clients or students get burned out faster than those whose work is more mixed. Day care workers, although they reported that their work with children was the most gratifying part of their job, were far more burned out when they were “on the floor” throughout the entire day.

Staffs that are reduced by cutbacks and budget crises, so frequent in these times, can intensify the problem. For example, the numbers of unemployment counselors are being cut at the very same time that the number of unemployed is rising.

“Burnout is inevitable when a professional must care for too many people,” writes Dr. Christina Maslach, a well-known researcher at the University of California. “There’s higher and higher emotional overload. Like a wire that has too much electricity, the worker emotionally disconnects.”

People in the helping professions, it is often remarked, tend to see their work not simply as a job, but as a “calling.” They feel impelled to help people, but often they cannot be successful through

The process of burnout, notes Dr. Herbert Freudenberger who is credited with inventing the term, is so gradual that the person experiencing it often does not realize it is happening. All that she knows is that she seems to be working harder and harder and accomplishing less and less. Stress symptoms such as insomnia, gastrointestinal disease and high blood pressure occur. Many such workers find themselves turning to cigarettes, alcohol and drugs to help them get through the work week. Frequently, the victims blame themselves rather than analyzing what about the job may be contributing to these problems.



Prime targets for burnout are teachers, like this one in a Brooklyn classroom.

no fault of their own. Besides, success is hard to measure in many of these professions. A patient may get well and some students may bloom before a teacher's eyes. But many clients provide little feedback. Some, in fact, may blame the worker when they make no progress. Colleagues and administrators rarely remark on how well one is doing. There is little to stoke the emotional reserves of the helper.

Women taking care of others

Women's issues are intimately connected with burnout, note social work consultant Diane Ryerson and psychologist Dr. Nancy Marks who have conducted innumerable workshops and training sessions on the problem. Although male physicians, psychiatrists and legal aid lawyers also suffer from the syndrome, most line workers in schools and social agencies are women. Constant



NUHCE

Nurses, with constant responsibility for others, are also prone to burnout.

responsibility for others is a potent source of burnout. In addition to "giving of themselves" to students and clients, many have home and child care responsibilities as well. This gives them what Ryerson and Marks call "dual careers in giving."

Furthermore, they note, women unlike men have been socially conditioned to measure success not by productivity and financial reward but by the meeting of human needs. The administrators of schools and agencies are traditionally male and are seldom sensitized to the needs of their female employees. The latter, in turn, seldom have been trained to press their own needs.

The result, say Ryerson and Marks, is that many women professionals feel "powerless and helpless in systems dominated by a male hierarchy."

Public indifference contributes

The public perception of the helping professions as not very important or worthy of much funding also contributes to burnout. "It's women's work and so nobody sees it as important," is the way one day care worker succinctly described her profession. Day care provides probably the most dramatic examples of socially and politically-caused burnout. According to a recent national day care study, workers in this field, despite considerable education and training, earn close to or under the minimum wage. The staff turnover at most child care centers is 15 to 30 percent a year which exceeds the national average of 10 percent for most human service fields, reports the Child Care Staff Education Project. Day care workers commonly buy supplies for their underfunded centers with money out of their own pockets. Yet federal funds for day care are continually cut.

In spite of all this, day care workers join with other helping professionals in calling for changes that can result in burnout prevention, even now under existing circumstances.

What can be done

■ One widely recommended reform is **lessening the hours** that all helping professionals spend in direct contact with clients. This can be achieved not only by flexible hours and a shorter work day, but by allowing workers a greater variety of tasks within the day. Dr. Maslach calls for "time-outs," not merely rest periods or coffee breaks, but opportunities to voluntarily do other, less stressful work, such as paperwork or attending meetings. If these are built into the schedule, she suggests, other professionals can temporarily cover for the absent worker — a much better way of coping than allowing the burned out professional to limp along, failing to meet client needs.

■ Many researchers of burnout also stress the importance of **peer support** — the formation of support groups, special staff meetings and workshops in which workers can share burdens and help each other to solve problems. Particularly difficult patient or client problems might better be handled by a team focusing on the problem, some suggest.

At one social agency, for example, social workers meet for an hour each week to discuss their problems in dealing with certain clients. By sharing suggestions, helping each other, they form what is in fact a support group.

■ **Administrators, too, should give more support**, they say. Dr. Robert L. Kahn of the University of Michigan recommends the expression of "liking, respect, admiration" for colleagues and those one supervises. "It is supportive to confirm their own realistic impressions" that the job is difficult, he says, "rather than let them think their sense of strain implies a defect on their part." Dr. Maslach even suggests that in some situations, such as social work, clients be oriented to act as partners in solving problems rather than mere receptacles of help. Thus the worker is not always giving and never receiving, while the client is also strengthened. She also suggests that at the outset client and worker discuss their expectations of what can be accomplished. In this way, no one starts out with unrealistic goals which can only meet with frustration.

Experience with burnout workshops dramatically illustrates the benefits of sharing and support groups, say Ryerson and Marks. But the benefits will be short lived unless administrative reforms are also made.

Administrative reforms

■ In addition to shortened hours — including a more flexible attitude by administrators toward part-time professional work — many writers on burnout call for a more democratic workplace. It is essential, they say, that **those who work directly with clients have some say in the making of the rules that govern their work**. It is also important to develop some kind of meaningful evaluation procedures so that workers have some realistic feedback about their performances.

■ Many helping professionals feel trapped in their careers because they have no place to advance, other experts point out. Many able line workers are never promoted because the next job requires a different kind of training or degree. **Administrations should create, and workers should press for, career ladders that allow for reward of skills**. Dr. Michael R. Daley of the University of Wisconsin suggests the creation of posts such as "advanced therapist" or "direct service consultant." Others call for lateral job transfers, inservice training, increased opportunities for managerial experience.

■ Ryerson and Marks recommend that in their very training **helping professionals be taught to recognize their own personality needs and coping styles**, how to spot symptoms of burnout and what to do about them. Learning to cope with stress, they suggest, may involve not only handling the symptoms but learning political skills which can be used to achieve administrative reforms.

Political skills may also be needed, some say, if helping professionals are to make the public more aware of the importance of their work, and to gain the funding and the salaries they deserve. □

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Swedes Research Women's Job Attitudes

Role conflict can interfere with work satisfaction.

Recent Swedish research has shown that men and women workers tend to have very different attitudes toward job conditions, according to Gunella Westlander of the Swedish National Board on Work Environment who visited WOHRC this summer.

Dr. Westlander, a researcher for the board, said that she had been troubled to find that Swedish women in challenging jobs frequently showed low self-esteem and job satisfaction. Further research had shown that the reason was role conflict. Many women had families who didn't want them so involved in their work, she discovered.

Another reason was that management was basing work organization on family structure, with the women responsible for supporting the men's work while still doing their own. "The women didn't protest," said Westlander. "They tried to do the whole thing."

Took job on assembly line

To understand the conditions under which women worked, Dr. Westlander herself took a job for several months on an assembly line. She found that assembly line women workers felt that they had to be "nice" and not make trouble. Many even requested that they not be included in the study so that they could avoid talking to researchers and "getting upset."

Westlander, who has written a book called *Mental Health and Industrial Work*, said that these facts were discovered during an inquiry into the importance of job satisfaction to mental health, which has been a focus of Swedish research since the 1960s. Interest in employed women has grown during this research, she reported. As a result, further research has been done on the structure of companies and unions as it relates to the ability of women to gain more equality.

Sweden's first equal rights law was passed in 1980, she said. Seventy-four percent of Swedish women have jobs outside their homes.

In her talk to WOHRC staff, Westlander also reviewed the ambitious work undertaken under Sweden's Work Environment Law, which is the equivalent of

the U.S. Occupational Safety and Health Act. Under the law, she said, each company with 50 or more employees must have a safety committee, a doctor and a safety ombudsman. Each company must contribute 2 percent of the company's profit to the national work environment fund.

The National Board on Work Environment employs some 400 researchers who investigate both physical and psychological hazards to occupational health. However, Sweden does not have the equivalent of Norway's famous "paragraph 12" which discourages routinized work.

"We are a country of only 6 million people," Westlander remarked, "but we have tremendous ambitions."

French Find Pollution From Asbestos Flooring

Asbestos flooring can release potentially dangerous levels of airborne asbestos fibers, according to a study recently completed in France.

Until this investigation, efforts at control of asbestos, which is known to be cancer-causing, had been concentrated on other building parts such as insulation and asbestos-cement pipes. Flooring has not been considered a serious source of asbestos pollution in a large-scale U.S. Environmental Protection Agency program to control use of the substance in school buildings.

However, French researchers who measured the presence of airborne asbestos in an office building near Paris found elevated concentrations, most of which came from vinyl asbestos floor tiles. Other pollution came from insulation sprayed on the ceilings. The flooring contained chrysotile and the insulation crocidolite, both of which are asbestos fibers. No other asbestos materials were present in the building.

The researchers, who measured the pollution in several parts of the building, observed that it was the highest in a busy workshop where the vinyl floor tiles had been weathered and scraped. They noted that human activity, by wearing down materials, seems to contribute to the segmentation and dispersal of dust in which polluted material appears.

They recommended that all measure-

ments of building airborne asbestos levels be taken during high usage time because "concentrations of indoor airborne asbestos measured during periods of active use are much higher."

They also noted that in the United States flooring manufacturers are the third largest users of asbestos.

The report, which appeared in the June 25, 1982 *Science*, was written by air pollution specialists P. Sebastian, J. Bignon and M. Martin.

Datascreen Terminals May Leak PCBs, Report Norwegian Scientists

Datascreen terminal operators may develop skin rashes because of leakage of polychlorinated biphenyls (PCBs) from their machines, according to research recently done in Norway.

Until now, PCBs have been associated with more serious health problems, including cancer. Because of this they have been used only in closed systems such as electrical capacitors and transformers. However, when rashes and conjunctivitis were reported among capacitor manufacturing workers and similar rashes occurred among datascreen operators, researchers at the University of Oslo set out to find whether the machines might be leaking the irritating substances.

Not all transformers and capacitors contain PCBs, and researchers were unable to trace the manufacturers of the components in question to see if they did. However, by taking air samples for several days in an office where rashes had appeared, they found that PCB levels during working hours were about 50 to 80 times the level outside the building. Three of fifteen datascreen terminal operators working in the office had developed such symptoms and the rashes disappeared during vacations and reappeared after a few days at work. Improvement was also obtained when the time spent in front of the screens was reduced.

Although the PCB levels discovered were below the safety level recommended by the U.S. National Institute for Occupational Safety and Health, the Norwegians termed them "unexpectedly high."

PUBLICATIONS

The first issue of a new *VDT Newsletter* was published by the Labour Council of Metropolitan Toronto this summer. Scheduled to appear four times a year, it carries the latest news about working conditions with video display terminals, provisions regarding them in trade union contracts and reports on legislation in Canada and other countries.

To subscribe send \$5 and your name and address to: VDT Committee, Labour Council of Metropolitan Toronto, Room 407, 15 Gervais Drive, Don Mills, Ontario, Canada. A bulk rate of \$2.50 per year is offered for orders of 20 or more copies.

Humanizing the VDT Workplace is a health manual for local union officers and stewards recently published by the Newspaper Guild and the International Typographical Union.

The 44-page pamphlet is described as "a handbook for tackling the VDT problems that are likely to exist in news-industry plants, one by one, and reducing or eliminating them." It covers VDT design, workplace design, lighting and individual visual problems in working with video display terminals.

For further information about the manual, write to The Newspaper Guild, 1125 15th St. NW, Washington, D.C. 20005 or International Typographical Union, P.O. Box 157, Colorado Springs, Colo. 80901.



District 1199 Cultural Center

A scene from "Taking Care," a musical review based on hospital workers' experiences — including health and safety hazards. The review is produced by District 1199, National Union of Hospital and Health Care Employees, as part of its Bread and Roses cultural project.

Occupational Health is a national newsletter published semi-monthly by the Shop, Distributive & Allied Employees' Association of Melbourne, Australia.

Recent issues contained articles about government policy on eye tests for users of video display terminals, problems of radiation exposure and political developments affecting occupational safety and health.

For further information write to *Occupational Health*, 10 Glen Street, Milsons Point, New South Wales 2061, Australia.

Hospital continued from page 1

workers are exposed to a number of them both inside and outside the hospital. However, certain substances are particularly suspect. Chief among them is ionizing radiation, a recognized cause of leukemia. Health care workers are exposed to this from a variety of sources, among them medical and dental X-rays, laboratory instruments and portable X-ray machines used on patient floors.

Other substances in hospitals that have been linked with cancer include anesthetic gases, benzene, formaldehyde, ethylene oxide (used in sterilization of instruments) and drugs—particularly sex hormones and alkylating agents used to treat cancer.

Previous statistics have revealed a generally high level of occupational illness among hospital workers. The researchers cited a 1973 California study showing that workers in nongovernment hospitals had a 40 percent greater incidence of such illness than workers in all nonfarm industries, and that 80 percent of the ill or injured were nonprofessionals. Most previous studies have been limited to professional health care workers. □

Because of vacation scheduling, WOHRC did not publish a July/August newsletter this year. However, subscribers will receive six issues, as usual, before the year's end.

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