

Reproductive Hazards, Teratogenic Agents and Pregnancy

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. A teratogen is a substance which interferes with embryonic or fetal development and women of child bearing potential should take care to avoid exposure. A fetotoxin is a substance that can poison or cause degenerative effects in a developing fetus or embryo. Radiation, some chemicals, certain drugs, cigarettes, some viruses, and alcohol are other examples of reproductive hazards.

A reproductive hazard may cause one or more health effects, depending on the time and duration of the exposure. For example, exposure to harmful substances during the first 3 months of pregnancy may 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 person or every pregnancy in the same way. Whether a woman or fetus is harmed depends on how much of the hazard they are exposed to, when they are exposed, how long they are exposed, and how they are exposed. (<http://www.cdc.gov/niosh/docs/99-104/pdfs/99-104.pdf>)

Faculty members and laboratory supervisors are responsible for training and instructing laboratory personnel in the appropriate ways to protect themselves from the hazards in the laboratory. Students, employees, guests and visitors are responsible for learning about the hazards in their workplace, using personal protective equipment, and following proper work practices. Employees, students, guests and visitors should take the following steps to ensure their own safety:

- Review the [SDS](#) and other resources for each hazardous chemicals used in the laboratory to become familiar with any reproductive hazards
- Guests and Visitors who will not be working in the lab should be accompanied/supervised by a trained laboratory worker.
- Restrict access to area where chemicals are being used
- Store chemicals that are reproductive hazards in sealed containers when they are not in use
- Wash hands after contacting hazardous substances and before eating, drinking, or smoking
- Avoid skin contact with chemicals
- If chemicals contact the skin, follow the directions for washing and decontamination as described in the [Safety Data Sheet](#) (SDS) and other resources
- Use personal protective equipment (e.g., gloves, respirators, and personal protective clothing) to reduce exposures to workplace hazards
- Follow appropriate work practices and procedures to prevent exposures to reproductive hazards.
- Consult a health care provider with any concerns about reproductive hazards in the workplace
- Participate in all relevant safety and health education, training, and monitoring programs offered by FSU

- Discuss proper work practices with the faculty member or laboratory supervisor Contact EH&S with questions about strategies to avoid exposures to reproductive hazards at 644-8916 or 644-6895.

Research or work with chemicals or biological agents possessing teratogenic or mutagenic capabilities, such as Rubella, herpes or cytomegalovirus, or other agents that could cause fetal death such as Brucella, may pose a significant health risk. Always consider the health risks associated with any chemical or biological agent before working with the agent and discuss any related concerns with your doctor. Consult faculty members, laboratory supervisors, principal investigators, or EH&S if you have any questions or concerns about the research being conducted.

Additional Information and Resources

- [CDC guidance documents on female reproductive health](#)
- [CDC guidance documents on male reproductive health](#)
- <http://www.croetweb.com/links.cfm?topicID=62>
- [Prenatal Risks of Exposure to Organic Solvents](#)
- [NTP 12th Report on Carcinogens](#)
- [OSHA - reproductive hazards](#)
- [Chemicals known to cause cancer or reproductive toxicity](#)
- <http://www.purdue.edu/rem/ih/terat.htm>
- http://otispregnancy.org/otis_fact_sheets.asp
- <http://toxnet.nlm.nih.gov/>
- <http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CPDB.htm>
- [Variations in Reproductive and Developmental Toxicant Information](#)
- [Lists of teratogens, mutagens, carcinogens and other hazardous chemicals in accordance with the New Jersey Right-to-Know Act](#)