



Comparison of effects of vaccines & diseases

Disease	Effects of disease	Side effects of vaccination
Diphtheria - contagious bacteria spread by droplets; causes severe throat and breathing difficulties.	About 1 in 15 patients dies. The bacteria release a toxin, which can produce nerve paralysis and heart failure.	DTPa vaccine - about 1 in 10 have local inflammation or fever. Serious adverse events are very rare, and much less common than with DTPw.
Hepatitis B - virus spread mainly by blood, sexual contact or from mother to newborn baby; causes acute hepatitis or chronic carriage.	About 1 in 4 chronic carriers will develop cirrhosis or liver cancer.	About 1 in 15 to 1 in 100 will have pain and fever.
Hib - contagious bacteria spread by droplets; causes meningitis, epiglottitis (respiratory obstruction), septicaemia, osteomyelitis.	About 1 in 20 meningitis patients dies and 1 in 4 survivors has permanent brain or nerve damage. About 1 in 100 epiglottitis patients dies.	About 1 in 20 has discomfort or local inflammation. About 1 in 50 has fever.
Influenza - contagious virus spread by droplets; causes fever, muscle and joint pains, pneumonia.	Causes increased hospitalisation in the elderly. High-risk groups include the elderly, diabetics and alcoholics.	About 1 in 10 have local reactions. Guillain-Barré syndrome occurs in about 1 in 1 million.
Measles - highly infectious virus spread by droplets; causes fever, cough, rash.	1 in 25 children with measles develops pneumonia and 1 in 2,000 develops encephalitis (brain inflammation). For every 10 children who develop measles encephalitis, 1 dies and 4 have permanent brain damage. About 1 in 25,000 develops SSPE (brain degeneration), which is always fatal.	About 1 in 10 have discomfort, local inflammation or fever. About 1 in 100 develops a rash, which is non-infectious. 1 in 1 million recipients may develop encephalitis (inflammation of the brain).
Meningococcal infections - bacteria spread by respiratory droplets. Causes sepsis (infection of the blood stream) and meningitis (infection of the tissues surrounding the brain).	About 1 in 10 patients die. Of those that survive, 1 in 30 have severe skin scarring or loss of limbs, and 1 in 30 has severe brain damage.	Polysaccharide vaccine: Local reactions common. Mild fever, headache, malaise in 1 in 30. Conjugate vaccine: About 1 in 10 has local inflammation, fever, irritability, anorexia or headaches.
Mumps - contagious virus spread by saliva; causes swollen neck and salivary glands, fever.	1 in 200 children develops encephalitis. 1 in 5 males past puberty develop inflammation of the testes. Occasionally mumps causes infertility or deafness.	1 in 100 vaccine recipients may develop swelling of the salivary glands. 1 in 3 million recipients develop mild encephalitis.
Pertussis - contagious bacteria spread by droplets; causes whooping cough and vomiting, lasting up to 3 months.	About 1 in 200 whooping cough patients under the age of 6 months dies from pneumonia or brain damage.	As for DTPa vaccine (see diphtheria).
Pneumococcal infections - bacteria spread by droplets; causes fever, pneumonia, septicaemia, meningitis.	About 1 in 10 meningitis patients dies.	Polysaccharide vaccine: Less than 1 in 20 has pain or local reaction. Conjugate vaccine: About 1 in 10 has local reaction or fever.



<p>Polio - contagious virus spread by faeces and saliva; causes fever, headache, vomiting and may progress to paralysis.</p>	<p>While many infections cause no symptoms, about 1 in 20 hospitalised patients dies and 1 in 2 patients who survive is permanently paralysed.</p>	<p>OPV: Less than 1 in 100 recipients develop diarrhoea, headache and / or muscle pains. 1 in 2.5 million recipients or close contacts develop paralysis. IPV: Local redness (1 in 3), pain (1 in 7) and swelling (1 in 10) common. Up to 1 in 10 has fever, crying, and decreased appetite.</p>
<p>Rubella - contagious virus spread by droplets; causes fever, rash, swollen glands, but causes severe malformations to babies of infected pregnant women.</p>	<p>About 5 in 10 patients develop a rash and painful swollen glands, 5 in 10 adolescents and adults have painful joints, 1 in 3,000 develops thrombocytopenia (bruising or bleeding), and 1 in 6,000 develops inflammation of the brain. 9 in 10 babies infected during the first 10 weeks after conception will have a major congenital abnormality, such as deafness, blindness, or heart defects.</p>	<p>About 1 in 10 have discomfort, local inflammation, or fever. About 1 in 20 has swollen glands, stiff neck, or joint pains. About 1 in 100 have a rash, which is non-infectious. Thrombocytopenia (bruising or bleeding) occurs after a first dose of MMR at a rate of 1 in 30,500.</p>
<p>Tetanus - caused by toxin of bacteria in soil; causes painful muscle spasms, convulsions, lockjaw.</p>	<p>About 1 in 10 patients dies. The risk is greatest for the very young or old.</p>	<p>As for DTPa vaccine (see diphtheria).</p>
<p>Varicella (chickenpox) - caused by highly contagious virus; causes low-grade fever and vesicular rash.</p>	<p>1 in 5,000 patients develop encephalitis (brain inflammation). About 3 in 100,000 patients die.</p>	
<p>Reactivation of the virus later in life causes herpes zoster (shingles).</p>	<p>Infection during pregnancy can result in congenital malformations in the baby. Onset of infection in the mother from 5 days before to 2 days after delivery results in severe infection in the newborn baby in up to one-third of cases.</p>	
