

Reproductive Hazards for Working in the Animal Care Environment

Substances or agents that affect the reproductive health of women or men or the ability of couples to have healthy children are called reproductive hazards. Radiation, some chemicals, certain drugs (legal and illegal), cigarettes, some viruses, and alcohol are examples of reproductive hazards. This information focuses on reproductive hazards in the care and use of animals in teaching and research.

Women

The causes of most reproductive health problems are still not known. Many of these problems - infertility, miscarriage, low birth weight - are fairly common occurrences and affect working and nonworking women. A reproductive hazard could cause one or more health effects, depending on when the woman is exposed. For example, exposure to harmful substances during the first 3 months of pregnancy might cause a birth defect or a miscarriage. During the last 6 months of pregnancy, exposure to reproductive hazards could slow the growth of the fetus, affect the development of its brain, or cause premature labor. Reproductive hazards may not affect every worker or every pregnancy.

REPRODUCTIVE HAZARDS FOR WOMEN

Agent	Observed Effects	Prevention
Cancer treatment	Infertility, miscarriage, birth defects, low birth weight	Safe handling techniques including use of skin barriers, eye protection. Haz. Mat. precautions to clean up spills
Ionizing radiation (e.g. X-rays and gamma rays)	Infertility, miscarriage, birth defects, low birth weight, developmental disorders, childhood cancers	Use of area and personal shielding, i.e. lead aprons
Anesthetic Gases, Halothane and NO ₂	Reduced fertility, spontaneous abortions	Use of anesthetic gas scavenging units, badge and area monitoring to detect chronic leaks
Toxoplasmosis *	Miscarriage, birth defects, developmental disorders	Good hygiene practices such as hand washing, avoid eating or handling food in animal areas. Immediate clean up of cat feces.
Listeria and Campylobacter	Risk of spontaneous fetal loss, chorioamnionitis	Good hygiene practices such as hand washing. Avoid eating or handling food when in animal care areas

*Toxoplasmosis: Because cats are frequently used in research and teaching, it is important for pregnant women to be aware of this biological hazard. The protozoan, *Toxoplasma gondii* has its complete life cycle only in cats, which are the only source of infective oocysts. It takes at least 24 hours for oocysts shed in the feces to become infective, so removal of fresh feces daily reduces the risk of acquiring infection. Toxoplasmosis in people usually resembles mild flu-like symptoms. Infection in a previously uninfected pregnant woman can result in prenatal infection of the developing fetus, which can result in birth defects.

Men

Although studies have found that workplace exposures affect the reproductive system in some men, these effects do not necessarily occur in every worker. Whether individuals are affected depends on how much of the hazard they are exposed to, how long they are exposed, how they are exposed, and other personal factors. Workplace substances that affect male workers may also indirectly cause harm to their families. Certain substances unintentionally brought home by a worker may affect a woman's reproductive system or the health of an unborn child.

REPRODUCTIVE HAZARDS FOR MEN

Agent	Observed Effects	Prevention
Cancer treatment drugs	Infertility. Low sperm count, abnormal sperm shape	Safe handling techniques, including use of skin barriers, gowns, gloves, masks, eye protection. Haz. Mat precautions to clean up spills
Ionizing Radiation	Infertility, lowered sperm number, abnormal sperm shape	Use of area and personal shielding (i.e. lead aprons)
Infectious agents	No known direct effects. Second hand exposure to pregnant partner or unborn child.	Good hygiene practices such as hand washing. Avoid eating or handling food when in animal care areas.
Anesthetic Gases	None known for male reproductive health	Use of anesthetic gas scavenging units, badge and area monitoring to detect chronic leaks

How to Be Protected From Reproductive Hazards:

- Store chemicals in sealed containers when they are not in use.
- Wash hands before eating, drinking, or smoking.
- Avoid skin contact with chemicals.
- If chemicals contact the skin, follow directions for washing provided in the Material Safety Data sheets found in your department.

- Become familiar with the potential reproductive hazards used in your workplace.
- To prevent home contamination:
 1. change out of contaminated clothing and wash with soap and water before going home;
 2. store street clothes in a separate area of the workplace to prevent contamination;
 3. wash work clothing separately from other laundry (at work if possible); and
 4. Avoid bringing contaminated clothing or other objects home.
- Participate in all safety and health education, training, and monitoring programs offered by your employer.
- Learn about proper work practices, engineering controls, and personal protective equipment (i.e., gloves, respirators, and personal protective clothing) that can be used to reduce exposures to hazardous substances.
- Follow the safety and health work practices and procedures implemented by your employer to prevent exposures to reproductive hazards in the workplace.
- Seek medical attention promptly. If you are injured or have an on-the-job exposure promptly report the accident to your supervisor, even if it seems relatively minor. If you have any concerns about your exposures at work you can contact Environmental Health and Safety or Occupational Health Services.
<http://www.ehs.uci.edu/programs/ih/reproductivehealth.html>
- Tell your physician about the type of work you do. If you are planning a family, tell your physician about the type of work you do, and about the potential hazards in your workplace.