

# Vaccines for Preventable Diseases

Disease	Vaccine	Disease spread by	Disease symptoms	Disease complications
<b>Chickenpox</b>	Varicella vaccine protects against chickenpox	Air, direct contact	Rash, tiredness, headache, fever	Infected blisters, bleeding disorders, encephalitis (brain swelling), pneumonia (infection of the lungs)
<b>Diphtheria</b>	DTaP* vaccine protects against diphtheria	Air, direct contact	Sore throat, mild fever, weakness, swollen glands in neck	Swelling of the heart muscle, heart failure, coma, paralysis, death
<b>Human Papillomavirus (HPV)</b>	HPV9 vaccine (Gardasil) protects against the 9 HPV strains that cause most of the cancers and genital warts.	Vaginal, anal or oral sex; intimate skin to skin contact. HPV is the most common sexually transmitted infection.	Certain strains cause genital warts; may be no symptoms.	Cancer of the cervix, vagina, and vulva; cancer of the penis; cancer of the anus; cancers of the mouth, tongue, tonsils and throat. These cancers can lead to death.
<b>Hib</b>	Hib vaccine protects against <i>Haemophilus influenzae</i> type b	Air, direct contact	May be no symptoms unless bacteria enter the blood	Meningitis (infection of the covering around the brain and spinal cord), intellectual disability, epiglottitis (life-threatening infection that can block the windpipe and lead to serious breathing problems), pneumonia (infection in the lungs), death
<b>Hepatitis A</b>	HepA vaccine protects against hepatitis A	Direct contact, contaminated food or water	May be no symptoms, fever, stomach pain, loss of appetite, fatigue, vomiting, jaundice (yellowing of skin and eyes), dark urine	Liver failure, arthralgia (joint pain), kidney, pancreatic, and blood disorders
<b>Hepatitis B</b>	HepB vaccine protects against hepatitis B	Contact with blood or body fluids	May be no symptoms, fever, headache, weakness, vomiting, jaundice, (yellowing of skin and eyes), joint pain	Chronic liver infection, liver failure, liver cancer
<b>Influenza (Flu)</b>	Flu vaccine protects against influenza	Air, direct contact	Fever, muscle pain, sore throat, cough, extreme fatigue	Pneumonia (infection in the lungs), death
<b>Measles</b>	MMR** vaccine protects against measles	Air, direct contact	Rash, fever, cough, runny nose, pinkeye	Encephalitis (brain swelling), pneumonia (infection in the lungs), death
<b>Meningococcal Disease</b>	MCV4 vaccine (Menactra) protects against meningococcal disease caused by serogroups A, C, W and Y	Air, direct contact, coughing, kissing, close household contact	Sudden onset of fever, chills, headache and stiff neck. Also confusion, nausea, vomiting, purple bruising rash, sensitivity to light	Meningitis (infection of the lining of the brain and spinal cord), septicemia (severe blood infection). Can quickly lead to death in 10-15% of cases. Many survivors suffer from deafness, brain damage, amputations, scarring and neurological problems
<b>Meningococcal Disease, serogroup B</b>	MenB vaccines (Bexsero and Trumenba) protect against meningococcal disease caused by serogroup B	Air, direct contact, coughing, kissing, close household contact	Sudden onset of fever, chills, headache and stiff neck. Also confusion, nausea, vomiting, purple bruising rash, sensitivity to light	Meningitis (infection of the lining of the brain and spinal cord), septicemia (severe blood infection). Can quickly lead to death in 10-15% of cases. Many survivors suffer from deafness, brain damage, amputations, scarring and neurological problems.
<b>Mumps</b>	MMR** vaccine protects against mumps	Air, direct contact	Swollen salivary glands (under the jaw), fever, headache, tiredness, muscle pain	Meningitis (infection of the covering around the brain and spinal cord), encephalitis (brain swelling), inflammation of testicles or ovaries, deafness
<b>Pertussis</b>	DTaP* vaccine protects against pertussis (whooping cough)	Air, direct contact	Severe cough, runny nose, apnea (a pause in breathing in infants)	Encephalitis (brain swelling), pneumonia (infection in the lungs), death
<b>Pneumococcal</b>	PCV vaccine protects against pneumococcus	Air, direct contact	May be no symptoms, pneumonia (infection in the lungs)	Bacteremia (blood infection), meningitis (infection of the covering around the brain and spinal cord), death
<b>Polio</b>	IPV vaccine protects against polio	Air, direct contact, through the mouth	May be no symptoms, sore throat, fever, nausea, headache	Paralysis, death
<b>Rotavirus</b>	RV vaccine protects against rotavirus	Through the mouth	Diarrhea, fever, vomiting	Severe diarrhea, dehydration
<b>Rubella</b>	MMR** vaccine protects against rubella	Air, direct contact	Children infected with rubella virus sometimes have a rash, fever, swollen lymph nodes	Very serious in pregnant women—can lead to miscarriage, stillbirth, premature delivery, birth defects
<b>Tetanus</b>	DTaP* vaccine protects against tetanus	Exposure through cuts in skin	Stiffness in neck and abdominal muscles, difficulty swallowing, muscle spasms, fever	Broken bones, breathing difficulty, death

\* DTaP and Tdap combine protection against diphtheria, tetanus, and pertussis.

\*\* MMR combines protection against measles, mumps, and rubella.