



The BMJ

Cite this as: *BMJ* 2022;377:e1274  
<http://dx.doi.org/10.1136/bmj.e1274>  
 Published: 20 May 2022

## Monkeypox: What do we know about the outbreaks in Europe and North America?

Monkeypox, a virus first discovered in monkeys in 1958 and that spread to humans in 1970, is now being seen in small but rising numbers in Western Europe and North America. **Elisabeth Mahase** summarises what we know so far

Elisabeth Mahase

### How many cases have been confirmed?

Case numbers seem to be rising daily though are still low. In England 20 cases were confirmed between 6 and 20 May.<sup>1</sup> Meanwhile, Spain has reported 23 potential but unconfirmed cases, and Portugal has confirmed five of its 20 suspected cases.<sup>2</sup> One case in the US has been confirmed.<sup>3</sup>

### How is it spreading?

Transmission between people mostly occurs through large respiratory droplets, normally meaning prolonged contact face to face. But the virus can also spread through bodily fluids. The latest cases have mainly been among men who have sex with men.

The UK Health Security Agency said that, although monkeypox has not previously been described as a sexually transmitted infection, it can be passed on by direct contact during sex. It can also be passed on through other close contact with a person who has monkeypox or contact with clothing or linens used by a person who has monkeypox.<sup>4</sup>

Inger Damon, director of the US Centers for Disease Control and Prevention's Division of High Consequence Pathogens and Pathology, said, "Many of these global reports of monkeypox cases are occurring within sexual networks. However, healthcare providers should be alert to any rash that has features typical of monkeypox. We're asking the public to contact their healthcare provider if they have a new rash and are concerned about monkeypox."

### What are the symptoms?

Symptoms can include fever, headache, muscle aches, backache, swollen lymph nodes, chills, and exhaustion. Typically a rash will develop, which often starts on the face but can then spread to other areas such as the genitals. The rash will go through different stages before forming a scab that finally falls off. The European Centre for Disease Prevention and Control (ECDC) said that the recent cases among men who have sex with men have involved lesions in the genital area.<sup>5</sup>

### Is monkeypox deadly and can it be treated?

Generally, monkeypox cases are mild and people tend to recover within weeks. But the death rate varies, depending on the type. The ECDC has said that the west African clade, the type so far seen in Europe, has a case fatality rate of around 3.6% (estimated from studies conducted in African

countries). Mortality is higher in children, young adults, and immunocompromised individuals.

Michael Head, senior research fellow in global health at the University of Southampton, said, "The risks to the wider UK public are extremely low, and we do have healthcare facilities that specialise in treating these tropical infections. However, with tropical medicine, these imported cases do indicate a wider burden of disease elsewhere in the world. It may be that in a post-pandemic environment we should be giving more consideration to understanding the local and global implications of Lassa, monkeypox, Ebola, and other rare but serious pathogens."

Although there are no specific treatments for monkeypox, the smallpox vaccine—which has been shown to be up to 85% effective in preventing monkeypox—and the antivirals *cidofovir* and *tecovirimat* can be used to control outbreaks.<sup>6</sup> The UK government has reportedly bought thousands of vaccine doses and already begun deploying them among close contacts of infected people.<sup>7</sup>

### Have the US and Europe seen previous major outbreaks?

In 2003 the US had an outbreak of 47 confirmed and probable cases linked to a shipment of animals from Ghana. Everyone infected with monkeypox became ill after contact with pet prairie dogs that had been infected after being housed near the imported small mammals.<sup>8</sup>

Seven previous cases of monkeypox have been reported in the UK (in 2018, 2019, and 2021), mainly among people with a history of travel to endemic countries. However, the ECDC has said that this latest outbreak is the first time that chains of transmission have been reported in Europe without known epidemiological links to west and central Africa, and they are also the first cases reported among men who have sex with men.

In a statement it said, "Given the unusually high frequency of human-to-human transmission observed in this event, and the probable community transmission without history of travelling to endemic areas, the likelihood of further spread of the virus through close contact, for example during sexual activities, is considered to be high. The likelihood of transmission between individuals without close contact is considered to be low."

**Correction:** On 20 May we updated the number of confirmed cases in England from nine to 20.

- 1 UK Health Security Agency. Monkeypox cases confirmed in England: latest updates. May 2022. <https://www.gov.uk/government/news/monkeypox-cases-confirmed-in-england-latest-updates>.
- 2 Portugal identifies five monkeypox infections, Spain has 23 suspected cases. Reuters. May 2022. <https://www.reuters.com/business/healthcare-pharmaceuticals/portugal-identifies-five-monkeypox-infections-spain-has-23-suspected-cases-2022-05-18>.
- 3 Centers for Disease Control and Prevention. CDC and health partners responding to monkeypox case in the US. May 2022. <https://www.cdc.gov/media/releases/2022/s0518-monkeypox-case.html>.
- 4 Mahase E. Seven monkeypox cases are confirmed in England. *BMJ* 2022;377:o1239. doi: 10.1136/bmj.o1239 pmid: 35580887
- 5 European Centre for Disease Control and Prevention. Monkeypox cases reported in UK and Portugal. May 2022. <https://www.ecdc.europa.eu/en/news-events/monkeypox-cases-reported-uk-and-portugal#:~:text=The%20West%20African%20disease%2C%20which,at%20risk%20of%20severe%20disease>.
- 6 UK Health Security Agency. Monkeypox. <https://www.gov.uk/guidance/monkeypox#treatment>
- 7 Boyd C. UK is stockpiling "thousands" of monkeypox vaccines and drugs as experts fear dozens of infections are slipping under radar. Mail Online. May 2022. <https://www.dailymail.co.uk/health/article-10832623/UK-stockpiling-thousands-monkeypox-vaccines-drugs-UK-cases-rise-nine.html>.
- 8 Centers for Disease Control and Prevention. 2003 outbreak from imported mammals. <https://www.cdc.gov/poxvirus/monkeypox/outbreak/us-outbreaks.html>.