

## Emerging Infectious Disease Threats: Monkeypox

***The world is experiencing an outbreak of monkeypox, a contagious viral disease that typically occurs in central and west Africa but occasionally spreads to other parts of the world.***

Monkeypox does not spread easily among people without close contact. Unlike COVID-19, there is a low risk of spreading infection in the workplace, on public transportation, and in places like restaurants and stores. The U.S. Centers for Disease Control and Prevention (CDC) tracks monkeypox cases [globally](#) and [nationally](#).

On June 2, 2022, the CDC raised its monkeypox travel alert to level 2, warning Americans to practice enhanced precautions when traveling to countries where outbreaks are occurring. On June 29, the CDC listed the threat of infection in the general U.S. population as “low.” On Aug. 4, the Biden administration declared the monkeypox outbreak a national health emergency, an action that can trigger grant funding and other resources for a more robust federal response. Meanwhile, the Director-General of the [World Health Organization](#) has determined that the multi-country outbreak of monkeypox constitutes a Public Health Emergency of International Concern.

The CDC has notified health care providers to be alert for patients with monkeypox symptoms, regardless of whether they have specific exposure-related risk factors such as recent travel abroad, their gender or sexual orientation. [Early data suggest](#) that men who have sex with men account for a high percentage of cases in the U.S. However, patterns of disease spread are under investigation and anyone who has been in close contact with someone with monkeypox is at risk.

### Symptoms

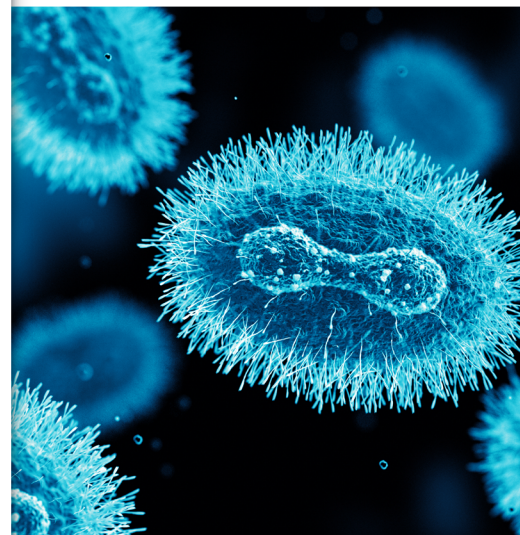
The incubation period for monkeypox averages 12 days. Illness typically begins with fever, headache, muscle aches, backache, swollen lymph nodes (a telltale sign), a general feeling of discomfort and exhaustion. A papular rash (raised, fluid-filled bumps) usually occurs within one to three days. It may appear on the groin, inside the mouth, vagina or anus, or on the hands, feet, chest or face. The rash goes through various stages before healing completely.

Monkeypox is usually a self-limited disease with symptoms lasting two to four weeks. However, severe cases can occur. Studies of human monkeypox infections in rural central and west Africa have reported case-fatality ratios of 1 to 10 percent.

### Spread

The following are ways the virus can spread from person to person:

- Direct contact with infectious rash, scabs or body fluids
- Respiratory secretions during prolonged face-to-face contact
- Intimate contact such as kissing, cuddling or having sex
- Touching contaminated clothing, linens or other items



It's also possible for people to get monkeypox from infected animals, either by being scratched or bitten, or when preparing and eating tainted meat.

Monkeypox can spread from the time symptoms start until the rash has fully healed. Scientists are studying whether monkeypox can be spread through contact with semen or vaginal fluids. The extent to which a person without symptoms may be contagious also has not been definitively determined.

## Prevention

Testing to detect infection and vaccination against the virus helps prevent the spread of monkeypox. The CDC reports that it is working with state and local health officials to identify people who may have been in contact with individuals who have tested positive for monkeypox so they can monitor for symptoms and changes in health status. Orthopoxvirus tests are being sent through the CDC to commercial laboratories to make testing more widely available, according to a [Health and Human Services press release](#).

In addition, on June 28, public health officials announced an [enhanced nationwide vaccination strategy](#) to make 1.6 million doses of JYNNEOS vaccine available in the U.S. by the end of the year, with 56,000 doses immediately available. However, subsequent supply shortages have created a need for a split-dose distribution plan across larger populations.

The CDC also recommends these preventive measures:

1. Wash hands with soap and warm water or use an alcohol-based hand sanitizer.
2. Avoid skin-to-skin and sexual contact in certain [social settings](#) or with an infected intimate partner until monkeypox sores have healed and a fresh layer of skin has formed.
3. Avoid touching materials with bare skin, such as bedding that has been in contact with a sick person or animal.
4. Isolate infected people from others who could be at risk for infection.
5. When caring for a sick person, wear personal protective equipment (PPE) such as an N95 mask and gloves, and in clinical settings, a gown and safety eyewear.
6. Avoid contact with animals that are sick or were found dead in areas where monkeypox occurs.

The U.S. Advisory Committee on Immunization Practices recommends that people whose jobs may expose them to orthopoxviruses get vaccinated. This includes clinical laboratory, research and health care personnel.

## Treatment

One antiviral agent developed for the treatment of smallpox has been licensed for the treatment of monkeypox in the U.S. People with monkeypox may take over-the-counter medications such as ibuprofen or acetaminophen to help relieve symptoms. Rest at home while in isolation is recommended.

Emergency care should be sought if the infected person is having trouble breathing, experiencing chest pain, seems confused or is having difficulty speaking or moving, or if they suffer a seizure or lose consciousness. First responders should be notified if monkeypox is suspected.

## Monkeypox Snapshot

- Monkeypox is caused by a virus that is a member of the orthopoxvirus genus in the family poxviridae.
- Monkeypox is a [zoonosis](#) – the virus is transmitted from animals to people; human-to-human transmission is limited.
- Monkeypox got its name when it was first identified in 1958 in research monkeys, but it is not primarily found in monkeys. It occurs among many species, including certain types of squirrels, rats and mice.
- The first human case of monkeypox was reported in 1970 in the Congo. The first U.S. monkeypox case of 2022 was confirmed on May 18 in Massachusetts.
- There are [two main types](#) of monkeypox virus: a west African version or clade, which is less severe and is the virus identified in the current outbreak, and a more lethal Congo Basin clade.
- Two vaccines - JYNNEOS and ACAM2000 - are approved for use to help prevent monkeypox infection. ACAM2000 was in greater supply, but due to side effects, it is not recommended for everyone.