

Why Immunize?

Disease	What it Does	Year Vaccine Developed &/or licensed	Why Immunize
Polio	Causes acute paralysis that can lead to permanent physical disability and even death.	1955	Before polio vaccination was available, 13,000 to 20,000 cases were reported each year in the U.S. None were reported in 2000.
Measles	Rash that can cause complications such as pneumonia, diarrhea or ear infections in 9% of those infected. Some develop encephalitis, which results in brain damage.	1963	Between 1958-1962, an average of 503,282 measles cases were reported with 432 deaths. Measles is still one of the most infectious diseases in the world, and is frequently imported into the US. If vaccinations were stopped, 2.7 million measles deaths could be expected worldwide.
Haemophilus Influenzae Type b (Hib) Meningitis	Most common cause of bacterial meningitis in the U.S. before the vaccine. Led to deafness, seizures or mental retardation in those who survived the disease.	1985	Before the vaccination, Hib was the leading cause of childhood bacterial meningitis and postnatal mental retardation. 34 cases of Hib disease were reported among children less than 5 years in 2005. Hib meningitis killed 600 children a year, and infected 20,000. If we were to stop immunizing, we would likely return to the pre-vaccine numbers of infections and deaths.
Pertussis (Whooping Cough)	Can lead to pneumonia, seizures, brain disease and death in infants. Results in prolonged coughing that lasts for many weeks, causing dehydration and vomiting.	1926	In 1922, 107,473 cases were reported; 5,099 deaths. Before immunization, up to 260,000 cases were reported in the U.S. each year, with up to 9,000 deaths. Pertussis still occurs worldwide. In 2002, 9,771 cases were reported.
Rubella (German Measles)	Usually mild in children and adults, up to 90% of infants born to infected mothers will develop congenital rubella syndrome (CRS), resulting in heart defects, cataracts, mental retardation and deafness.	1969	Before the 1965 vaccination was used routinely in the U.S., rubella resulted in an estimated 20,000 infants born with CRS, 2,100 neonatal deaths and 11,250 miscarriages in a two-year time span. Rubella declared no longer endemic in US in 2005
Varicella (Chickenpox)	Always present in the community and highly contagious. Can be severe in some, leading to complications such as dehydration, pneumonia, and shingles. Children miss a week or more of school on average when	1995	Chickenpox was responsible for an estimated 4 million cases, 11,000 hospitalizations and 100 deaths each year before the licensing of the chickenpox vaccine ⁹⁵ . In 1995, 120,624 cases were reported. 22,841 cases were reported in 2002; 9 deaths.

	infected with chickenpox.		
Hepatitis B	Infants and children who become infected with Hepatitis B are at the highest risk of developing life-long infection, which often leads to death from liver disease and liver cancer.	1982	In 1982, 22,177 cases were reported. Approximately 25% of children who become infected with life-long hepatitis are expected to die of a related disease as adults. In addition to the 12,000 infants infected by their mother during birth, approximately 33,000 children under the age of 10 were infected before the vaccination. In 2002, 7,996 cases were reported.
Diphtheria	A serious disease caused by poison produced from the bacteria. It frequently causes heart and nerve problems.	1923	In 1920, 147,991 diphtheria cases were reported and 13,170 deaths. The death rate before vaccinations was up to 20% in the young and elderly. Although Diphtheria is primarily in other countries, international travels make it easy to contract. In 1921, a diphtheria outbreak caused 12,230 deaths in the U.S. 1 case was reported in 2002.
Tetanus (Lock Jaw)	A severe, often fatal disease. Leads to stiffness and spasms of the muscles. Can cause the throat to close, and spasms can cause fractures.	1927	Between 1922-1926, an average of 1,314 cases of tetanus were reported per year. Approximately 30% of reported cases of tetanus end in death. Tetanus kills 300,000 newborns and 30,000 birth mothers worldwide, from lack of immunization. Tetanus is not contagious, and can only be prevented by immunization. People of all ages can be infected. In 2002, 25 cases were reported in US.
Mumps	Once a major cause of deafness in children, occurring in approximately 1 of every 20,000 cases reported. Can cause swelling of the brain, nerves and spinal cord that can lead to paralysis, seizures and fluid in the brain.	1967	Before the vaccination was developed in 1967, an estimated 212,000 cases occurred in the U.S. annually. In 1986 and 1987, there was a resurgence of mumps with 12,848 cases reported. Since 1989, the incidence has declined, with a total of 323 cases last year. In 2002, 270 cases were reported.
Smallpox	Smallpox is a serious, contagious, and sometimes fatal infectious disease. There is no specific treatment for smallpox disease, and the only prevention is vaccination. The <i>pox</i> part of <i>smallpox</i> is derived from the Latin word for "spotted" and refers to the raised bumps that appear on the face and body of an infected person.	1796 (not widely used before 1900)	In 1900, 21,064 smallpox cases were reported; 894 deaths. Smallpox was eradicated in 1977
Influenza	The flu is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead	1945 (not routinely used until 2004)	Every year in the United States, on average 5% to 20% of the population gets the flu; more than 200,000 people are hospitalized from flu-related complications;

	to death. Some people, such as older people, young children, and people with certain health conditions (such as asthma, diabetes, or heart disease), are at high risk for serious flu complications.		and about 36,000 people die from flu-related causes.
Pneumococcal	Symptoms of pneumococcal disease include pneumococcal pneumonia (high fever, cough, and shortness of breath), bacteremia (fever and feeling generally poorly), and meningitis (fever, headache, thinking slowly or not clearly).	1977 (polysaccharide) 2000 (conjugate – childhood vaccine)	In 1998-1999, rate of invasive pneumococcal disease in children was 188 per 100,000 population. Disease rates have declined 70-80% among children younger than 2 years of age, compared to 1998-1999.

Source: Centers for Disease Control and Prevention (www.cdc.gov)

References:

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