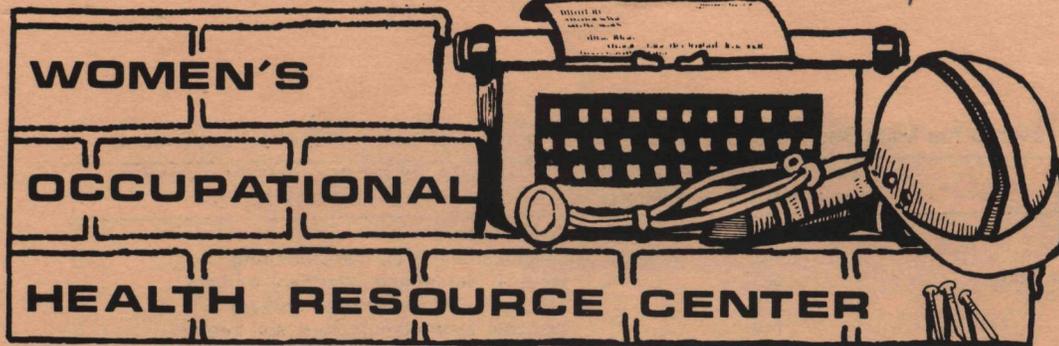


Employment/benefits + health
related employment/work-family

JAN 20 1982

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FACT SHEET

March 1980

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"REPRODUCTIVE HEALTH IN THE WORKPLACE"

In late 1977, four women charged that they were given a cruel choice—either be sterilized or lose their jobs.

Their jobs involved exposure to high levels of lead, levels so high that the company, American Cyanamid, was afraid that any children born to these women would suffer from birth defects.

So they say they were given the choice of being sterilized or being transferred, most likely to low paying janitorial jobs. They chose to keep their jobs—and lose any future possibility of bearing children. Since then, these four women have sued the company for forcing them to make such a tragic decision and OSHA (Occupational Safety & Health Administration) has issued a citation to the company. It is being contested.

One million American women in their prime child-bearing years work under conditions which could damage their ability to bear healthy children. A few of them have been sterilized in order to keep their jobs; many of them may be faced with the same kind of choice.

Is this discrimination—or a common sense precaution?

The fact is that there are many, many **reproductive hazards** in the workplace. Many of these can affect the ability of **male** [Table I] as well as **female** [Table IV] workers to have healthy children. Some hazards can even spread into the home where they can harm growing children. Here are the dangers—and some of the workplace conditions which are responsible for them.

The Danger of Infertility and Sterility

Some workplace conditions can make it harder for couples who want children to conceive. Some can even lead to permanent sterility.

- Substances which reduce the fertility of **men** include chloroprene (used in the manufacture of rubber), DBCP (a pesticide), and lead.

"I'm sterile. That's all there is to it. I've been cheated.

a male worker
at Occidental Chemical Corporation,
sterilized by exposure to DBCP

- Conditions which reduce the fertility of both sexes include exposure to PCBs (polychlorinated biphenyls used in electrical capacitors and transformers) and X-rays. In addition, anything which interferes with a woman's menstrual cycle can also reduce her fertility. For example, stress on the job causes more women to stop menstruating and become infertile for months at a time. Also flying can affect the menstrual cycle and flight attendants have complained of serious difficulties.

- Substances or conditions which cause longterm, serious diseases, like cancer obviously interfere with people's ability to bear children. Cancer often strikes the reproductive organs: The prostate gland in

TABLE I.

Selected Agents Toxic to the Male Reproductive System which may be of occupational significance. *

CHEMICAL HAZARDS	SPECIES EFFECT OBSERVED (h = humans, a = animals)	EXAMPLES OF OCCUPATIONS WHERE HAZARDS MAY OCCUR
alcohol	h	Social hazard
alkylating agents	h,a	Chemical and drug manufacturing
anesthetic gases; nitrous oxide	a,h	Medical, dental and veterinary workers
cadmium	h,a	Storage batteries; smelter workers
carbon disulfide	h,a	Viscose rayon manufacture; soil treaters
carbon tetrachloride	a	Chemical laboratories; dry cleaners
diethylstilbesterol	a,h	DES manufacturers
chloroprene	h,a	Rubber Workers
ethylene oxide	a	Health care workers (disinfectants); users of epoxy resins
hair dyes	a	Cosmetic manufacturers; hairdressers and barbers
lead	h,a	Storage batteries; policemen; smelter workers
manganese	h	Welders, ore smelters and roasters
nickel	a	Smelters, welders
organic mercury comp'ds.	a	Pesticide workers
tris (flame retardants)	a	Clothing and textile work
Pesticides (e.g.):	a	Farm workers; pesticide manufacture; spray applicators; exterminators
dibromochloropropane		
kepone		
DDT		
DBCP		
carbaryl		
DDVP		
malathion		
vinyl chloride	h	PVC manufacture and processing
PHYSICAL HAZARDS		
elevated carbon dioxide	a	Brewery workers; chemical manufacture
elevated temperatures	h,a	Bakers; glassblowers; foundry and oven workers
microwaves	h,a	Radar operators; air crewmen; transmitter operators
x-irradiation	h,a	Health workers; radiation workers

Adapted from Manson. See J. Stellman, "The effects of toxic agents on reproduction," OCCUPATIONAL HEALTH AND SAFETY April, 1979

TABLE IV

Substances of Occupational Significance Observed to Induce Adverse Reproductive Outcomes with Exposure During Pregnancy *

	SOME OCCUPATIONS WHERE EXPOSURE MAY OCCUR
alkylating agents	Drug workers
anesthetic gases*	Operating room personnel (incl. dental and veterinary)
arsenic	Agricultural workers
benzene	Chemical workers; laboratory technicians
carbon monoxide	Outside workers; offices with smokers;
chlorinated hydrocarbons	Laboratory workers; craft workers
diethylstilbesterol*	Drug workers
dimethyl sulfoxide	Laboratory workers
dioxin*	Agricultural workers
infectious agents:	Health care workers; social workers;
rubella virus*	teachers; animal handlers; meat cutters
cytomegalovirus	and inspectors; laundry workers
herpes virus hominis	
toxoplasma	
syphilis*	
ionizing radiation*	X-ray technicians & technologists; atomic workers; drug workers
organic mercury compounds	
organophosphate pesticides	Agricultural workers
DFP	
parathion	
captan	
carbaryl	
theram	
polychlorinated biphenyls*	Electrical workers; microscopists; (Immersion oil)

*human effects noted

Adapted from Wilson. See J. Stellman, "The effects of toxic agents on reproduction," OCCUPATIONAL HEALTH AND SAFETY April, 1979

men; the uterus and ovaries in women. The cutting and lubricating oils used in many industries can soak through garments and cause cancer of the scrotum in men. Men in the rubber industry have a higher-than-average risk of developing cancer of the prostate.

Many, many industrial hazards can cause cancer. Common examples include benzene, vinyl chloride, asbestos, and X-rays.

The Danger of Birth Defects

Probably nothing is more frightening to a couple who want children than the possibility of bearing a seriously deformed or defective child. Some defects are obvious at birth, such as deformed or missing limbs, cleft palate, Down's syndrome (mongolism), and blindness. But others, like heart valve defects, are not obvious and it may be several years before they take their toll. Other examples are blood diseases, disorders of the nervous system, abnormally high susceptibility to cancer, and learning disabilities.

The effects of most industrial substances and processes on future offspring are not fully understood. But some conditions are definitely known to cause fetal damage and birth defects.

Occupational hazards which cause **mutations** can affect both men and women. A mutation is a change in the chromosomes, or genetic material, of the cells. A mutation occurring either in the male's sperm cell or the female's egg cell may cause a birth defect. For example, the anesthetic gases used in operating rooms are believed to cause mutations. The children of female operating room workers show an unusually high rate of birth defects—as do the children and wives of male operating room workers

Other hazards which can cause mutations are X-rays and other forms of radiation and the chemicals, vinyl chloride and trichloroethylene. People who work in plastics manufacturing, dry cleaning, and perfume manufacturing may be exposed to these chemicals. Textile spot cleaners and electronic equipment cleaners are exposed to trichloroethylene.

Exposure to conditions which cause mutations can have longlasting effects. Years

after exposure, a man or woman may still run the risk of producing a defective child.

Other hazards which cause birth defects affect only women—in fact, only pregnant women. These substances act by damaging the fetus as it is developing. You may remember the thalidomide scandal in the 1950s. Hundreds of women who took this prescription drug during early pregnancy gave birth to babies who were missing arms or legs. In the workplace environment, there are many hazards which can damage developing fetuses, such as metals like mercury and cadmium; chemicals like benzene, methoxyflourane; organic dyes; and radiation. These are teratogens (substances that can cause abnormal development of the fetus.)

Viruses can also damage developing fetuses. The best known example is the German measles (rubella) virus, which causes a variety of serious defects. Health workers, primary school teachers, social workers, animal handlers, and meat inspectors can be exposed to dangerous viruses on the job.

"I wish I had never done it, but I was scared."

Barbara Cantwell,
American Cyanamid employee who underwent sterilization in order to keep her job in a high lead environment.

The Danger of Miscarriages and Still-births

Any hazardous condition which is capable of damaging the fetus can, of course, kill it. In a work-related miscarriage, the fetus is usually expelled from a woman's body early in pregnancy. If the damage occurs later in pregnancy, a woman may be pregnant a full nine months and go through labor only to produce a dead infant. Exposure to hazards like vinyl chloride, anesthetic gases, or radiation may cause higher than normal rates of miscarriages and still-births. Wives of male workers exposed to mutation-causing agents are also thought to suffer high rates of miscarriages and still-births.

The Danger to Children in the Home

Unfortunately, parents can accidentally bring workplace hazards home and expose their children. Toxic chemicals may be carried home on a person's shoes, clothes, or hair. For example, the families of men who work with asbestos suffer from high rates of mesothelioma, a rare form of cancer caused by asbestos. The asbestos fibers come home on work clothes and spread to the rest of the family.

Breast milk can be another "carrier" of hazardous chemicals. Recently, a six-week old baby in Halifax, Canada, was poisoned by breast milk contaminated by the dry-cleaning solvent tetrachloroethylene which the mother inhaled during lunch hour visits with her husband at work. The baby developed liver disease, but improved when the mother stopped breast feeding. Many synthetic chemicals from the environment and workplace are secreted in breast milk. What their effects are on developing infants, no one really knows.

Other Dangers to Family and Personal Life

Workplace hazards not only interfere with our reproductive lives, they can also interfere with our sex lives. The most common occupational threat to a person's sex life is simple exhaustion. This is a major problem for working women, who usually come home from work to a second "shift" as a housekeeper. There are also chemicals which can interfere with sexual feelings: For example, the metal manganese in welding and the chemical estrogen in drug manufacturing can reduce the sex drive in males.

The Issues

There is no question that workplace hazards can affect people's ability to bear children, to raise healthy children, and even to have sex in the first place. The response to many employers has been to exclude **women** from work where they may be exposed to reproductive hazards. For the companies, there is a real financial motivation to protect women from the possibility of birth defects: A child born with a deformity or defect has the right to sue the company up until the age of 21, if the parents

and child believe that the company is responsible for the defect.

On the other hand, many union leaders, women's health activists, and occupational health experts argue against the exclusion of women from work environments which could affect future offspring. They believe that workplaces should be made safe for both male and female workers. They point out that:

- The exclusion of women from particular jobs violates the 1964 Civil Rights Act, which forbids discrimination on the basis of sex.
- So far, employers have not attempted to bar women from hazardous occupations which are considered to be "women's work." (No one is asking female operating room nurses to leave their jobs!) The women who face discrimination because of reproductive hazards are women who have entered traditionally male jobs.
- Exposure of male workers to occupational hazards can also damage offspring, so excluding female workers won't solve the problem anyway.

Recently, the government took a stand against a double standard for male and female workers. On October 10, 1979, OSHA decided that the condition which had led to the sterilization of four women workers in an American Cyanamid plant were in violation of the law. OSHA fined the company and ordered it to make its plant safe for workers of both sexes—and their future offspring.

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for a conference on:

"Hazards in the Textile Mills
And What You Can Do About Them,"

A Joint OSHA/Women's Bureau Conference
For Working Women of the Textile Industry
Co-sponsored by the Coalition of Labor Union
Women (CLUW)