



# Immunizations

## What is a vaccine?:

A vaccine is medication that prevents us from getting infectious (transmittable) diseases.

## How does a vaccine work?:

A **germ**, be it a virus or bacterium, causes a disease by spreading and multiplying in our bodies and causing damage to our tissues in the process. In response to a foreign invasion, our defense -- the **immune system** -- produces substances called **antibodies** that kill the germs and eradicate the infection. More antibodies and quicker response time lessens the chance for a germ to spread, thus decreasing the chances that we will get the disease.

A vaccine helps us to develop antibodies against a germ without getting the full-blown disease. That way, when we encounter a germ or bacterium that we have been vaccinated for, we are able to kill it before it has a chance to cause disease.

**A vaccination (also called immunization) against a certain type of germ prevents us from getting the disease caused by that germ.**

## Diseases children are routinely immunized against:

1. **Diphtheria** - This serious disease is spread by a **bacterium**. Diphtheria can block the airway, making it impossible to breath. It can also cause heart problems. Of 100 people who contract diphtheria, five to ten die.
2. **Tetanus (Lockjaw)** - Tetanus is caused by a **toxin** (poison) produced by a bacteria that enters the body through a cut or wound. Tetanus causes serious and painful spasms of all muscles and can lead to "locking" of the jaw so that an infected person cannot open his or her mouth, swallow or breath. Three of ten people who contract tetanus die.
3. **Pertussis (Whooping Cough)** - Pertussis is caused by a **bacterium**. It can cause spells of violent coughing and choking, making it hard to breath, drink or eat. The cough can last for weeks. Pertussis is most serious for babies, who can catch pneumonia, experience seizures, become brain damaged and possibly die. About 50% of babies who get pertussis have to be admitted to the hospital.
4. **Polio** - Polio is caused by a **virus** that is spread by contact with the feces (bowel movement) of an infected individual. Symptoms can include sudden fever, sore throat, headache, muscle weakness and pain. Polio can also cause paralysis and death.
5. **Measles** - The measles **virus** is spread very easily. Just being in the same room with a person that has measles is enough for the disease to pass to you. Symptoms include a rash, fever, cough and watery eyes. Measles can also lead to pneumonia, brain damage, seizures or death. Of every 1000 children who get measles, one or two will die.
6. **Mumps** - The mumps **virus** causes fever, headaches and swollen salivary glands under the jaw. One of every nineteen children who get mumps may develop **meningitis** (inflammation of the covering of the brain and spinal cord) and some times **encephalitis** (inflammation of the brain). Mumps can also result in permanent hearing loss.

7. **Rubella (German Measles)** - The rubella **virus** usually causes mild sickness with a fever, swollen glands and a rash that lasts for about three days. The danger is to pregnant women and their unborn children. A woman that contracts rubella while pregnant could lose her unborn child, or the baby could suffer from blindness, deafness, mental retardation, heart defects or other serious complications.
8. **Hib Meningitis** - Haemophilus influenza type b (Hib) causes meningitis (inflammation of the covering of the brain and spinal cord). It can also cause pneumonia and infection of the blood, joints, bones, throat and heart covering. This disease is especially serious for children younger than age five, especially infants.
9. **Hepatitis B** - Hepatitis B is an infection of the liver caused by a **virus**. It spreads through contact with blood or other bodily fluids. This can happen through sexual contact or by sharing a razor, toothbrush or needles used to inject drugs. Hepatitis B causes a flu-like illness with loss of appetite, nausea, vomiting, rashes, joint pain and jaundice (yellowing of the eyes and skin). An infected pregnant woman can expose her newborn to this virus during birth. The virus stays in the liver of some people for the rest of their lives. People such as these can also develop severe liver disease or liver cancer later in life.
10. **Varicella (Chickenpox)** - The varicella **virus** usually causes a rash, itching, tiredness and fever. It can lead to pneumonia, brain infection or death. Complications occur most often in very young children, adults or people with damaged immune systems.

### **Immunization Schedule:**

- **Diphtheria/Tetanus/Acellular Pertussis (DTP):** Four vaccinations at two, four, six and fifteen-eighteen months
- **Polio:** Three vaccinations at two, four and six-eighteen months
- **Measles/Mumps/Rubella (MMR):** Two vaccinations at twelve-fifteen months and four-six years
- **H. Influenza type b:** Three to four vaccinations at two, four, six and twelve-fifteen months
- **Hepatitis B:** Three vaccinations at zero-two months, one-four months and six-eighteen months
- **Varicella (Chickenpox):** One vaccination at twelve-eighteen months

**The full series of vaccinations can be given in five visits to a doctor or clinic.**

**A printable version of this schedule can be found here.**

This link will open in a new window. Simply close that window when you are finished.

### **What's your excuse?:**

1. **My baby is healthy. There is no need to take him or her to the doctor.** Just because your baby is healthy now does not mean he or she will not get childhood diseases. Only immunizations can prevent diseases such as measles, mumps, polio and diphtheria. Some of these diseases can be a serious threat to your baby.
2. **My baby won't get the measles. Nobody gets it anymore.** Failure to immunize leads to new outbreaks of disease. In 1989-1991 a measles epidemic resulted in more than 55,000 reported cases, 11,000 hospitalizations and more than 120 deaths. Half of these deaths were in young children.

3. **Childhood diseases aren't serious.** Vaccine-preventable diseases are potentially fatal. Tetanus kills three of ten people it strikes. Diphtheria kills one of ten. Polio, pertussis, measles, mumps, rubella, hepatitis B and spinal meningitis are also deadly but preventable.
4. **I can't afford to go to the doctor.** most private and public health plans pay for childhood immunizations. If you have no regular health care provider, call the free hotline to locate the nearest place to get life protecting shots. The number is **1-800-232-2522**.
5. **I can't take time off work to take my child to the doctor.** Taking the time now to immunize your children can save you much more time later if your child becomes ill. Childhood illnesses, such as measles, can put a child in bed for weeks, or even in the hospital.
6. **I'll take them for shots when they are old enough fro school.** Children need 80% of their vaccines by the age of two. Nearly one of four of America's two-year-olds lack one or more recommended vaccinations.
7. **My doctor didn't tell me my baby needed shots.** It's up to you to make sure your child is protected. Your doctor may forget to discuss shots with you. Keep a record of your child's shots in a safe place. Bring the record with you to every health care visit your child has. Ask your doctor or other health care provider to look at the record and tell you if the baby needs shots.
8. **Vaccines cause harmful side effects, illnes or even death.** Vaccines are actually very safe. Most vaccine side effects are minor and temporary such as a sore arm or mild fever. More serious side effects occur rarely (on the order of one in thousands or one in millions of doses). As for vaccines causing death, so few deaths can be plausibly attributed to vaccines that it is almost impossible to assess the risk statistically. The fact is that a child is far more likely to be injured by one of these diseases than by any vaccine.

**ATTENTION:** This web page is intended to be used for health information ONLY. If you or a family member has a medical emergency, please call your doctor or 911, or your local emergency service number.