

The Impact of Vaccines: Key Facts

Vaccination is widely considered among the 10 greatest public health achievements of the 20th century. Only access to safe and clean water has had a larger effect on human health by preventing disease and extending lifespans.



Lives Saved and Disease Prevention

Vaccines work with the body's natural defenses to build protection

Vaccines prevent an estimated 3.5–5 million deaths annually worldwide due to diseases such as diphtheria, tetanus, pertussis, influenza, and measles.

Source: https://www.who.int/health-topics/vaccines-and-immunization#tab=tab_1



Economic Benefits of Vaccines

Direct savings in the Billions. Societal savings in the Trillions

Among children born during 1994–2023 in the United States, routine childhood vaccinations will have prevented approximately 508 million cases of illness, 32 million hospitalizations, and 1,129,000 deaths, resulting in direct savings of \$540 billion and societal savings of \$2.7 trillion.

Source: https://www.cdc.gov/mmwr/volumes/73/wr/pdfs/mm7331a2-H.pdf



MMR Vaccine: Measles, Mumps, and Rubella

Before a vaccine nearly all children were infected

In the U.S., before a measles vaccine became available in 1963, nearly all children contracted measles by age 15, with 3 to 4 million people infected annually. Among reported cases each year, an estimated 400 to 500 people died, 48,000 were hospitalized, and 1,000 experienced encephalitis, a severe brain swelling. The MMR vaccine has prevented millions of deaths globally from measles, including over 60 million between 2000 and 2023. Two doses of MMR vaccine are 97% effective against measles and 88% effective against mumps. There is no evidence that the MMR vaccine causes autism. Multiple studies have found no association between the vaccine and autism.

Sources:

- https://www.cdc.gov/measles/about/history.html
- https://www.who.int/news-room/fact-sheets/detail/measles
- https://www.cdc.gov/vaccines/vpd/mmr/public/index.html



Herd Immunity

Vaccine is the safest way to achieve herd immunity.

Herd immunity means that enough people in a group or area have achieved immunity (protection) against a virus or other infectious agent to make it very difficult for the infection to spread, and vaccination is the best way to achieve this.

When a person is immune, it becomes more difficult for an infection to spread to others. By getting vaccinated, you create a barrier that prevents the virus from using you to infect others or evolve into new variants. For highly contagious viruses, a larger proportion of the population needs immunity to effectively stop the spread of disease.

Source: https://my.clevelandclinic.org/health/articles/22599-herd-immunity



Did you know these facts?

Vaccines have helped eliminate polio in much of the world

Since the launch of the Global Polio Eradication Initiative in 1988, cases have decreased by over 99%. Only two countries still report endemic wild poliovirus cases—Afghanistan and Pakistan.

Source: https://www.who.int/health-topics/poliomyelitis#tab=tab1

The flu vaccine reduces the risk of flu-related hospitalization

During the 2022–2023 flu season, emergency department and urgent care visits were reduced by 44% and hospitalizations by 35% among adults. Flu vaccination also mitigates severe outcomes, including ICU admissions, especially for high-risk groups such as older adults and those with underlying conditions.

Source: <u>https://www.cdc.gov/flu/whats-new/2023-2024-study-prevent-medical-visits.html</u>