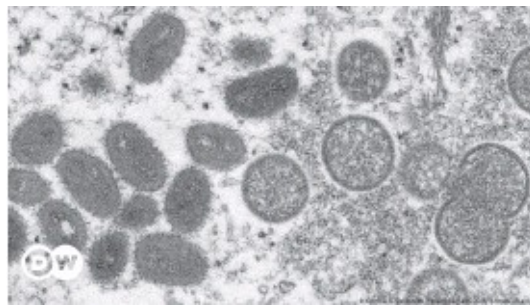


- Virus**Don't panic when it comes to monkeypox — but do be cautious**

According to the WHO, vaccination against human smallpox also works against monkeypox. But, as smallpox has been considered eradicated for decades, most people don't have sufficient vaccine protection anymore.

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First, there were six cases of monkeypox in the United Kingdom. Then, other European countries also recorded infections, including Germany, Spain, Portugal, France and Italy. Cases of monkeypox have also been detected in North America, Latin America and Australia. Experts are on heightened alert, but they warn against panicking.



A Risk Assessment by the European Centre for Disease Prevention and Control (ECDC), released on May 23, advises EU/EEA countries to "focus on prompt identification, treatment and tracing of contacts and reporting of new monkeypox cases."

Another recommendation from the agency is to review the availability of smallpox vaccines, antivirals and personal protective equipment for health professionals. Despite these serious indications, experts say there is no need to panic.

Parties in Spain a possible super-spreader?

"Most of the current cases have presented with mild disease symptoms, and for the broader population, the likelihood of spread is very low," said Andrea Ammon, ECDC Director.

"However, the likelihood of further spread of the virus through close contact, for example during sexual activities among persons with multiple sexual partners, is considered to be high."

In this context, Spanish authorities are investigating whether gay pride parties on the vacation island of Gran Canaria could be another source of monkeypox infections. This was reported by the Spanish paper El País, citing sources in the health sector.

From May 5 to 15, a total of about 80,000 people mostly from Spain joined in the pride parties. So far, 30 cases of monkeypox have been confirmed in Spain and there are 23 more suspected cases.

Smallpox vaccination might help

According to the World Health Organisation (WHO), vaccination against human smallpox is also effective against monkeypox. Both species are related but human smallpox is a lot more dangerous.

Because of the severe course of human smallpox, the high mortality rate and the high risk of infection, the WHO launched a worldwide vaccination campaign in 1966. In 1980, the WHO

declared smallpox eradicated worldwide. Since then, only people who work with vaccine viruses in laboratories have been vaccinated.

Majority not vaccinated

Since smallpox has been considered eradicated in humans for more than 40 years, people no longer get the jab. An estimated 70% of the world's population is not effectively vaccinated, according to a British study published in the July 2020 issue of the journal "Vaccine".

The European Center for Disease Control (ECDC) has already issued recommendations for so-called ring vaccinations. This involves vaccinating all close contacts of infected persons to form an immunity ring. Ring vaccinations are already being carried out in the United Kingdom.

The WHO has stockpiled smallpox vaccines. Many countries, such as the United States, Germany, Austria and Switzerland, maintain their own stocks. However, experts consider an outbreak with human smallpox to be extremely unlikely.

How is monkeypox transmitted?

The monkeypox virus, MPV, has been known since 1958 and has occurred mainly in West and Central Africa. Monkeypox belongs to the group of zoonoses, i.e. diseases transmitted from animals to humans, mainly by monkeys and various rodent species.

Infection is caused by infected animals, their secretions, blood, excretions, or contact with body tissues. Infection can also occur through handling the meat of infected animals.

"If human-to-animal transmission occurs, and the virus spreads in an animal population, there is a risk that the disease could become endemic in Europe. As such, there needs to be a close intersectoral collaboration between human and veterinary public health authorities to manage exposed pets and prevent the disease from being transmitted to wildlife", the Rapid Risk Assessment says.

What are the symptoms?

The first symptoms of a monkeypox infection are fever, headache, muscle pain, and back pain. The lymph nodes swell. There are noticeable skin changes, so-called skin florescence. Depending on the stage of the disease, these skin changes resemble those of chickenpox or syphilis.

Nodules, blisters or pustules may form. They usually start on the face and then spread to other parts of the body, such as legs and arms. Some of the cases reported this May also involved skin lesions in the genitourinary area. Men who had sex with men were particularly affected. According to Germany's Robert Koch Institute (RKI), they should "seek medical care immediately" if they experience unusual skin lesions.

While smallpox in humans is usually a very serious disease and often fatal, a monkeypox infection is much milder and patients usually recover within a few weeks. However, there are exceptions. If children under the age of 16 are infected with the Central African variant, a lethality of up to 11% can be observed, according to the RKI. The currently registered West African variant, on the other hand, leads to death in about 1% of those affected.

Are there any therapies?

Most therapeutic approaches focus on treating symptoms and relieving discomfort. In the EU, the drug Tecovirimat was recently approved by the EMA

(European Medicines Agency). It was developed for the treatment of infections with orthopoxviruses, a group which includes not only human smallpox but also cowpox and monkeypox.

A modern vaccine approved in the EU is Imvanex which is based on the so-called MVA, the Modified Vaccinia Virus Ankara. This live vaccine was originally approved only for smallpox in humans, but is also used offlabel against monkeypox, i.e. as a vaccine without official approval.

In the US and Canada, Imvanex is licensed for human smallpox and monkeypox. The Germany Paul Ehrlich Institute recommends use from the age of 18. Imvanex protects against the virus through what is known as cross-immunity.

The modern vaccine cannot replicate in humans and cannot cause the disease, a major difference to the vaccines used before smallpox was eradicated. The old vaccines contained viruses that could replicate and carried the risk of the virus spreading to other parts of the body.

The vaccination is administered subcutaneously on the upper arm and is recommended by the EMA for people who don't have any immunization. In these individuals, the preparation is administered twice, one month apart. For individuals who have already been vaccinated, a single dose of 0.5 milliliters of the vaccine is sufficient. The effectiveness of the vaccination is about 85%.