

Guidance for Prevention of Zoonotic Infection with Monkeypox

Monkeypox is a zoonotic disease, meaning that it can spread between animals and people. Certain African mammals, including several kinds of rodents and non-human primates, have been shown to be able to be infected with monkeypox virus. In 2003, an outbreak of monkeypox in domesticated prairie dogs occurred after they shared bedding and caging with a shipment of infected small mammals from West Africa. This led to 47 human cases in 6 states in the United States. Instances of animal-to-animal and animal-to-person spread, such as the 2003 outbreak, demonstrate the need to reduce the risk of infections to and from animals by isolating infected people as well as exposed and infected animals.

We are still learning which species of animals can get monkeypox. While we do not know if reptiles, amphibians, or birds can get monkeypox, it is unlikely since these animals have not been found to be infected with other orthopoxviruses. Animals that are infected can spread monkeypox virus to people, and it is possible that people who are infected can spread monkeypox virus to animals through close contact, including petting, cuddling, hugging, kissing, licking, sharing sleeping areas, and sharing food^{1,2,3,4}.

Recommendations for persons infected with monkeypox:

Because of the risk of zoonotic spread (between people and animals), people infected with monkeypox virus should receive the following information:

- Avoid direct contact with mammals, including pets, domestic animals, and wildlife to prevent spreading the virus. Do not pet, cuddle, hug, kiss, allow to lick, share sleeping areas or share food with animals.
- If there are pets in the household, and the person with monkeypox did NOT have close contact with pets after symptom onset, ask friends or family members who live in a separate home to be the animal's caretaker until the person with monkeypox fully recovers.
 - Disinfect home before bringing healthy animals back; follow the [general guidance on cleaning and disinfecting non-healthcare settings](#).
- If the person with monkeypox DID have close contact with pets in the household after symptom onset, exposed pets should be kept at home and away from other animals and people for 21 days after the most recent contact.

- If possible, the person with monkeypox should avoid close contact with the animal and ask another household member to care for them until fully recovered. Close contact with the animal should be limited.
- People who are immunocompromised, pregnant, have young children present (<8 years of age), or with a history of atopic dermatitis or eczema, should not provide care for animals that had close contact to a person with monkeypox as they may be at increased risk for severe outcomes from monkeypox disease.
- If the person with monkeypox must care for their pets during home isolation, they should:
 - Wash their hands, or use an alcohol-based hand rub, before and after caring for pets.
 - Cover any skin rash to the best extent possible (i.e. long sleeves, long pants), and wear gloves and a well-fitting mask or respirator while providing care for animals.
 - Ensure pets cannot inadvertently come into contact with contaminated articles in the home such as clothing, sheets, bandages, and towels used by the person with monkeypox.
 - Ensure food, toys, bedding, or other items provided for animals during isolation do not come in direct contact with skin or uncovered rash.
- Do not surrender, euthanize, or abandon pets just because of a potential exposure or infection.
- It is important to prevent pets' contact with wild rodents by [limiting their access into the home](#) and supervising pets outdoors.
- Animals exposed to monkeypox should be monitored for symptoms, and any symptoms reported to a veterinarian and the local health jurisdiction. Symptoms of infection may vary amongst different types of animals and may be mild or more severe. Symptoms may include lethargy, lack of appetite, cough, nasal secretions or crust, bloating, fever, and/or pimple- or blister-like skin rash.

If a person infected with monkeypox is unable to care for their animal, or if there is known ongoing contact with wild rodents due to an infestation or inability to keep the animal away from rodents, the animal should be temporarily removed from the home for a quarantine period of up to 21 days.

- Following recovery of the person with monkeypox, the home should be disinfected before bringing healthy animals back; follow the [general guidance on cleaning and disinfecting non-healthcare settings](#).

Recommendations for veterinarians examining exposed and symptomatic animals:

Veterinarians examining animals with suspected monkeypox should implement infection control practices, including hand hygiene and PPE (disposable gown, gloves, eye protection or face shield, and a well-fitting mask or respirator, ideally a disposable NIOSH-approved N95 filtering facepiece respirator)¹. Guidance on cleaning and waste disposal is available here: <https://www.cdc.gov/poxvirus/monkeypox/veterinarian/examination.html>.

Animal Testing Guidance:

Testing is recommended for symptomatic animals meeting the CDC case definition for suspect animal cases of monkeypox: <https://www.cdc.gov/poxvirus/monkeypox/veterinarian/case-def.html>. LHJs should work with the animal's veterinarian and WA DOH (Office of CDEpi Zoonotic Disease, 206-418-5500) regarding specimen collection and submission for testing; approval from the state veterinarian is required and will be coordinated by DOH.

Specimen collection

Acceptable clinical specimens: lesion material for animals with an active rash (a swab of lesion fluid or surface material, scabs and lesion crust), more than one lesion should be sampled from different locations on the body; oral, nasal, and anal swabs are acceptable if not lesion present. If crust is present on the nose or mouth, collect swabs from those areas. Blood may be collected in EDTA tubes for PCR and for separation of serum or plasma for serology.

- Vigorously swab the lesion to ensure adequate DNA is collected
- Wet lesions under the fur can be identified by clumping of hair (moist or dry)
- Use only polyester swabs with a thin plastic, wood, or aluminum shaft. Do not use cotton swabs if possible.
- Swab and lesion samples stored in VTM (300ul) or in a dry sterile tube are acceptable
 - Swabs can be stored in o-ring sealed screw-cap 2 mL tubes or other gasketed sterile container after breaking the shaft close to the swab tip, do not store multiple swabs in one container
- Specimens should be stored refrigerated or frozen within an hour of collection if possible

Animal Case Follow-up:

Animals infected with monkeypox virus should be separated from other animals and minimize direct contact with people for at least 21 days after becoming ill or until fully recovered.

- It is preferable to keep animals with signs of illness isolated in their home and away from anyone who has not had monkeypox.
- While caring for and cleaning up after sick animals, follow precautions including diligent hand hygiene and using personal protective equipment (PPE). [PPE should include gloves, eye protection \(safety glasses, goggles, or face shield\), and a well-fitting mask or respirator \(ideally a disposable NIOSH-approved N95 filtering facepiece respirator\)](#), and a disposable gown.

- If a disposable gown is not available, wear clothing that fully covers the skin (i.e. long sleeves, long pants), and immediately remove and [launder clothing](#) after contact with the animal, animal enclosures, or animal bedding.
- Use a dedicated, lined trash can for all potentially contaminated waste. Seal any bags of waste and do not leave or dispose of outdoors. If appropriate for the species and the plumbing system, flush animal waste down the toilet.

References:

1. <https://www.cdc.gov/poxvirus/monkeypox/veterinarian/index.html>
2. <https://www.gov.uk/government/publications/hairs-risk-assessment-monkeypox/qualitative-assessment-of-the-risk-to-the-uk-human-population-of-monkeypox-infection-in-a-canine-feline-mustelid-lagomorph-or-rodent-uk-pet#about-the-human-animal-infections-and-risk-surveillance-group>
3. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5227a5.htm>
4. https://wwwnc.cdc.gov/eid/article/13/9/07-0175_article
5. <https://www.cdc.gov/poxvirus/monkeypox/veterinarian/case-def.html>

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