

Report to the Boards of Health

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Monkeypox

Monkeypox is a viral illness that normally circulates in wild animals in western and central Africa. It is not clear what animals are the reservoir host, or the animals that carry the monkeypox without getting sick and serve as the source of infection to other animals and humans. It is thought that rodents or other small mammals are the reservoir hosts. All the other animals monkeypox can spread to is unknown, but humans, monkeys, apes, chimpanzees, gorillas, orangutans, gibbons, marmosets, other primates, rodents, shrews, prairie dogs, squirrels, groundhog/ woodchuck, opossums, hedgehog, and other small mammals have all been known to be infected.

Monkeypox virus is an *Orthopoxvirus* and is closely related to the variola (smallpox) virus. There are different strains, or clades, of the monkeypox virus. The monkeypox viruses from the Congo Basin seems to cause more serious illness, with a death rate around 10% during outbreaks in Africa. The viruses from West Africa tend to cause milder illness, but deaths are seen in children and those with a poor immune system. The death rate of the West African clade is 3.6%. It appears the West African clade is the cause for the 2022 outbreak occurring now in non-African countries.

You can get monkeypox from an infected animal, person, or an object with virus on it. If you come into contact with an infected animal, the virus can spread to you by the animal's bite or scratch, or by handling the animal's body, meat, or other products made from the animal. The monkeypox virus is spread between people by contact with the rash, sores, or scabs, or with any other body fluids including respiratory secretions of someone infectious.

If you are exposed to monkeypox, it usually takes 7-14 days to get sick, but can take anywhere from 5-21 days. The illness usually starts with fever, swollen lymph nodes, headache, muscle aches, backache, chills, and exhaustion. Typically, within 1 to 3 days of having a fever, you may get small spots or sores in your mouth and tongue and then a rash will appear, which tends starts on your face, hands, feet, arms, or legs. It may only appear where you came into contact with someone else's rash, like the genital area. The rash may hurt at first then itch as it starts to crust. It usually starts as a red patch, then becomes a bump, then a small blister, then a pustule, and finally scabs over. The rash usually breaks out and changes through these stages at the same time. This process lasts about 2 to 4 weeks. Sometimes the illness is more severe, especially in those that were more heavily exposed, children, people with poor immune systems or underlying health problems. Complications can occur, like secondary infections, bronchopneumonia, sepsis, encephalitis, and infection of the cornea with ensuing loss of vision. While not much is known about illness during pregnancy, several cases of fetal loss with and without evidence of infection have been reported. The related orthopoxvirus smallpox is associated with an increased risks to the mother and baby, including death, preterm birth, and spontaneous miscarriage.

Prior to 2022, human cases of monkeypox have almost always been confined to Africa. There have been a few cases among travelers from Africa to Europe and Asia, with one case causing spread to a hospital worker. There was also an outbreak in the United States in 2003, due to spread from pet prairie dogs to humans. Over the last 50 years, there has been a greater than 10-fold increase in confirmed, probable, and/or possible monkeypox cases, primarily in Africa, from 48 cases in the 1970s to 520 cases in the 1990s. Since the 1990s, there has been a very large increase in the number of cases reported by the Democratic Republic of the Congo (DRC). From 2000 to 2009, the DRC reported just over 10,000 suspected cases, and this increased to over 18,000 from 2010 to 2019. In

the 28 months from January 2020 to May 2022, there have already been over 10,000 (*of note, they've also had over 47,000 cases of measles since from January 2022 to May 2022*).

The smallpox vaccination is about 85% protective against monkeypox. Most cases (approximately 80%-96%) have occurred in unvaccinated individuals. The highest percentage of vaccinated cases (21%) occurred during the 2003 outbreak in the US. Routine smallpox vaccination stopped in the US in 1972 meaning nearly all individuals in the US that are 50 years of age and younger are unprotected.

Since May 2022, over 1,400 confirmed and probable cases have been reported in countries that are not endemic for monkeypox, with no deaths yet reported in any of these countries. While most of these cases have been in men who have sex with men (MSM), there have been reports of community transmission and cases in women. Finding monkeypox in so many new areas, with many cases not linked to travel or to each other suggests this may have been spreading undetected for a while. Genetic testing of samples from US cases suggest they are not related to cases occurring in Europe, further supporting ongoing spread. There is a real concern that monkeypox may become established in some of these new countries. This would be much more likely if it gets established in the local animals.

Since most new cases have been in MSM, there is a risk of stigmatization and neglecting other groups of people at risk of exposure or severe disease, like healthcare workers, sex workers, household members, immunocompromised people, pregnant women, and young children. The summer season, which usually has large events and festivals, may provide more opportunities for this disease to spread.

Recommendations:

1. Be aware of monkeypox and its risk factors. Resources are available for guidance, like "Social Gatherings, Safer Sex and Monkeypox"
https://www.cdc.gov/poxvirus/monkeypox/pdf/MPX_Social_Gatherings_Safer_Sex-508.pdf
2. STIs (sexually transmitted infections) can be confused for monkeypox, and many are increasing, such as syphilis. More information about STIs is available at
https://www.cdc.gov/std/healthcomm/fact_sheets.htm and free or reduced cost testing is available at the health department.
3. Our world keeps getting smaller as we travel more and more. We must be aware of our global health to protect our own health. <https://www.who.int/emergencies/disease-outbreak-news>

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