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OCCUPATIONAL HEALTH - PART II

Occupational Health Hazards for Pregnant Women

A recent decision by General Motors in Canada has prohibited "fertile" women from working in its battery plant because of fear that lead-oxide emissions in the plant could lead to birth defects. This means that women either have to prove they are sterile or be transferred to another job - perhaps with less pay. Yet it has been shown that male - as well as female - reproductive systems are affected by lead and chemical emissions⁽¹⁾ Not only is the issue of civil liberty involved but employers have begun to discriminate against all women who just possibly might be fertile instead of making the work places safe for all workers.

In 1925 witnesses at the Commonwealth Royal Commission on Health stated that adolescent girls working in factories were partially susceptible to gynaecological ailments and problems associated with childbirth because the work they did was too heavy. They were generally so debilitated by the time they married that trouble-free pregnancies were rare.⁽²⁾

In 1927 the Victorian Government appointed a special committee to enquire into the following conditions at H. V. McKay Pty. Ltd. at Sunshine:

- "(a) If the employment of females in such industries is likely to be injurious to the health of the workers;
- (b) If there is any other sufficient reason, apart from the effect of the work done on the health of the workers, why females should not be employed in such industries."⁽³⁾

Not only was it recommended that women could be employed but that they should be paid the male occupational rate. These recommendations were accepted by management and unions.

Since this time limited research has been undertaken into toxic substances, particularly those harmful to pregnant women. However women have been moving into the workforce in increasing numbers - many into potentially dangerous industries where little information is available about safety precautions and the dangerous materials with which they work.

With the influx of women into the workforce during the Second World War the U.S. Department of Labor published a guide to "Maternal Policy in Industry". This policy is important in light of current demands for maternity and paternity leave being taken up by unions. It reads:

"The majority of working women are in the child-bearing years and the experience of some employers with women workers causes them a bit of panic in the face of possibilities that they scarcely know how to handle. It is the usual practice in plants not to hire women who are known to be pregnant, and it is almost equally common to discharge them as soon as pregnancy is discovered. Such a policy, however, encourages women to conceal their pregnancy as long as possible. Under such circumstances a woman may continue to work at a job or in a place that offers considerable hazard to her health and safety. Moreover, the first three months of pregnancy, which are the most easily concealed, are also more precarious than the next three months. At this early date, then, women particularly need protection; but, unless there is a policy in the plant that will encourage them to report their condition, they cannot avail themselves of protection."⁽⁴⁾

The Policy further recommended the importance of judging each case individually, "the types of jobs that should be avoided because of danger of physical strain or injury from toxic substances, the preservation of seniority rights, the opportunity to return to the job . . ." (5)

Although the right for pregnant women to work was guaranteed in some countries as early as 1907, it appears that this right may be relinquished despite anti-discrimination legislation. In fact employers have already stated their intention to discriminate against women workers. A survey by the Victorian Chamber of Manufactures found that 21 percent of employers intended to reduce their female workforce on the introduction of unpaid maternity leave and 61 per cent if paid leave were introduced.

Pregnant women workers may need some special consideration but, like other forms of 'protective legislation', it should not be used to discriminate against all women in the child-bearing years (15 to 45). Ideally women should be encouraged to report pregnancy early and be able to transfer to another area where they would not be exposed to potentially toxic chemicals or hazardous conditions. It would be unlikely for a company to require a man who had had a heart attack to do heavy physical work or to expect a small lightly-built man to lift heavy objects.

Toxic Chemicals

Various toxic substances and hazardous working conditions are known to affect the genital systems of men and women. Not only can they damage a foetus while carried by a woman but they can cause testicular atrophy in males which may be permanent. Studies (6) by the U.S. National Institute for Occupational Safety and Health (NIOSH) revealed a 25 percent increase in the incidence of birth defects among children born to wives of male operating room personnel. Women working in operating theatres risk spontaneous abortions and birth defects in their children; yet few hospitals are equipped with adequate gas-removal devices.

Other research (7) has shown causes of some cancer in offspring can be traced to the parents' occupation; e.g. working with hydrocarbons or alkylating agents now in extensive use in the clothing and textile industries or to chemicals taken by the mother, e.g. diethylstilbesterol.

Chemicals entering the pregnant woman by ingestion, inhalation or skin absorption will ultimately be found in the foetus. The Encyclopaedia of Occupational Health and Safety (8) lists a number of substances which are harmful to pregnant workers. Among them -

- "(i) Nicotine is a hazard for women in the tobacco industry. Chronic nicotine poisoning causes menstrual disorders and may induce sterility. Nicotine penetrates the placenta and disturbs foetal development, causing spontaneous abortion, premature births, malformations or death of the foetus.
- (ii) A variety of organic solvents such as benzene, toluene, ketones, alcohols, esters may be the cause of genital system disorders in women; benzene, in particular, is highly toxic and pregnant women are highly susceptible to its action. It penetrates the placenta and often terminates pregnancy and causes stillbirths." (8)

Although some teratogenic substances - those substances which can cause abnormalities in offspring - are known, little or no knowledge is available on what concentration of a teratogenic agent the embryo or foetus can tolerate before damage occurs.

Teratogenesis is an acute toxicologic phenomenon requiring only short or instantaneous exposure to produce the pathologic result in a relatively short time. Very few substances have been studied for their teratogenic effects but some known ones are lead, benzene, carbaryl, carbon tetrachloride, paraquat, mercury, malthion, cyanide, formaldehyde, fluorine etc.

Some effects of dangerous substances encountered by workers emerge in their offspring years later as behavioural problems. Research into behavioural toxicology is only in its infancy but it appears that longterm, low-level exposure to some chemicals can cause subtle changes in the functioning of the brain and nervous system.⁽⁹⁾ Ideally no worker should be exposed to potentially harmful chemicals until tests have been made to prove their safety but most workers are ignorant of the hazards. It should be the employer's responsibility to inform workers of potential hazards and precautions. It is the government's responsibility to research the toxic effects of industrial chemicals and to insist that substances causing birth defects or miscarriages should be identified and labelled as such.

The Oil, Chemical and Atomic Workers (AFL-CIO) International Union have published a guide to their women members. It says:

"When a woman is pregnant the health hazards to which she is exposed are a threat to her child as well as to herself. Toxic substances that enter her bloodstream are transmitted to the fetus . . . She must avoid even small exposures to toxic substances . . . And, most importantly, she must have a clause in her contract that protects her right to transfer to a safer part of the plant without loss of pay or seniority . . . for the duration of the pregnancy . . . The contract should also require the labelling of substances known to be teratogens and abortifacients. No woman should ever have to choose between her job security and her baby's health."⁽¹⁰⁾

Physical Agents

The physical environment can also be harmful to women and men workers. Although the effect of heat causing 'gonadic insufficiency' and reduced fertility in men has been well documented,⁽¹¹⁾ the effect on pregnant women has not been so well studied. Low-frequency, high-amplitude vibrations can lead to physiological conditions which may cause menstrual disorders, spontaneous abortions and premature births.⁽¹²⁾

The effects of ionizing radiations on the reproductive system and pregnancy have long been known. The U.S. Nuclear Regulatory Commission has proposed issuing special warnings to women of child-bearing age but, so far as is known, no action has yet been taken. Apparently no thought has been given to reducing the radiation dose for all workers.

Infection

Nurses, teachers, laboratory and agricultural workers are in constant contact with potential infections - rubella and infectious hepatitis being the most common.

Research Needed

Limited research and inadequate statistics have made the study of pregnant women's occupational health problems difficult. Unions should pressure governments to collect more precise information on the numbers and occupations of parents involved in spontaneous abortions, stillbirths and congenital malformations. One study has indicated that wives of vinyl chloride workers had twice as many miscarriages and stillbirths as the wives of workers who did not handle the material.⁽¹³⁾ Yet there is no compensation programme to cover these women.

WHAT UNIONS CAN DO

1. Ensure that research is undertaken into potentially harmful chemicals and working conditions, e.g. noise, vibration, heat stress and, particularly, new substances which may have teratogenic, mutagenic or carcinogenic effects.

3. Ensure that governments monitor the occurrence of birth defects in defined geographical areas to ascertain the effect of local industry.
4. Add to Logs of Claims:
 - (a) Free pregnancy testing
 - (b) Re-assignment without loss of pay or seniority
 - (c) (as per U.S. Equal Employment Opportunity Commission guidelines) that "disabilities caused by or associated with pregnancy, miscarriage, abortion and childbirth must be considered temporary disabilities and treated as such . . ."
 - (d) Employers to inform workers (migrants in their own language) of potential hazards and precautions
 - (e) Employers to label all harmful substances and situations and make every effort to exclude unsafe situations.

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