Biological Hazards

Mpox (monkeypox)

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What is mpox?

Mpox is a disease caused by a virus in the family Poxviridae. It is closely related to the smallpox virus, which was declared eradicated by the World Health Organization (WHO) in 1980. In November 2022, the World Health Organization began using 'mpox' as the preferred term for monkeypox disease.

Health Canada states that mpox is usually a mild illness and that most people recover on their own after a few weeks. In rare cases, death may occur.

What are the symptoms of mpox?

The incubation period (time between infection and experiencing symptoms) for mpox is usually between 3 to 21 days (generally 7 to 10 days). Mpox illness often resolves by itself in 2 to 4 weeks.

A rash (lesions), which can be painful, is a common symptom of the virus and can affect any part of the body such as the face, arms, legs, anus, and genitals. The rash can last 2 to 4 weeks as it goes through different stages, eventually forming scabs that fall off. When the scabs fall off, the skin may have pitted scars or be lighter or darker.

The stages of the mpox rash are:

Macules (flat skin discolouration)

- Papules (raised spots on the skin)
- Vesicles (fluid-filled blisters)
- Pustules (pus-filled bumps)
- Scabs

Other symptoms that can be experienced are:

- Fever
- Chills
- Swollen lymph nodes
- Headache
- Sore throat
- · Muscle, joint, and back pain
- Exhaustion
- Rectal pain
- Gastrointestinal symptoms (such as vomiting, and diarrhea)

Most individuals recover without treatment. Newborn babies, young children, pregnant persons, people with a history of eczema, and immunocompromised individuals are more at risk of severe disease and complications.

In rare cases, more serious complications can occur (such as sepsis) and may result in death.

How does mpox spread?

An individual with mpox can spread the disease while they have symptoms (or possibly up to 4 days before symptoms appear). A person is no longer contagious after the scabs have fallen off on their own and the skin is healed.

The mpox virus can be spread through:

- Person to person after contact with sores, lesions, scabs, bodily fluids (such as blood, saliva, semen, or pus from lesions) or mucosal areas (eyes, mouth, throat, anus, rectum, genitals). Common ways this type of spread can occur is through sexual contact or providing care to an infected person
- Bites or scratches from infected animals
- Contact with products from infected animals (such as furs or skin), eating undercooked meat from infected animals

- Touching contaminated surfaces, objects, and materials (such as bedsheets or clothes of a symptomatic person or by sharing personal objects used by an infected person such as razors, utensils, needles, etc.)
- The placenta (mother to fetus)
- Respiratory droplets produced by coughing, sneezing, breathing, or talking. It is not currently known if airborne transmission of the mpox virus occurs

Who is at risk of contracting mpox?

Mpox is typically found in central and western African countries. The cases discovered outside of these regions are believed to have been spread by infected travellers or animals.

In Canada, the risk of infection is considered low for the general population.

People who closely interact with symptomatic individuals are at greater risk of infection. These persons include healthcare workers, people living in the same house, and sexual partners. Workers such as doctors, nurses, and laboratory workers are at risk when they:

- Make physical contact with sick individuals, or shared surfaces or objects
- Work with infected individuals in poorly ventilated enclosed spaces, especially when physically close and for extended durations
- Handling animals or specimens that may carry the virus.

Currently, the cases reported in Canada are predominantly among men who have sex with men. Globally, the transmission between people is the result of close physical contact with symptomatic individuals.

What prevention measures can be taken?

The most effective way to avoid contracting mpox is by limiting exposure to infected individuals. Infected individuals should be encouraged to:

- Self-isolate as long as they are experiencing symptoms. In healthcare settings, suspected or confirmed cases should be isolated in a closed room with proper ventilation
- Cover skin lesions if possible (such as with clothing or a light bandage)
- Maintain good <u>hand hygiene</u> and <u>respiratory etiquette</u>
- Avoid close physical contact (such as sexual activity)
- Avoid touching shared surfaces, objects, and materials

- Avoid touching, scratching, or shaving the lesions
- Wear a suitable mask or respirator (such as a medical mask or N95 respirator)

Anyone who must be physically present with an infected individual (or surfaces, objects, and materials the individual has been in contact with) should:

- Avoid touching the individual, if possible (for example, do not hug or shake hands)
- Frequently wash (with soap and water) or sanitize hands, especially after physically touching an infected individual or touching contaminated surfaces, objects, and materials (such as clothes, towels, utensils, door handles, railings, or objects that came in contact with their secretions)
- Use impervious gloves and avoid direct contact with the skin lesions or secretions
- Wear an N95 or higher-level respirator, eye protection, and a gown (for healthcare personnel who must enter a patient's room). Note that workers who wear respirators for protection against workplace hazards need to be fit-tested
- · Get vaccinated

Do not reuse contaminated personal protective equipment (PPE).

Clean and disinfect objects or surfaces touched by infected individuals. Keep contaminated materials separate from clean objects and surfaces.

What should you do if you think you have mpox?

Immediately contact a healthcare provider if you have symptoms of mpox, particularly skin eruptions or swollen lymph nodes, or had contact with a known or suspected mpox case. Describe your symptoms and include how you may have been in contact (for example, recent travel to a place where there was a mpox outbreak, close contact where there have been suspected infections, etc.). Healthcare providers can advise on your next steps.

If you have been diagnosed with mpox, self-isolate until all symptoms resolve. All scabs should have fallen off and healed before ending isolation.

What is the treatment for mpox?

Most individuals with mpox do not require specific medical treatment. Symptoms are usually mild and supportive treatment is usually sufficient. Healthcare providers can monitor and adjust treatment based on the severity of the infection. Some antiviral treatments may be recommended by a healthcare professional.

Pre-exposure vaccination is possible in healthy, high-risk individuals who do not have other medical conditions that could cause issues (such as an allergic reaction to a vaccine component). Post-exposure vaccination may also be an option.

Where can I get more information about mpox?

More information is available from:

- Mpox (Monkeypox) Government of Canada
- Mpox World Health Organization (WHO)
- About Mpox Centers for Disease Control and Prevention (CDC)

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