



HERD IMMUNITY

1. What is Herd Immunity?

- Herd immunity is sometimes also called *herd effect*, *community immunity*, or *population immunity*.
- It is a form of indirect protection from infectious disease that can occur with some diseases.
- Herd immunity is achieved when a sufficient percentage of a population has become immune to an infection whether through vaccination or previous infections.

2. Why do we want to reach Herd Immunity?

- It reduces the likelihood of infection for individuals who lack immunity because immune individuals are unlikely to transmit disease, disrupting chains of infection, which stops or slows the spread of disease.
- When more individuals are immune in a community, there is less chances that non-immune individuals will come into contact with an infectious individual.

3. What is better, to get to herd immunity with vaccination or to allow a disease to spread throughout the community?

- Public health experts including the World Health Organization (WHO) support achieving herd immunity through vaccination, not by allowing a disease to spread through any segment of the population. When disease spreads in communities, it results in *unnecessary* cases and deaths.
- WHO states that attempts to reach herd immunity through exposing people to a virus are scientifically problematic and unethical.
- While most infected people get mild or moderate forms of COVID-19 and some experience no disease, many become seriously ill and must be admitted into the hospital.
- We are only beginning to understand the long-term health impacts among people who have had COVID-19, including what is being described as 'Long COVID.' WHO is working with clinicians and patient groups to better understand the long term effects of COVID-19.
- Vaccines train our immune systems to create proteins that fight disease, known as 'antibodies', just as would happen when we are exposed to a disease but – crucially – vaccines work without making us sick.



- Achieving herd immunity with safe and effective vaccines makes diseases rarer and saves lives.

4. How do we get to this herd immunity against COVID-19?

- To safely achieve herd immunity against COVID-19, a substantial proportion of a population would need to be vaccinated, lowering the overall amount of virus able to spread in the whole population.
- When a large percentage of the population is vaccinated, the spread of disease is limited. This indirectly protects unimmunized individuals, including those who can't be vaccinated and those for whom vaccination was not successful. This is the principle of herd immunity.
- The percentage of people who need to be immune in order to achieve herd immunity varies with each disease.
 - For some diseases, herd immunity may begin to be induced with as little as 40% of the population vaccinated. More commonly, and depending on the contagiousness of the disease, vaccination rates may need to be as high as 80%-95%. This percentage is called the herd immunity threshold.
 - For example, herd immunity against measles requires about 95% of a population to be vaccinated. The remaining 5% will be protected by the fact that measles will not spread among those who are vaccinated. The 5% is "protected" because there is such a low chance of infection when 95% of the population is vaccinated.
 - For polio, the threshold is about 80%.
 - The proportion of the population that must be vaccinated against COVID-19 to begin inducing herd immunity is not known. This is an important area of research and will likely vary according to the community, the vaccine, the populations prioritized for vaccination, and other factors.

5. How many people need to get a COVID-19 vaccine for a community to have herd immunity?

- Centers for Disease Control and Prevention (CDC) states that "while experts don't yet know how many people would need to get vaccinated to achieve herd immunity, vaccination is a safer way to build protection than getting sick."



6. Are we getting close to herd immunity against COVID-19?

- According to WHO, the vast majority of people in most countries remain susceptible to the COVID-19 virus.
- We are still learning about immunity to COVID-19. Most people who are infected with COVID-19 develop an immune response within the first few weeks, but we don't know how strong or lasting that immune response is, or how it differs for different people. There have also been reports of people infected with COVID-19 for a second time.
- Until we better understand COVID-19 immunity, it will not be possible to know how much of a population is immune and how long that immunity last for, let alone make future predictions. These challenges should preclude any plans that try to increase immunity within a population by allowing people to get infected.