

HEALTH AND SAFETY DURING C&D

C&D Basics



The cleaning and disinfection (C&D) process is necessary to prevent disease in animal settings, but injuries are possible during C&D tasks. Most disinfectants have some hazard and must be used with care. Follow these tips to stay safe!

WHAT ARE SOME OF THE RISKS WHEN USING DISINFECTANTS?

Depending on the product used, possible health impacts can affect the skin, eyes, nose, mouth, or respiratory tract.

- Irritation to the skin, eyes, nose, or lungs
- Allergic reactions (e.g., allergic dermatitis, asthma attacks)
- Chemical burns to the skin, eyes, nasal passages, especially concentrated solutions
- Respiratory distress, if inhaled
- Toxicity if ingested
- Some disinfectants (e.g., formaldehyde) are potential carcinogens

HOW CAN EXPOSURE OCCUR?

When preparing disinfectant solutions:

Concentrated products can splash onto skin or into eyes while pouring solutions.

When applying disinfectant solutions: Fine sprays or mists can expose the eyes, skin, or the respiratory tract.



DON'T FORGET PHYSICAL HAZARDS

Physical hazards can also occur when performing C&D duties. These include:

- Slips or falls due to wet, and sometimes slippery surfaces.
- Tripping hazards, such as hoses on the ground or other C&D equipment in the work area.
- Skin punctures from water jets when using high pressure sprayers.
- Burns to the skin from hot water, steam, flames, or other heat disinfection methods.
- Respiratory irritation from dust generated during the cleaning phase.
- Skin or eye damage from direct exposure to UV light.
- Electrical shock if electrical equipment is not turned off.

PROTECT ANIMALS

Animals can have similar exposure risks.

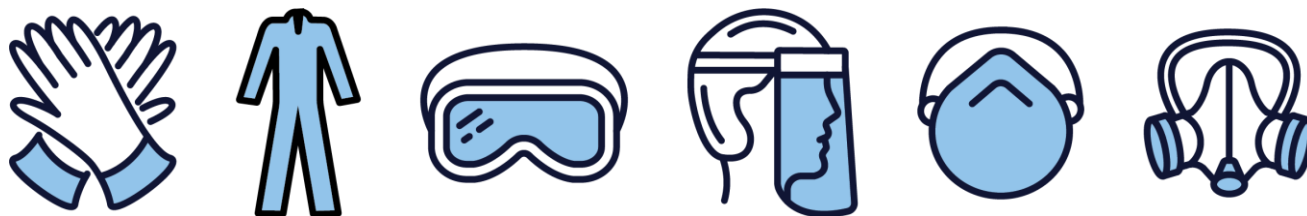
- Most disinfectants cannot be used when animals are present.
- Disinfectants should not be applied directly to animals unless labeled for such use.
- Some chemical disinfectants can cause burns or cracking of footpads or hooves.
- Animals can lick or ingest chemicals if areas or items are not rinsed well before animal use. All disinfectants are toxic if swallowed. Rinsing is especially critical for feeding and watering equipment.



HOW TO PROTECT YOURSELF AND OTHERS

Read the Product Label

Always read the product label (or the product safety data sheet) before preparing or using chemical disinfectants. The label will list any health hazards and protective measures needed. It will also have the necessary first aid and medical treatment information, and any additional dangers, such as flammability, corrosiveness, or explosive characteristics



Personal Protective Equipment (PPE)

Protect your skin, eyes, mouth, nose and respiratory tract. Always wear personal protective equipment (PPE) when handling, mixing and applying disinfectants.

- At a minimum this should include waterproof gloves, protection for exposed skin (e.g., coveralls, long sleeves), closed toed shoes (rubber boots are best) and eye/face protection (e.g., goggles or face shield).
- Masks should be worn when fine mists are generated. They should also be worn for situations involving significant amounts of dust generation or zoonotic disease potential.
- Some products may require a respirator (e.g., N-95 mask) during application.
- Additional personal protective equipment, such as waterproof or chemical-resistant suits (e.g., pants and jacket with hood), waterproof aprons, or respirators may be necessary for some situations (e.g., formaldehyde or acidic disinfectants).

Handwashing

Always wash your hands after handling, preparing, and applying disinfectants and before eating, drinking, or other hand-to-mouth activities.



PROTECT THE ENVIRONMENT

Many chemical disinfectants are hazardous for aquatic organisms (e.g., fish) and plants. Protecting the environment during C&D procedures is also critical. Runoff should be avoided or controlled to prevent entry into waterways, such as lakes, streams, ponds or wetlands. The use of berms and pumps to collect wastewater may be needed. Products that are biodegradable and safer for the environment should be considered.

For more information on disinfection in animal settings, visit the [CFSPH Disinfection Website](https://cfsph.iastate.edu/infection-control/disinfection).

Development of this material was made possible through a grant (award number AWD-025393-00001) from the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service through the National Animal Disease Preparedness and Response Program (NADPRP). USDA is an equal opportunity employer and service provider. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the USDA.