

Information for Immune Compromised Researchers

Purpose

Immune compromised laboratory researchers may be at increased risk for development of infectious diseases as a result of research activities including working directly with potential pathogens as well as working in the same laboratory space where infectious agents are studied. Examples from this group include employees and students.

What is immune compromise?

Immune compromise, also referred to as immunocompromise or immunosuppression, is a condition in which the immune system does not work as well as it does in normal healthy workers. Immune compromised personnel are at higher risk of illness and/or more serious side effects of illness caused by an infectious disease.

Information on this page regarding potential health considerations and risks is intended for immune compromised individuals who work in UC Irvine research laboratories and/or handle animals in these areas.

What conditions cause immune compromise?

There are many medical conditions that cause immune compromise. In general, if you have a medical condition that causes problems with your immune system, your primary physician will have informed you. Some examples include:

- Infection with Human Immunodeficiency Virus (HIV)
- Prolonged use of corticosteroid (cortisone) medications by mouth or by injection (these drugs are given for a variety of diseases including asthma, allergies and autoimmune disorders such as lupus and rheumatoid arthritis)
- Monoclonal antibody therapy
- Medications used by people who have received organ transplants
- Long term diabetes mellitus, kidney or liver disease
- Blood diseases (diseases that affect the bone marrow or white blood cells; for example, leukemia or lymphoma)
- Certain forms of cancer, leukemia and lymphoma
- Cancer chemotherapy and radiation therapy
- Chronic under nutrition (malnutrition)

- Pregnancy will cause some degree of immune compromise (i.e., Listeria, LCMV)
- Spleen removal

If I am immune compromised, what infections am I at increased risk for?

Almost all of the infectious disease agents that can infect healthy people pose more of a risk of infection for people who are immune compromised. Bacterial, viral, parasitic and fungal agents may be present in research labs. A few examples include:

- Tuberculosis (TB)
- Human Immunodeficiency Virus (HIV)
- Streptococcus pneumonia
- Herpes viruses
- Leishmania
- Enteric infections such as salmonella, campylobacter and cryptosporidium

Many infectious agents that do not normally cause serious health problems in healthy people can cause problems in immune compromised individuals. A few examples include:

- Mycobacterium marinum (found in fish tanks)
- Mycobacterium avium (found in birds)
- Cryptosporidium (found in many animals in the research laboratory)
- Giardia (found in cats, dogs, and sheep)
- Salmonella (found in many different research animals, especially reptiles/rodents)
- Shigella and campylobacter (found in many mammalian research animals)
- Ectoparasites such as mites (found in many research animals including birds, rodents and other mammals)
- Bordetella species (dogs, cats, pigs and other mammals)
- Bartonella species (cats and cat fleas)

Which vaccines are not safe for immune compromised people?

Before receiving any live bacterial or viral vaccines, your personal physician/provider should be consulted since these medications may pose risks of severe side effects:

- MMR (mumps, measles and rubella)
- Yellow fever vaccine

- Varicella (chicken pox and shingles vaccines)

In general, other vaccines that do not contain live bacteria or viruses are safe, but may be less effective and supply less protection in the case of laboratory exposure:

- Hepatitis vaccines
- Inactivated polio vaccine
- Tetanus, diphtheria and pertussis vaccines

In general, the tuberculin skin test is considered safe for individuals with immune compromise but may be less accurate than in a healthy individual.

If I am immune compromised, what can I do to reduce my risk of infection?

It is important to ask for help in evaluating your risks. The following resources are available:

- Know your workplace: Environmental Health & Safety (EH&S) and the UCI Institutional Biosafety Committee (IBC) conduct risk assessments of research projects and procedures to identify and minimize the potential risk of exposure to research-related hazards for all employees. In addition to identifying possible hazards in the workplace, EH&S Research Safety specialists can help evaluate engineering controls and safety practices to minimize your risk of exposure. In general, safety practices in the research setting are designed to minimize all personnel exposure to hazards.
- Talk to your provider: A primary care physician/provider who is aware of your medical condition and has a list of infectious agents present at your workplace can help you make important decisions regarding whether you should ask for work place accommodation. In addition to the infectious agents present in your workplace, discuss with your doctor your work activity, frequency and duration of contact with infectious agents, and the normal safety practices and equipment present in your workplace.
- Consult with the EH&S Occupational Health Coordinator: After talking to your physician to discuss infectious agents present in your workplace and your health condition and if medical recommendations or restrictions are necessary to minimize exposure, the EH&S Occupational Health Coordinator can assist in documenting medical recommendations and visiting an occupational health physician.
- For employees, please contact Workers' Compensation and Disability Management if job modifications or accommodations are needed to avoid possible workplace exposures, at wcdm@uci.edu.
- For students, please contact the UCI Disability Services Center if modifications or accommodations are needed to avoid possible exposures, at dsc@uci.edu.

What else can I do to reduce my risk?

- Always use the recommended engineering controls (such as biosafety cabinets).
- Always wear the recommended personal protective equipment.
- Always wash your hands after contact with animals, potential hazards and after taking off gloves.
- Ask for help in requesting accommodations in the workplace to avoid possible exposures.

What should I do if I have symptoms?

If you have any symptoms suggestive of infection from your workplace, seek medical evaluation as soon as possible.

- If your condition requires emergency treatment, go to the nearest Emergency Department for evaluation.
- Notify your supervisor and follow the [UCI incident reporting process](#)
- UCI employees should contact the Occupational Health Coordinator in EH&S and/or Workers' Compensation and Disability Management in Human Resources (HR) to schedule an appointment for evaluation and treatment.

Training and counseling regarding risk

Counseling of immune compromised laboratory workers and trainees regarding risk occurs both at the time of hire and during the course of employment:

- All personnel will be advised during the initial UC Laboratory Safety Fundamentals training and/or Orientation to Animal Research training (e.g., ULAR classroom training, CITI Training and the submission of the Laboratory Animal Occupational Health Program (LAOHP) questionnaire) about the increased risk of illness in immune compromised workers as a result of infectious disease exposure in the workplace.
- Immune compromised personnel will be encouraged to contact the EH&S Occupational Health Coordinator to identify potential pathogens in their work area. An individual risk assessment will be completed based on the laboratory biohazardous use and/or research animal environment.
- All personnel who receive a risk assessment will be encouraged to discuss the results of the risk assessment with their primary care physician and/or with a physician from The Center for Occupational and Environmental Health (COEH).

- In the event personnel have persistent concerns regarding risks of employment, they may be advised to make an appointment with COEH to assess risks and advise personnel regarding resources and options. The cost for this appointment may be covered either by the individual's department or Workers' Compensation, depending on the circumstances.
- Personnel will be advised of the UCI accommodation services available through Workers' Compensation (for employees) and/or UCI Disability Services Center (for students).
- Employees are encouraged to seek advice regarding potential infectious hazards from the Biosafety Officer or EH&S Occupational Health Coordinator, in addition to a medical consult with the Occupational Health Physician.

PI's Responsibility

The Principal Investigator (PI)/Laboratory Supervisor has responsibility for the health and safety of all laboratory personnel working under their authority or within their research facilities. The PI/Laboratory Supervisor may delegate the safety duties for which they are responsible, but must ensure delegated duties are performed and obligations met. Laboratory Personnel who work in research facilities have the right to be informed about the potential health hazards of the chemicals in their work areas and to be properly trained to work safely with those substances.