What you need to know about monkeypox

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Recently, several European countries have reported outbreaks of monkeypox following the first case (index case) reported in the United Kingdom on May 7, 2022, linked to a traveler from Nigeria. Monkeypox belongs to a family of other pox-like viruses and is a rare viral disease characterized by flu-like symptoms and a blistering rash that typically begins on the face and spreads to other areas of the body. Monkeypox, as with all zoonotic diseases, originated from an animal reservoir (experts speculate it to be rodents) and has mutated to infect humans.

The first case in 1958 was identified in primates being used for research, and the first human infection was reported in the Democratic Republic of Congo in 1970. Monkeypox has since been observed to be primarily localized to Western and Central Africa. Australia and Canada have also identified several infected individuals, and as of June 2, 2022, there have been 21 confirmed positives in ten states across the United States. Globally, this constitutes more than 550 cases at the time of writing. Surprisingly, the spread of the disease has neither been linked to the first case in the U.K. nor direct travel from endemic areas. As such, it is not yet clear how or why the incidence of monkeypox is increasing and what hidden factors might be driving transmission, prompting the World Health Organization (WHO) and international public health officials to employ contract tracing strategies to seek connections between those who have tested positive.

What is currently known is that monkeypox is transmitted primarily through close contact with skin lesions, bodily fluids, and respiratory droplets. Men aged between 20 and 50 years, many of whom have sex with other men (MSM), are notably included in a majority of the cluster cases, thereby indicating that sexual contact may be a significant route of transmission. The correlation with sexual activity does not corroborate increased contamination or virulence; it simply highlights that close contact and skin lesions may allow for monkeypox to spread most effectively. Anne Rimoin, professor of epidemiology at the University of California, Los Angeles, suggests that the virus may have coincidentally been introduced to the MSM community and spread from there. She implores the public to avoid stigmatization, especially during a crucial time where more information is needed to grasp the entirety of the situation.

The WHO has currently stated that it is unlikely for monkeypox to become the next pandemic given its low infectivity—especially compared to COVID-19—the risk to the general public is relatively small. This isn't the first time that the U.S. has dealt with this virus. In 2003, there was an outbreak of 71 cases due to the sale of infected prairie dogs across the country. Extensive laboratory testing, vaccine distribution, and updated FDA regulations on wildlife trade contained the situation. According to previous reports, death caused by monkeypox is rare (three to six percent of cases) in endemic regions. Emerging data shows the current strain of the virus circulating may have a mortality rate of ~3 percent

according to the WHO, although some sources claim that it may be as little as one percent. Regardless, careful monitoring and public awareness are vital to hedge against further spread. There are currently two vaccines that can be used to protect against monkeypox. Since smallpox is a close relative, the ACAM2000 smallpox (variola) vaccine is considered to be a viable option. JYNNEOS is a vaccine that is specifically licensed for monkeypox, and data suggests both are 85 percent effective. As of right now, there is no recommendation from public health officials for the general public to be vaccinated against the disease. As experts continue to monitor the evolving situation, they urge people to keep practicing good hand hygiene and to avoid contact with infected individuals.

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