

Biological Reproductive Hazards

Certain biological materials may pose an increased risk for personnel who are, or wish to become, pregnant. These reproductive hazards may affect fertility, conception, growth and health of a fetus or infant. Keep in mind that during pregnancy, any infectious disease or pathogen may cause a more severe illness than when the woman is not pregnant, so precautions must be taken with any infectious organism or material. Some of these agents may cause physical malformations or result in miscarriage. The risk for each of these varies depending on the stage of pregnancy. Some can cause damage very early, possibly before the woman is even aware she's pregnant.

Some examples of biological reproductive hazards include:

Agent	Complications
Arboviruses	Congenital infections, miscarriage
Brucella	Miscarriage
Chlamydia	Neonatal conjunctivitis
<i>Coxiella burnetii</i> (Q fever)	Premature birth, fetal or newborn death
Coxsackie virus	Meningitis or sepsis (blood infection)
Cytomegalovirus	Growth and developmental retardation, microcephaly
Group B strep	Meningitis, septicemia
Hepatitis B virus	Acute or chronic infection
Herpes simplex virus (Types I and II)	Disseminated disease, encephalitis
Human immunodeficiency virus (HIV)	Transmission to fetus
Human parvovirus B19 (Erythema infectiosum)	Miscarriage
<i>Listeria monocytogenes</i>	Miscarriage or stillbirth, premature delivery, infection of newborn
Mumps virus	Sterility (males), pregnancy loss
Rubella (German measles)	Birth defects, disruption of fetal growth
Syphilis	Abnormal teeth and bones, mental retardation
Toxoplasmosis	Hydrocephalus, blindness, mental retardation
Varicella zoster virus (chickenpox/shingles)	Skin scarring, limb reduction defects, muscle atrophy, mental retardation

Employees and students must be made aware of the hazards before beginning work in the laboratory. If you are considering becoming pregnant, or think you might be, and are concerned about your lab work contact DOHS to discuss your research and any precautions that should be taken. It is especially important to discuss the materials you handle, whether they are biological, chemical, or radioactive, with your physician. The final decision to continue to work in the laboratory rests with the employee or student. You may wish to consider changing your work or project to eliminate the exposure to the agent during the pregnancy, or request a medical leave. If appropriate work practices,

equipment controls, and personal protective equipment are used, pregnant women should be able to remain safe from biological exposures in the lab.

Conduct a risk assessment for the research and agents you'll be using to determine practices and procedures to reduce or eliminate the risk. Consult the infectious agent MSDSs for safety information. If you are working with these agents, follow the appropriate biosafety level precautions for the agent. Use appropriate PPE and follow good microbiological techniques and lab procedures, such as washing your hands when leaving the lab and before eating or drinking. Follow proper disinfection and decontamination procedures. For agents of particular concern, such as *Listeria monocytogenes*, the lab may be placarded to warn anyone who is/may be pregnant that the agent is in use in that location.