

Immune, Infectious, and Dermal Disease Prevention Program PPOP

What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Immune, Infectious, and Dermal Disease Prevention Program works with partners in industry, labor, trade associations, professional organizations, and academia. The program focuses on these areas:

- Reducing immune abnormalities (including immune aspects of asthma) associated with workplace exposures.
- Reducing occupational skin disorders and exposures that result in disease.
- Reducing exposure and transmission of infectious diseases in the workplace.

What do we do?

- Conduct research to better understand the impact and basic mechanisms of occupational exposures on the immune system, including exposures to chemical, biological, or infectious agents.
- Identify occupational allergens that cause disease in workers in high burden industries.
- Develop strategies for prevention and raise awareness of skin injury materials.
- Maximize resources by using statistical modeling to prioritize chemicals to research, rather than investigating all potentially hazardous chemicals.
- Improve surveillance for hazard identification, exposure assessment, and risk characterization of chemicals absorbed through the skin that lead to immune or systemic toxicity (e.g., damage to internal organs).
- Increase awareness of occupational immune and dermal health issues through collaborations with NIOSH sector programs; contributions to field investigations; and publications and presentations of research findings.
- Conduct investigations of infectious disease occurring in workplaces.
- Provide evidence-based recommendations and guidance on prevention measures for managers and workers to reduce transmission of infectious disease in the workplace.
- Publish [Skin Notation \(SK\) Profiles](#), hazard warnings used worldwide, to alert workers and employers to the health risks of skin exposures to workplace chemicals.

What have we accomplished?

- [Published](#) research on the efficacy of face masks, neck gaiters and face shields for reducing the expulsion of simulated cough-generated aerosols.
- Published review paper [Occupational Respiratory Infections](#) in Clinics in Chest Medicine.
- Published 30 worker-related COVID-19 guidance documents, 29 fact sheets, and 39 MMWRs and manuscripts.
- [Published](#) research on animal studies that characterize mouse pulmonary and neurological responses to repeated inhalation exposure to the indoor fungi *Aspergillus versicolor*.
- Published [skin notations](#) for: diacetyl, dioxane, beta-chloroprene, toluene diisocyanate, and chlorodiphenyl.

What's next?

- Investigate the toxicity of dermal exposure to perfluoroalkyl substances.
- Publish research on how exposure to disinfectants affect the immune system.
- Conduct research on bioaerosol sampling for SARS-CoV-2.
- Conduct investigations and publish guidance on infections with *B. cereus* containing homologue of anthrax pXO1 plasmid among welders.
- Investigate the effectiveness of indoor ventilation and 3-6 feet social distancing when attempting to prevent infectious disease transmission.
- Publish updated guidance on protecting workers from histoplasmosis.



Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

Mention of any company or product does not constitute endorsement by the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention

At-A-Glance

The Immune, Infectious, and Dermal Disease Program primarily focuses on hazard identification to prevent and minimize the effects of work-related dermal and immune diseases. This snapshot shows recent accomplishments and upcoming projects and activities.

Publication Spotlight: Efficacy of face masks, neck gaiters and face shields for reducing expulsion of simulated cough-generated aerosols



Publication Spotlight: Safe and Proper Sharps Disposal

Safe and Proper Sharps Disposal During the COVID-19 Mass Vaccination Campaign

Sharps are objects that can pierce the skin. For example, contaminated syringes and needles, lancets, scalpels, infusion needle sets, correction needles, auto injectors, or defined in the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens standard. This fact sheet reinforces how you can protect yourself from needlestick injuries while administering COVID-19 vaccines or while helping at vaccination sites.

Protect Yourself from a Needlestick Injury

- Place sharps disposal containers as close as possible to you or within arm's reach. When a wall mount is not possible, set the container on a table or on a cart in an upright position (preferably secured). Do not place sharps disposal containers on the floor or the ground.
- Immediately after you use a sharp, engage any safety features, and place it in a sharps disposal container that is closable, puncture-resistant, leakproof on the sides and bottom, and biohazard-labeled or color-coded.
- Do not remove, recap, break, or bend contaminated needles or separate contaminated needles from syringes before discarding them into a sharps disposal container as this increases the risk of a needlestick injury and a bloodborne pathogen exposure. Best practice is to immediately place the connected needle and syringe into the sharps disposal container.
- Use sharps containers to dispose of needles and other sharps contaminated with blood or other potentially infectious material.
- Close the container when it is filled to the clearly marked fill line or when it is 3/4 full if it has no fill line.
- Do not overfill sharps disposal containers—even during supply shortages—as this increases the risk of a needlestick injury and a bloodborne pathogen exposure.

Sharps Disposal Containers are for Needles and Sharps Only

- Place only needles and sharps in sharps disposal containers.
- Do not put anything in sharps disposal containers that can be placed in regular waste containers (such as uncontaminated trash, gloves, alcohol pads, needle caps, and gloves).
- Place non-sharp, contaminated material, such as gauze contaminated with blood or other potentially infectious material, in a red biohazard waste disposal bag.
- Follow your local guidelines for proper disposal methods. Visit <https://safeneedledisposal.org>

If you experience a needlestick from a used or contaminated needle, seek immediate evaluation and treatment.

Call the PEP (post-exposure prophylaxis) hotline at 1-888-443-4911 immediately for guidance on testing exposures.

Learn More about Sharps Disposal

[Safeneedledisposal.org](https://safeneedledisposal.org)
<https://www.cdc.gov/sharps/>

Food and Drug Administration (FDA): How to get rid of a sharps container
<https://www.fda.gov/oc/ohrt/sharps/>

OSHA: Bloodborne pathogens and needlestick prevention
<https://www.osha-slc.gov/bloodborne-pathogens>

OSHA: Bloodborne Pathogens standard
<https://www.osha-slc.gov/bloodborne-pathogens>

OSHA: Protecting yourself when handling contaminated sharps
<https://www.osha-slc.gov/bloodborne-pathogens>

OSHA: Poster for COVID-19 vaccination sites
<https://www.osha-slc.gov/bloodborne-pathogens>

CDC: Emergency sharps information (what to do in case of a needlestick)
<https://www.cdc.gov/sharps/>

National Institute for Occupational Safety and Health (NIOSH): Preventing needlestick injuries at COVID-19 vaccination sites
<https://www.cdc.gov/sharps/>

<https://www.cdc.gov/sharps/>

cdc.gov/coronavirus