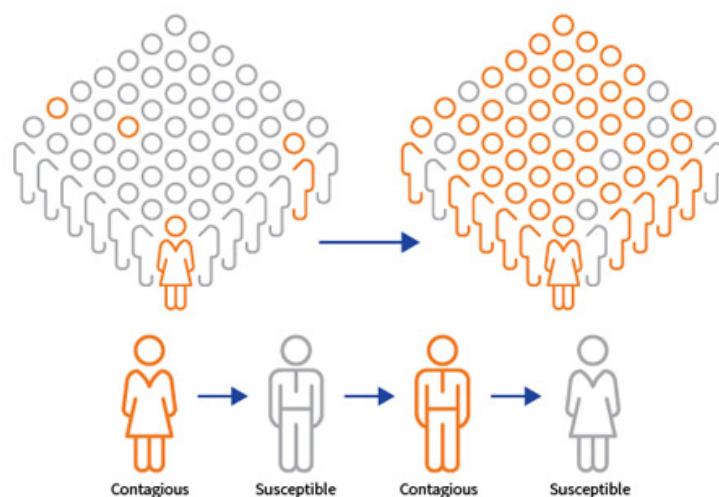


What is community immunity? The role of community immunity and vaccines?

When you get vaccinated, you protect yourself and others and it's called community immunity.

Community immunity or herd immunity is a condition in which a certain percentage of people are immune to certain infectious diseases to prevent human-to-human transmission. This immunity is acquired through people getting vaccinated or having had the disease before.

Put simply, when you get vaccinated, you protect yourself and the people around you and it's called community immunity.



The role of community immunity and vaccines?

The vaccine is designed to protect people who are injected against infections caused by viruses, bacteria and other pathogens.

Humans have completely eradicated a virus that causes smallpox through wide-area vaccination. However, if this vaccination is not continued, smallpox is likely to reappear in the future.

The more people in the community who are vaccinated, the fewer people are susceptible to the disease, including infants, those who have not been immunized and those who have immunodeficiency.

When the proportion of people who have vaccinated in the community is high enough, the chain of infection will be broken and stop the spread of infectious diseases in the community.

Conversely, when immunization rates fall, more people are susceptible to the disease, leading to an increased likelihood of the disease spreading and outbreaks.



The most obvious example of a broken community immunity is the measles virus. Before the 1960s, most children would get measles.

In 1971, the MMR vaccine, a combination vaccine, was used against three diseases including measles, mumps and rubella. After the vaccination, the incidence of all three diseases fell sharply.

When two doses of MMR vaccine are combined, the effectiveness in preventing measles virus infection ranges from 97% to 99%.

From 2000 to 2013, the worldwide prevalence of measles decreased by 75% due to vaccinations for infants and children. But because the vaccine is not yet fully implemented every year in the world, there are still about 145,700 measles deaths.

In the United States, measles was completely eliminated in 2000 thanks to high immunization rates, combined with good disease surveillance and rigorous disease control.

But an outbreak of measles with 178 people in 17 states has once again occurred in the US due to declining immunization rates and declining immunity of the community.

According to scientists' research, in order to create a community immunity to measles, the vaccination rate must be around 95%, which means that at least 95% of people in the community vaccinate. For polio, the incidence is about 80% to 85%.

The measles vaccination rate in the US has dropped to 92%, which is no longer high enough to achieve community immunity due to the growing anti-vaccination movement.

In West Africa, immunization for children in Guinea, Liberia and Sierra Leone is estimated to decrease by 25% between 2013-2014.

According to estimates by public health experts, about 1.1 million children have not been vaccinated in the last 18 months. This makes the number of people susceptible to measles significantly increase. It is estimated that there will be more than 200,000 cases and up to 16,000 deaths, double the number before the vaccination.

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