

## Monkeypox Virus: Transmission, Prevention, and Control Measures

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## DESCRIPTION

Monkeypox virus is a rare viral disease that primarily occurs in remote regions of Central and West Africa. It belongs to the Orthopoxvirus family, which includes other well-known members such as smallpox virus and vaccinia virus. Monkeypox virus was first identified in laboratory monkeys in 1958 and was later discovered in humans in 1970. This virus spreads to humans through contact with animals, usually rodents and monkeys, who serve as reservoir hosts for the virus. Virus can be transmitted through direct contact with infected animals, their bodily fluids, or even their meat. Additionally, human-to-human transmission can occur through contact with bodily fluids, lesions, or respiratory secretions of infected individuals. The symptoms of monkeypox virus infection can range from mild to severe. Initial symptoms include fever, headache, muscle aches, backache, swollen lymph nodes, chills, and exhaustion. After a few days, a rash develops, which often begins on the face and then spreads to other parts of the body. The rash progresses to papules, then vesicles, and finally pustules, which scab over and fall off after about three weeks. In severe cases, it can cause complications such as pneumonia, sepsis, and encephalitis. Although the disease is usually self-limiting, meaning it resolves on its own, it can be fatal in some cases, especially in individuals with weakened immune systems.

This virus outbreaks occur sporadically in Central and West Africa, with the largest recorded outbreak occurring in Nigeria in 2017. The outbreak resulted in 172 confirmed cases and 9 deaths. Other outbreaks have occurred in the Democratic Republic of Congo, Cameroon, and the Central African Republic. Monkeypox virus outbreaks involves a multi-pronged approach, including surveillance, diagnosis, isolation, and treatment of infected individuals, contact tracing, and vaccination. Vaccination with smallpox vaccine is considered an

effective way of preventing monkeypox virus infection, as the two viruses are closely related. Smallpox vaccination has been used to successfully control monkeypox outbreaks in the past. Currently, there is no specific treatment for monkeypox virus infection. Supportive care, such as fluid and electrolyte replacement, management of pain and fever, and wound care, is the mainstay of treatment for affected individuals. However, some antiviral drugs have shown promise in animal studies and may be effective in treating human cases in the future. Prevention of monkeypox virus infection involves avoiding contact with infected animals, practicing good hygiene. In addition, individuals who have been in close contact with infected individuals should be closely monitored for symptoms and isolated if necessary. However, some antiviral drugs, such as cidofovir and brincidofovir, have shown promising changes in animal studies and may be effective in treating human cases in the future. It is important to note that the use of any medication for monkeypox virus infection should be based on the patient's clinical condition, and should only be prescribed by a qualified healthcare professional. Selfmedication or the use of unproven remedies can be dangerous and is not recommended. Additionally, prevention of monkeypox virus infection through vaccination and avoidance of contact with infected animals is the most effective way to control and prevent outbreaks.

Monkeypox virus is a rare but potentially serious viral disease that occurs primarily in Central and West Africa. Although the disease is usually self-limiting, it can cause severe complications and even death in some cases. Prevention and control of monkeypox virus outbreaks involve a combination of surveillance, diagnosis, isolation, treatment, contact tracing, and vaccination. Ongoing research into the pathogenesis, treatment, and prevention of monkeypox virus infection is essential to improving public health and preventing future outbreaks.

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