

MONKEY POX

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KEYWORDS :

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Mpox, formerly known as monkeypox, is a viral illness caused by the monkeypox virus, belonging to the Orthopoxvirus genus. The virus has two main branches: Clade I (subclades Ia and Ib) and Clade II (subclades IIa and IIb). The 2022-2023 global outbreak was triggered by the Clade IIb strain. Initially identified in 1959, the virus was isolated from monkeys that fell ill during transit from Singapore to a research facility in Denmark. The first human case was confirmed in 1970 in the Democratic Republic of Congo, where a child was initially suspected of having smallpox.

Transmission

Mpox spreads from person to person mainly through close contact with someone who has mpox, including household members. Close contact includes skin-to-skin (such as touching or sex) and mouth-to-mouth or mouth-to-skin contact (such as kissing), and it can also include being face-to-face with someone who has mpox (such as talking or breathing close to one another, which can generate infectious respiratory particles). People with multiple sexual partners are at higher risk of acquiring mpox. People can also contract mpox from contaminated objects such as clothing or linen, through needle injuries in health care, or in community settings such as tattoo parlours. During pregnancy or birth, the virus may be passed to the baby. Contracting mpox during pregnancy can be dangerous for the fetus or newborn infant and can lead to loss of the pregnancy, stillbirth, death of the newborn, or complications for the parent. Animal-to-human transmission of mpox occurs from infected animals to humans from bites or scratches, or during activities such as hunting, skinning, trapping, cooking, playing with carcasses, or eating animals. The animal reservoir of the monkeypox virus remains unknown.

Signs And Symptoms

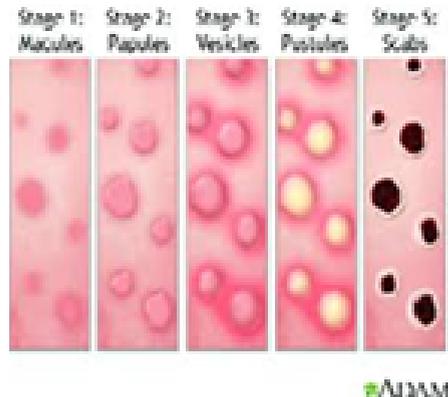
Mpox symptoms tend to start within 21 days after coming in contact with the virus. Symptoms that are like the flu, include sore throat, runny or stuffy nose, and cough.

Other symptoms may include

- Fever and chills
- Headache.
- Backache.
- Fatigue.
- Muscle aches and backaches.
- Swollen lymph nodes.

People usually get a skin rash about 1 to 4 days after the flu-like symptoms. Often, the mpox rash first appears on the face, hands, or feet and then spreads to other parts of the body. The rash may also start in the genital area, mouth, or throat. There may be many rash spots, a few spots, or just one.

The mpox rash goes through many stages. Flat spots turn into blisters. Then the blisters fill with pus, scab over, and fall off over a period of 2 to 4 weeks.



Diagnosis

Identifying mpox can be difficult because other infections and conditions can look similar. It is important to distinguish mpox from chickenpox, measles, bacterial skin infections, scabies, herpes, syphilis, other sexually transmitted infections, and medication-associated allergies. Someone with mpox may also have another sexually transmitted infection at the same time, such as syphilis or herpes. Alternatively, a child with suspected mpox may also have chickenpox. For these reasons, testing is key for people to get care as early as possible and prevent severe illness and further spread.

The preferred laboratory test for mpox is the detection of viral DNA by polymerase chain reaction (PCR). The best diagnostic specimens are taken directly from the rash – skin fluid, or crusts – collected by vigorous swabbing. In the absence of skin lesions, testing can be done using swabs of the throat or anus. Testing blood is not recommended. Antibody detection methods may not be useful as they do not distinguish between different orthopoxviruses.

Treatment And Vaccination

The goal of treating mpox is to take care of the rash, manage pain, and prevent complications. Early and supportive care is important to help manage symptoms and avoid further problems.

Getting a mpox vaccine can help to prevent infection (pre-exposure prophylaxis). It is recommended for people at high-risk of getting mpox, especially during an outbreak.

Groups that may be at high risk of mpox include:

- health care workers at risk of exposure.
- people in the same household or close community as someone who has mpox, including children.
- people who have multiple sex partners, including men who have sex with men.
- sex workers of any gender and their clients.

The vaccine can also be administered after a person has been in contact with someone who has mpox (post-exposure prophylaxis). In these cases, the vaccine should be given less

than 4 days after contact with someone who has mpox. The vaccine can be given for up to 14 days if the person has not developed symptoms. The vaccine for mpox is called Jynneos. People age 18 and older can get the vaccine depending on their risk of coming in contact with the virus. Two doses are given at an interval of four weeks. Some antivirals have received emergency use authorization in some countries and are being evaluated in clinical trials. To date, there is no proven effective antiviral treatment for mpox.

Prevent mpox in a few ways.

- Get the mpox vaccine.
- Avoid close contact with people who have a rash that looks like mpox.
- Avoid animals that may carry the monkeypox virus.
- The caretaker for a person with mpox, limits contact with objects and fabrics the person uses.
- Wash hands with soap and water, especially after any contact with a person or animal with mpox. If soap and water aren't available, use an alcohol-based hand sanitizer with at least 60% alcohol.

Complications

- Bacterial superinfection of skin
- Permanent skin scarring
- Hyperpigmentation or hypopigmentation
- Permanent corneal scarring (vision loss)
- Pneumonia
- Dehydration (vomiting, diarrhea, decreased oral intake due to painful oral lesions, and insensible fluid loss from widespread skin disruption)
- Sepsis
- Encephalitis
- Death

On 14 August 2024, under the International Health Regulations (2005), the WHO Director-General declared that the increase in mpox cases in the Democratic Republic of the Congo and its expansion to neighbouring countries constitutes a Public Health Emergency of International Concern (PHEIC). This spread presents a public health risk to other Member States and requires a coordinated international response.

Mpox cases have been reported in India since July 14, 2022, with the most recent case documented on March 27, 2024. A total of 30 laboratory-confirmed cases have been recorded, split equally between Kerala and Delhi.

The spread of infectious diseases requires a susceptible population and opportunities for transmission. Individual and herd immunity to mpox, previously achieved through widespread vaccinia vaccination, has declined since the 1980s, increasing human susceptibility to outbreaks.

In addition, interim sociopolitical and ecological changes in endemic regions likely increased human exposure to animal reservoirs. Education of patients and healthcare workers in regions where the mpox virus is endemic is of the utmost importance. Local containment is the best defense against the worldwide spread.

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