Disinfection of the Home and Non-Healthcare Settings

June 6, 2022

This document provides considerations on cleaning and disinfecting non-healthcare settings such as homes and cars that may be contaminated with Monkeypox virus. This is specific to the West African clade of Monkeypox virus only.

Purpose of Home Disinfection

People with monkeypox who do not require hospitalization may be isolated at home. Monkeypox spreads between people through direct contact with an infectious rash, body fluids, or by respiratory secretions during prolonged, face-to-face contact. Transmission of Monkeypox virus is possible from the onset of the first symptoms until the scabs have separated and the skin has fully healed. During the infectious period of time, body fluids, respiratory secretions, and lesion material from people with monkeypox can contaminate the environment. Poxviruses are known to be hardy and can survive in linens, clothing and on environmental surfaces, particularly when in dark, cool, and low humidity environments. In one study, investigators found live virus 15 days after a patient's home was left unoccupied. Studies show that other closely related Orthopoxviruses can survive in an environment, similar to a household, for weeks or months. Porous materials (bedding, clothing, etc.) may harbor live virus for longer periods of time than non-porous (plastic, glass, metal) surfaces.

Orthopoxviruses are very sensitive to UV light. Despite the ability of Orthopoxviruses to persist in the environment, they are also sensitive to many disinfectants, and disinfection is recommended for all areas (such as home and vehicle) where a person with monkeypox has spent time, as well as, for items considered to be potentially contaminated.

Disinfectant

Use an EPA-registered disinfectant, in accordance with the manufacturer's instructions. Follow all manufacturer directions for use, including concentration, contact time, and care and handling. When choosing a disinfectant, it is important to consider any potential health hazards, and do not mix disinfectants or add other chemicals. More considerations can be found here: Hazard Communication for Disinfectants Used Against Viruses | NIOSH | CDC. Follow these steps for safe and effective disinfectant use:

- **Check that your product is EPA-registered:** Find the EPA registration number on the product.
• **Read the directions:** Follow the product's directions. Check “use sites” and “surface types” to make sure this is the right product for your surface. Next, read the “precautionary statements.”
• **Pre-clean the surface:** Make sure to wash the surface with soap and water if the directions mention pre-cleaning or if the surface is visibly dirty. Dirt can keep the disinfectant from working.
• **Follow the contact time:** Follow the instructions: The surface should remain wet for the amount of time indicated to ensure the product is effective. Reapply if necessary.

**Cleaning and Disinfection**
During isolation at home, people with monkeypox should clean and disinfect the spaces they occupy regularly to limit household contamination.

• **ISOLATING ALONE IN HOME:** People with monkeypox who are isolating alone at home should regularly clean and disinfect the spaces they occupy, including commonly touched surfaces and items, to limit household contamination. Perform hand hygiene afterwards using an alcohol-based hand rub (ABHR) that contains at least 60% alcohol, or soap and water if ABHR is unavailable.

• **ISOLATING WITH OTHERS IN HOME:** People with monkeypox who are isolating in a home with others who don't have monkeypox should follow the isolation and infection control guidance, and any shared spaces, appliances, or items should be disinfected immediately following use.

People who have recovered from monkeypox and whose isolation period has ended should conduct a thorough disinfection of all the spaces within the home that they had been in contact with. Follow the steps below to minimize risk of infection to others in your home after recovery.

• If cleaning and disinfection is done by someone other than the person with monkeypox, that person should wear, at a minimum, disposable medical gloves and a respirator or well-fitting mask.
• Standard clothing that fully covers the skin should be worn, and then immediately laundered according to recommendations below.
• Hand hygiene should be performed using an ABHR, or soap and water if ABHR is unavailable.
• Focus on disinfecting items and surfaces that were in direct contact with the skin of the person with monkeypox, or often in the presence of the person with monkeypox, during isolation. If unsure, disinfect.
• Do not dry dust or sweep as this may spread infectious particles.
- Wet cleaning methods are preferred such as disinfectant wipes, sprays, and mopping.
- Vacuuming is acceptable using a vacuum with a high-efficiency air filter. If not available, ensure the person vacuuming wears a well-fitting mask or respirator.

- Clean and disinfect household in the following order:
  1. General waste containment
     i. Collect and contain in a sealed bag any soiled waste such as bandages, paper towels, food packaging, and other general trash items.
  2. Laundry
     i. Gather contaminated clothing and linens before anything else in the room is cleaned. Do not shake the linens as this could spread infectious particles.
  3. Hard surfaces and household items
  4. Upholstered furniture and other soft furnishing
  5. Carpet and flooring
  6. Waste disposal

**Laundry**

Used or contaminated clothing, linens and bedding materials, towels, and other fabric items should be contained until laundering. When at all possible, people with monkeypox should handle and launder their own soiled laundry. Laundry should not be mixed with that of other members of the household.

Follow these laundering procedures:
- Handle soiled laundry according to standard practices, avoiding contact with contaminites from the rash that may be present on the laundry.
- Soiled laundry should never be shaken or handled in a manner that may spread infectious particles.
- In-home laundry facilities:
  o Transfer soiled laundry items to be laundered in an impermeable container or bag that can be disinfected afterwards. Alternatively, a fabric bag may be used that can also be laundered along with the soiled items.
  o Wash laundry in a standard washing machine with detergent, following label instructions. Laundry sanitizers may be used but are not necessary.
- In-home laundry facilities not available:
  o When in-home laundry facilities (facilities not shared with other households) are not available, individuals should coordinate with their local public health department to determine appropriate laundering options.
Hard Surfaces (and non-porous car interiors)
Routinely clean and disinfect commonly touched surfaces and items (such as counters or light switches) using an EPA-registered disinfectant in accordance with the manufacturer's instructions.

- This includes surfaces like tables, countertops, door handles, toilet flush handles, faucets, light switches, and floors.
- Include interior surfaces of refrigerator, freezer, other appliances, interior cabinet spaces, or drawers if they have been accessed by the person with monkeypox.
- Items and surfaces within the home that have likely not been in contact with the person while sick with monkeypox do not need to be disinfected.
  - This includes clothing and items in drawers or boxes that have not been in contact with, or in the direct presence of the person with monkeypox.
- Wash soiled dishes and eating utensils in a dishwasher with detergent and hot water or by hand with hot water and dish soap.

Upholstered Furniture, Carpet and Soft Furnishing (and porous car interiors)
- If the person with monkeypox had direct skin contact and/or excessive drainage of fluids from rashes onto soft furnishings, such as upholstered furniture, carpets, rugs, and mattresses, steam cleaning can be considered. Discuss with state or local health authorities for further guidance.
- If the person with monkeypox had minimal contact with soft furnishings, disinfect the surface with a surface-appropriate disinfectant.

Waste Disposal
Generally, management of waste from homes, including those of people with monkeypox isolating at home, should continue as normal. Municipal waste management systems routinely collect and dispose of waste materials from individuals with infectious diseases and can do so safely using existing procedures.

- The person with monkeypox should use a dedicated, lined trash can in the room where they are isolating.
  - Any gloves, bandages, or other waste and disposable items that have been in direct contact with skin should be placed in a sealed plastic bag, then thrown away in the dedicated trash can.
  - The person with monkeypox or other household members should use gloves when removing garbage bags and handling and disposing of trash.
- If professional cleaning services are used, treat and/or dispose of waste in accordance with applicable state, local, tribal, and territorial laws and regulations for waste management. For more information, the Department of Transportation has
monkeypox-specific information in Appendix F-2 of the federal interagency guidance for managing solid waste contaminated with a Category A infectious substance.

Additional Information
For more information on cleaning and disinfection, see:

- CDC: Guide F – Environmental Control of Smallpox Virus
- CDC: Sequence for Donning and Removing Personal Protective Equipment