

**- Virus**

## Endemic, epidemic, pandemic: What's the difference?

A lot of people hope that the coronavirus will disappear as quickly as it came. But many virologists assume the virus will become endemic, especially with omicron. This means we'll have to live with it.

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A disease that occurs regularly in certain regions is called endemic. When a disease becomes endemic, the number of people falling ill remains relatively constant over time.

The number of cases is higher than in other areas but does not increase over time. Over a certain period of time, approximately the same number of people repeatedly contract the disease.

A typical example is malaria, which annually affects 300 million people worldwide, with most cases in the tropics. As early as May 2020, the World Health Organization (WHO) predicted that the coronavirus could become an endemic virus. The delta and omicron variants have since shown how adaptable the virus is, much like the flu. Endemic means the virus is out there in the world, and that we will have to learn to live with it in certain regions. It will not disappear.

The spread of a disease is termed an epidemic when it occurs with unusual frequency in a certain region and for a limited period of time.

When the number of cases of a disease in that particular region rises above the expected (endemic) level, it is called an epidemic. When the disease incidence is localized, it's often referred to as an outbreak.

An epidemic occurs, for example, when the virulence of a particular pathogen changes: a virus mutates and becomes more contagious.

Epidemics can also occur when diseases are newly introduced into a certain area. The prerequisite is that a disease can be passed from person to person.

An early example of this is smallpox, which was introduced to the Americas via the arrival of Europeans from the beginning of the 16th century. Because the Indigenous population had never before been in contact with the pathogens, their immune systems could not fend off the virus.

Individual projections suggest that up to 90% of the Indigenous population of the Americas fell victim to smallpox.

If a disease spreads across countries and continents, experts refer to it as a pandemic.

This means, above all, that successful control of the disease depends on cooperation among the health systems of different countries. It does not mean that a disease is particularly dangerous or deadly.

According to the WHO and the US Centers for Disease Control and Prevention (CDC), pan