VACCINATION IS A VITAL PART OF A CHILD'S PROTECTION AGAINST INFECTIOUS DISEASES

It's always safer to prevent a disease than to endure its effects.

Your child's vaccination records can be accessed through the Health Portal: terviseportaal.ee.

At your request, the healthcare provider will also record them in the vaccination passport.

The benefits of timely vaccination far outweigh the risks of any potential side effects.

For more information, refer to your child's vaccination calendar at vaktsineeri.ee.

For new parents

If you have any questions, please consult your family nurse or family doctor.

Family doctor's helpline **1220**

vaktsineeri.ee/en
terviseportaal.ee/en

vaktsineeri.ee

PROTECT YOUR CHILD!

TERVISEKASSA

TERVISEAMET

VACCINATION PROVIDES PROTECTION AGAINST DANGEROUS INFECTIOUS DISEASES

Every parent wants to protect their child. Vaccination is a highly effective and safe way to protect children from serious infectious diseases. Thanks to vaccination, many serious infectious diseases have become much less common. According to the World Health Organization, vaccination saves 2-3 million lives every year.

By vaccinating your child, you help prevent the spread of infectious diseases and protect others around you, including children who cannot be vaccinated for any reason.

INFECTIOUS DISEASES SPREAD UNNOTICED

Infectious diseases are caused by tiny pathogens, like viruses and bacteria, that are invisible to the naked eye. These germs can spread from person to person through the air, hands, objects, and sometimes through food, drinks, or sexual contact, leading to infectious diseases.

Several factors influence the occurrence of disease, including a person's health, the type and length of contact with the pathogen, and immunity.

THE IMMUNE SYSTEM DEFENDS AGAINST DISEASE-CAUSING GERMS

The immune system is the body's natural defense against pathogens. To fight infectious diseases, the immune system first needs to recognize the surface molecules of pathogens, called antigens. Once identified, white blood cells produce antibodies that attack the pathogens, helping to defeat the disease and protect the person from future infections.

However, the immune system doesn't produce antibodies immediately after infection; it takes time. Meanwhile, pathogens can cause significant damage by triggering inflammation and producing toxins in the body. It's impossible to predict how severe an infectious disease will be in any given person.

The next time a person is infected with the same pathogens, the immune system already knows how to recognize and fight them. This means the person either doesn't get sick or experiences a much milder form of the disease, and it is said that they have become immune to the disease.

During the first months of life, a baby is protected by antibodies transferred from the mother during pregnancy. These maternal antibodies gradually disappear from the baby's bloodstream within the first six months. As a result, the baby is left without this protective defense against dangerous infectious diseases and their complications.

VACCINATION IS A SAFE AND EFFECTIVE WAY TO GAIN IMMUNITY

Vaccines contain surface molecules (antigens) from viruses or bacteria, which help the immune system recognize the pathogen. These antigens are safe and do not cause disease.

Vaccination creates immunity similar to that gained from having an infectious disease, but without the risks and hardships of actually getting sick. Vaccination does not harm the immune system. If a vaccinated child becomes infected, their immune system is immediately ready to protect them, destroying the micro-organisms before they can multiply. This also helps prevent the spread of the infection to others. The more people who are vaccinated, the lower the spread of infectious diseases and the risk of infection.

VACCINES ARE VERY EFFECTIVE

Most childhood vaccinations provide immunity to 95-99% of those vaccinated. In the rare event that a vaccinated child does contract the disease, it tends to manifest in a milder form.

Vaccination has led to a significant decrease in many infectious diseases worldwide. However, the risk of illness is just one contact and a flight away.

Infectious diseases vary in how quickly they spread and the complications they cause. For instance, one person with measles can infect 12 to 18 unvaccinated individuals. Among those who contract measles, one in 10 children develops pneumonia and one in 1000 develops inflammation of the brain (encephalitis).

Vaccination protects young children from both infection and the serious complications of infectious diseases.

WHAT IS AN IMMUNIZATION SCHEDULE?

Every country has an immunization plan that provides free vaccines to children and adults. The immunization schedule is adjusted as needed based on requirements and available resources.

In Estonia, the national immunization plan offers free vaccination against 13 diseases. Some vaccines are combined, providing protection against multiple pathogens simultaneously. This approach reduces both the number of injections and the likelihood of side effects.

Inactivated vaccines do not contain live disease-causing germs. Instead, they use killed pathogens (e.g., the polio vaccine) or their components (e.g., vaccines against diphtheria, tetanus, pertussis, and Haemophilus influenzae type B).

THE DISEASE FOR WHICH VACCINATION IS REQUIRED	CHILD'S AGE											
	1–5 DAYS	2 MONTHS	3 MONTHS	4,5 MONTHS	6 MONTHS	1 YEAR	1,5-2 YEARS	6-7 YEARS	12-14 YEARS (15–18 YEARS)	13 YEARS	15-16 YEARS
Tuberculosis	●										
Rotavirus infection		● 1st dose	● 2nd dose	● 3rd dose							
Diphtheria, tetanus, whooping cough, polio, Haemophilus influenzae type B and hepatitis B virus			● 1st dose	● 2nd dose	● 3rd dose		● 4th dose	● 5th dose*			● 6th dose**
Measles, mumps, rubella						● 1st dose				● 2nd dose	
Human papillomavirus (HPV)									●		
Influenza (flu)					● Annually before the beginning of the flu season (October-November)				● For children in the flu risk group up to age 18, it's recommended to receive the flu vaccine annually before the beginning of the flu season (October-November)		

* Vaccine against diphtheria, tetanus, whooping cough and poliomyelitis
** Vaccine against diphtheria, tetanus and whooping cough

Both live and inactivated vaccines are used for vaccination.

Live vaccines contain weakened microorganisms that cannot cause disease in a healthy child but still create immunity against infections. Examples of live vaccines include the tuberculosis vaccine, the rotavirus vaccine, and the measles, mumps, and rubella vaccine.

Vaccines also contain very small amounts of adjuvants to enhance their effectiveness and safety. These substances are present in such small amounts that they have no harmful effects on health.

After receiving a vaccine, it usually takes a few weeks for immunity to develop. Repeated exposure to antigens helps maintain immunity, so some vaccines are given multiple times according to the immunization schedule.

THE CHILDREN'S IMMUNIZATION CALENDAR INCLUDES SEVEN VACCINES

In the maternity hospital, children are vaccinated against tuberculosis. The tuberculosis vaccine effectively protects young children against severe forms of tuberculosis, but it does not provide lifelong protection. Repeated doses do not enhance protection against infection, so they are not given. At-risk children also receive the hepatitis B vaccine after birth.

At 2 months old, infants are vaccinated against rotavirus infection. Depending on the vaccine, a total of two or three doses are administered during infancy.

At 3 months old, infants begin vaccination against six diseases: diphtheria, tetanus, whooping cough, polio, hepatitis B, and Haemophilus influenzae type B. A combined vaccine is used to provide protection against all these diseases simultaneously. This vaccine is administered multiple times to develop permanent immunity.

The hepatitis B vaccine provides very long-term protection, so children vaccinated against hepatitis B in infancy do not need repeat doses later.

Boys and girls aged 12 to 14 are vaccinated against the human papillomavirus (HPV). Free vaccination is also available to young people aged 15 to 18 who have not previously been vaccinated against HPV. HPV vaccination is usually given at school, with the school nurse obtaining parental consent.

Children are vaccinated against measles, mumps, and rubella at the age of 1, with a booster shot at age 13.

Vaccination against diphtheria and tetanus should continue into adulthood every ten years. This vaccine is free for adults and can be administered by a family doctor.

TUBERCULOSIS

Tuberculosis is a serious disease that requires long-term treatment and can affect the lungs and other organs. In young children, it can even cause severe meningitis.

Newborns are vaccinated against tuberculosis between 1 and 5 days old. After vaccination, a small nodule may form at the injection site on the left upper arm, which may sometimes release pus. Cleaning the site with clean water is sufficient; no further treatment is necessary. The tuberculosis vaccine contains weakened live bacteria, so it is not recommended for immunocompromised patients.

In Estonia, the incidence of tuberculosis has decreased in recent years but remains significantly higher than in neighboring countries like Finland and Sweden. Drug-resistant tuberculosis bacteria are also common in Estonia.

POSSIBLE CONSEQUENCES OF THE DISEASE

- Tuberculosis can affect the lungs as well as other organs.
- The most common symptom of pulmonary tuberculosis is a persistent cough, often accompanied by coughing up blood and chest pain.
- In young children, tuberculosis can lead to severe meningitis.
- Treatment for tuberculosis typically lasts 6 to 24 months.

POSSIBLE SIDE EFFECTS OF THE VACCINE

- In less than 1 in 100 children: fever, discharge or ulcer at the injection site, enlarged lymph nodes, headache, and purulent inflammation of the lymph nodes.
- In less than 1 in 1000 children: purulent inflammation at the injection site and a bacterial infection caused by the vaccine that can spread throughout the body, including the bones (the risk is higher in children with weakened immune systems).

HEPATITIS B VIRUS

Hepatitis is an inflammation of the liver, with Hepatitis B caused by a virus mainly transmitted through blood and other body fluids. The virus can also be transmitted through tiny amounts of dried blood, making its transmission insidious. Up to a third of people with Hepatitis B may not realize they've been infected. It can also be transmitted sexually and from mother to child during childbirth.

In adults, Hepatitis B often presents without acute symptoms in 60% of cases, but approximately 5% of those infected develop chronic Hepatitis. Chronic Hepatitis B increases the risk of liver cancer. Infection during childhood significantly raises the risk of chronic illness, with nearly all babies infected at birth developing chronic liver damage and up to half of those infected in early childhood facing a similar risk. Due to these risks, Hepatitis B vaccination is recommended in early childhood. The vaccine does not affect the liver and does not cause jaundice in newborns.

DIPHTHERIA

Diphtheria inflames the respiratory tract, particularly the pharynx and larynx. Thick coatings in the larynx can lead to breathing problems and suffocation. If the pathogen's toxin damages the heart or nervous system, the disease can be fatal — almost one in 10 people with diphtheria die.

Thanks to vaccination, Estonia halted the spread of diphtheria by 1964. The last case in Estonia was in 2001, but it remains present in neighbouring countries like Latvia and Russia. This means the risk of the disease spreading is still very real.

TETANUS

Tetanus, also known as lockjaw, is a severe and often fatal disease. It starts with convulsions near the wound or in the jaw muscles and can then spread to the entire body.

The disease is caused by bacteria found in soil, manure, and dust. Tetanus risk is higher with abrasions, cuts, puncture wounds, and surfaces penetrating the skin, as well as insect and animal bites. Since immunity takes time to develop after vaccination, it's important to get vaccinated before potential exposure to the bacteria.

HAEMOPHILUS INFLUENZAE TYPE B (HIB)

Before the introduction of vaccination against Haemophilus influenzae type B (Hib), this bacterium was the primary cause of purulent meningitis in infants and young children in Estonia. This form of meningitis is severe and can lead to hearing loss, developmental issues, or even death. Haemophilus meningitis most commonly affects children between 6 and 12 months old, with a high risk of infection up to the age of 5.

WHOOPING COUGH

Whooping cough, also known as pertussis, is a prolonged illness characterized by severe coughing fits that can last for weeks or even months. In infants, it can lead to serious complications like respiratory arrest, pneumonia, and seizures, causing permanent brain damage.

Even when contracted at a later age, whooping cough can result in complications. Treatment is challenging, but antibiotics can help relieve symptoms, shorten the illness's duration, and reduce its spread if taken early.

Unlike some diseases, having whooping cough does not grant lifelong immunity. Therefore, individuals can experience it multiple times. While the vaccine also doesn't offer lifelong immunity, it significantly reduces the risk of contracting the disease and developing severe complications.

Whooping cough is prevalent among school children in Estonia, so the vaccine is also given to 15-16-year-olds as part of the immunization schedule. Pregnant women are advised to get vaccinated in the third trimester to protect their newborns during the first months of life.

POLIOMYELITIS (POLIO)

Polio is a viral disease that can lead to muscle paralysis. Symptoms range from mild fever, headache, and throat or stomach pain to severe paralysis of the limbs, which can result in permanent disability. In the worst cases, paralysis of the respiratory muscles can be fatal.

Estonia faced its largest polio outbreak in 1958, with 991 reported cases. Half of those affected experienced varying degrees of paralysis, and nearly three-quarters suffered from respiratory failure. Since the introduction of the polio vaccine in 1961, Estonia has been polio-free. However, vaccination remains crucial due to the disease's global presence and rapid spread across countries and continents.

In 2021, Tajikistan experienced a polio outbreak, affecting 50 children, 34 of whom developed paralysis. In 2022, cases were reported in Ukraine, and polio-viruses were found in sewage in Great Britain.

THE VACCINE OFFERS PROTECTION AGAINST ALL SIX DISEASES SIMULTANEOUSLY

POSSIBLE CONSEQUENCES OF THE DISEASE

DIPHTHERIA

- Thick coatings in the larynx can lead to breathing problems and suffocation.
- Up to one in 10 patients die from diphtheria.
- The bacteria release a toxin that can cause paralysis of the nerves and heart failure.

POSSIBLE SIDE EFFECTS OF THE VACCINE

- Very common: crying, restlessness, insomnia, irritability, fever, pain, redness and swelling at the injection site, loss of appetite, and vomiting.
- Less often than 1 in 10 children: prolonged crying, diarrhea, and hardening of the injection site.
- Less often than 1 in 100 children: allergic reaction, high fever over 39.6°C, and lump (nodule) at the injection site.

POSSIBLE CONSEQUENCES OF THE DISEASE

TETANUS

- Two out of every hundred patients die from the disease.
- The disease poses the highest risk to very young or elderly individuals.

WHOOPING COUGH

- One out of every 125 babies under 6 months of age with whooping cough will die from either pneumonia or brain damage.

HEPATITIS B VIRUS

- One out of every four carriers of the infection will develop cirrhosis or liver cancer.

POLIOMYELITIS (POLIO)

- Up to three out of 10 patients with polio die from the disease, and many of those who survive are left permanently paralyzed.

HAEMOPHILUS INFLUENZAE TYPE B (HIB)

- One in 20 people with meningitis will die, and one in four survivors may develop permanent brain damage.
- Inflammation of the larynx can block the airway and cause suffocation.

POSSIBLE SIDE EFFECTS OF THE VACCINE

- Less than 1 in 1000 children: severe allergic reaction (within minutes after injection), convulsions with or without fever, rash, and severe swelling of the injected limb.
- In less than 1 in 10 000 children: an episode where the child goes into a shock-like state, appearing pale, lethargic, and inactive for a period of time.

MEASLES

Measles is a highly contagious viral disease characterized by rash and fever. Approximately one in 10 measles patients develop complications such as pneumonia or otitis media (inflammation or infection located in the middle ear). Encephalitis, inflammation of the brain, can also occur, making measles a potentially severe illness.

Measles continues to cause deaths among unvaccinated children in several European countries. Additionally, individual cases of measles occur in Estonia every year.

RUBELLA

Rubella is a highly contagious viral disease characterized by mild symptoms in both children and adults, including fever, rash, and joint pain. However, the severity of the disease is particularly concerning during pregnancy, as it can lead to congenital rubella syndrome (CRS).

Contracting rubella during the first trimester of pregnancy carries a 90% risk of birth defects such as blindness, deafness, heart defects, or mental retardation. In the second trimester, this risk persists in around one-third of cases, and the infection can also result in miscarriage.

Fortunately, due to high vaccination rates, congenital rubella syndrome no longer occurs in Estonia. However, if vaccination rates decrease, there is a risk of the disease re-emerging among the unvaccinated population, potentially leading to serious fetal harm in pregnant women who contract the virus.

MUMPS

Mumps is a viral infection spread through coughing and sneezing. It primarily affects the parotid glands, causing fever and painful swelling. However, it can also harm other salivary glands, pancreas, testicles, and ovaries, potentially leading to infertility. Mumps can be severe, with complications like meningitis, which can cause hearing loss or deafness.

THE VACCINE PROVIDES PROTECTION AGAINST MEASLES, MUMPS, AND RUBELLA AT THE SAME TIME:

POSSIBLE CONSEQUENCES OF THE DISEASE

MEASLES

- One in 15 children with measles will develop pneumonia, and one in 1000 will develop encephalitis.
- Of those with encephalitis, one in 10 will die, and others may develop permanent brain damage.
- In rare cases, one in 100 000 sufferers may develop fatal brain damage.

RUBELLA

- Rash, enlarged and tender lymph nodes, and joint pain.
- Bruising, bleeding, or inflammation of the brain may occur in one out of 3000 people infected.
- If a mother contracts rubella in the first trimester of pregnancy, the baby will be born with a severe malformation, deafness, or blindness in nine out of 10 cases.

MUMPS

- One in 5000 children develops encephalitis.
- One in five adolescent or adult men develops testicular inflammation.
- In some cases, mumps can cause infertility or permanent deafness.

POSSIBLE SIDE EFFECTS OF THE VACCINE

- Very common: fever (38.5°C or higher), redness, pain, and swelling at the injection site.
- Less often than 1 in 10 children: a rash similar to measles 1-2 weeks after vaccination (not contagious) and bruising at the injection site.
- Less often than 1 in 100 children: injection site rash, hives, indigestion, runny nose or other cold symptoms, and crying.
- Less common than 1 in 10 000 children: severe allergic reaction (within minutes after the injection), convulsions with or without fever, rash, extensive swelling of the injected limb, decrease in the number of platelets after the first dose of the MMR vaccine (which may cause bruising or bleeding), pain in the lymph nodes, seizures or convulsions without fever, and joint pain.

ROTAVIRUS INFECTION

Rotavirus infection is a leading cause of acute diarrhea in infants and young children worldwide, affecting over 100 million children. Symptoms include vomiting and diarrhea, and the virus is highly contagious.

It is estimated that by the age of five, nearly every child has experienced a rotavirus infection at least once. The virus primarily spreads through unwashed hands and contaminated objects.

While many cases are mild and can be managed at home, severe cases may lead to dehydration requiring hospitalization. Younger children are particularly vulnerable to severe infections. Vaccination against rotavirus should begin early, between 1.5 and 3 months of age, and is administered orally.

ROTAVIRUS INFECTION

POSSIBLE CONSEQUENCES OF THE DISEASE

- The disease may present with mild diarrhea, but it can also cause severe diarrhea with significant fluid loss and fever, potentially leading to death.
- Before the introduction of the vaccine, nearly 1000 children in Estonia required hospital treatment each year due to rotavirus infection.

POSSIBLE SIDE EFFECTS OF THE VACCINE

- Very common: diarrhea, vomiting, and fever.
- Less often than 1 in 10 children: runny nose and sore throat.
- Less often than 1 in 100 children: ear infection, rash, and blood in stool.
- Less than 1 in 1000 children: hives and difficulty breathing.
- Less often than 1 in 10 000 children: intestinal obstruction (a part of the intestine becomes blocked or twisted; symptoms may include severe abdominal pain, persistent vomiting, blood in the stool, abdominal swelling, and/or high fever).

HPV INFECTION

HPV, or human papillomavirus, is very common, and most people will be infected with some strain of the virus during their lifetime. In most cases, the body can rid itself of the virus within a few years, but some types of HPV can cause cancer in the genital area or oral cavity in both men and women.

The infection spreads from person to person through mucous membrane contact, such as during sexual intercourse, but even simple intimate touches are sufficient. The HPV vaccine is provided free of charge to boys and girls aged 12-18 in Estonia. It is recommended to vaccinate as soon as possible when the child turns 12, as vaccination is most effective before exposure to the virus.

HPV INFECTION

POSSIBLE CONSEQUENCES OF THE DISEASE

- In Estonia, approximately 300 people develop cancer caused by HPV every year.
- HPV types 16 and 18 are responsible for nearly 70% of all cervical cancer cases.
- Head and neck cancers caused by HPV are more common in men.

POSSIBLE SIDE EFFECTS OF THE VACCINE

- Very common: headache, pain, swelling, and redness at the injection site.
- Less often than 1 in 10 children: fever, tiredness, itching or bruising at the injection site, dizziness, and nausea.
- Less often than 1 in 100 children: fainting immediately after the injection, which may be accompanied by convulsions, enlarged lymph nodes, hives, muscle pain, joint pain, malaise, weakness, and chills.
- Less than 1 in 1000 children: allergic reaction, with severe allergic reactions being even rarer.

INFLUENZA (FLU)

Influenza is a respiratory illness that spreads worldwide in seasonal outbreaks. Due to the high variability of the flu virus, the flu vaccine does not provide long-term protection. Therefore, the composition of the flu vaccine is changed every year based on the World Health Organization's flu virus monitoring results, and a new vaccine dose is recommended before the start of each flu season.

The risk of flu complications is higher in young children, the elderly, pregnant women, and people with chronic diseases. Influenza vaccination is especially important for children with chronic conditions such as diabetes, lung diseases (like asthma), kidney disease, immunodeficiency, or congenital heart disease. The flu vaccine helps prevent severe illness caused by the flu virus but does not prevent other viral diseases that cause fever.

In Estonia, free flu vaccination is available for children up to 7 years old, elderly people over 60, pregnant women, individuals in general and special care services (including 24-hour and community living), and minors in the flu risk group.

INFLUENZA (FLU)

POSSIBLE CONSEQUENCES OF THE DISEASE

- The flu can be very severe in young children, pregnant women, elderly people over 60, and those with severe chronic diseases. It can lead to serious complications such as pneumonia, otitis media, and the exacerbation of other chronic conditions.
- Complications from the flu can be fatal.

POSSIBLE SIDE EFFECTS OF THE VACCINE

- Very common: redness or pain at the injection site, malaise, headache, muscle pain, fever, irritability, loss of appetite, and drowsiness in children.
- Less often than 1 in 10 people: fever and chills, redness, swelling, or hardening at the injection site.
- Less often than 1 in 100 people: pain in lymph nodes, dizziness, fatigue, hot flashes, indigestion, bruising and itching at the injection site.
- Less often than 1 in 1000 people: allergic reactions, drowsiness, skin sensitivity disorders, sweating, joint pain, flu-like symptoms, and shortness of breath.

In addition to the vaccinations provided by the national immunization plan, children can also be vaccinated against several other infectious diseases prevalent in Estonia, such as pneumococcal infection, tick-borne encephalitis, and chickenpox. Furthermore, vaccinations may be necessary before traveling to protect against specific infectious diseases. It is advisable to consult with your family doctor regarding vaccination.

PNEUMOCOCCAL INFECTION

Pneumococcal infection can lead to ear and sinus infections, and in some cases, pneumonia, purulent meningitis, and septicemia. In several European countries, the pneumococcal vaccine is part of the national immunization schedule.

In Estonia, the pneumococcal vaccine is not yet included in the immunization schedule, but it is recommended for people in high-risk groups. A detailed list of these risk groups can be found on the website vaktsineeri.ee. For those in high-risk groups, the pneumococcal vaccination is free, but consultation with a family doctor or general practictioner is required.

PNEUMOCOCCAL INFECTION

POSSIBLE CONSEQUENCES OF THE DISEASE

- Three in 10 people with meningitis die.
- Pneumococcal infection causes one-third of all pneumonia cases in adults and half of those requiring hospitalization.

POSSIBLE SIDE EFFECTS OF THE VACCINE

- Very common: loss of appetite, headache, muscle pain, joint pain, fatigue, and pain at the injection site; in children, also loss of appetite, irritability, drowsiness, and fever.
- Less often than 1 in 10 people: fever, redness, and swelling at the injection site; in children, also diarrhea, vomiting, rash, and fever over 38.9°C.
- Less often than 1 in 100 people: allergic reaction, indigestion, enlarged lymph nodes, and chills; in children, also crying and hives.

TICK-BORNE ENCEPHALITIS

The tick-borne encephalitis virus is transmitted to humans through the bite of an infected tick. The disease can range from mild flu-like symptoms to more severe conditions such as encephalitis and meningitis. Although the risk of encountering ticks is higher in rural areas and forests, they are also common in urban parks and green spaces. Therefore, the entire country of Estonia is considered a tick-borne encephalitis risk area.

Children are recommended to receive the tick-borne encephalitis vaccine starting at the age of 1. The vaccination schedule consists of three doses, with the first two doses administered 1 month apart and the third dose given a year later. Subsequently, a booster shot should be administered every 3-5 years.

TICK-BORNE ENCEPHALITIS

POSSIBLE CONSEQUENCES OF THE DISEASE

- Tick-borne encephalitis can cause inflammation of the brain and spinal cord, which can be fatal.
- The disease can lead to various neurological complications, including memory, concentration, and cognitive function disorders, as well as muscle weakness and coordination issues.

POSSIBLE SIDE EFFECTS OF THE VACCINE

- Very common: pain and swelling at the injection site.
- Less often than 1 in 10 people: loss of appetite, restlessness and sleep disturbances, fatigue, malaise, headache, nausea, vomiting, muscle pain, fever.
- Less often than 1 in 100 people: enlarged lymph nodes, abdominal pain, joint pain, chills.
- Less often than 1 in 1000 people: skin sensitivity disorders, dizziness, diarrhea, indigestion, hives, itching at the injection site.

For more detailed information about a specific vaccine, refer to the information sheet included in the vaccine package or visit ravimiregister.ee.

SOME DISEASES CAN BE ESPECIALLY SEVERE IN INFANTS

More than half of the severe cases caused by Haemophilus influenzae type B occur in children under one year old, and whooping cough is most severe during infancy.

Hepatitis B infection during infancy or early childhood is more likely to lead to chronic liver inflammation and cirrhosis. Tuberculosis bacteria can cause severe meningitis in infants and young children.

Vaccination does not overload or overwhelm the immune system of a young child. From birth and immediately afterward, the body is exposed to many foreign substances, or antigens, which stimulate the immune system to fight potential pathogens from birth.

The effects of vaccines on the human body have been studied very thoroughly. Since the immune systems of both children and adults are constantly dealing with millions of antigens, vaccine antigens are like a tiny drop in the ocean of all antigens. Vaccines received in childhood help ensure a safe future throughout the span of life.

Today's conjugate vaccines contain far fewer antigens than disease-causing microbes or many of the vaccines used in the past. For example, the combination vaccine that protects against diphtheria, tetanus, whooping cough, hemophilia, polio, and hepatitis B has less than 25 antigens in total. In comparison, the once widely used pertussis vaccine alone contained at least 3000 different antigens.

THERE ARE VERY FEW CONTRAINDICATIONS TO VACCINATION

If the child has experienced a severe allergic reaction (anaphylaxis) to a vaccine or medication in the past, the person administering the vaccine should be informed. Anaphylaxis is a rare, life-threatening reaction that can happen in response to any substance. Therefore, it's important to be cautious during vaccination and to closely monitor the child's health afterward.

Egg allergy, which often occurs in infants and young children, does not prevent vaccination. Similarly, allergies to dust mites, pollen, food, insecticides, or animals do not contraindicate vaccination; in fact, vaccination can benefit allergy sufferers by strengthening the immune system, potentially helping to reduce allergies.

Live vaccines are not recommended during pregnancy or for individuals with immunodeficiency. Vaccination should be postponed if the child has a fever or has recently been ill. However, a mild cough or runny nose during the recovery phase of an illness does not prevent vaccination.

SIDE EFFECTS OF VACCINATION ARE USUALLY MILD AND PASS QUICKLY

Like other medicines, vaccines can cause side effects. These are generally mild and temporary. The benefits of vaccination far outweigh the risks of these side effects.

- After vaccination, the injection site may be painful, red, or swollen for 1-3 days.
- Sometimes, a fever may occur, which is a normal reaction of the body to vaccination and typically resolves within 2-3 days.
- The likelihood of other side effects is small. For example, the tuberculosis vaccine can cause an enlarged lymph node in the armpit or an abscess. In very rare cases, a general infection may occur after the tuberculosis vaccine if the child's immune system is weakened due to another disease.
- After receiving a measles, mumps, and rubella vaccine injection, a short-term, self-limiting skin rash or swelling in the neck area may occur after a few weeks. These conditions are not contagious. Very rarely, extensive swelling in the area of the limb where the vaccine was injected, a transient low platelet count, and other transient side effects may occur.
- Children with a genetic predisposition to febrile convulsions may experience them when they have a fever. Febrile convulsions in these children can be triggered by any fever; however, the likelihood of them occurring is higher during a genuine infectious illness and very rare after vaccination.
- The risk of a severe allergic reaction (anaphylactic shock) from immunization is extremely low, around one case per million vaccinations. In the rare event of an anaphylactic reaction, immediate and effective first aid is necessary. Therefore, it is advisable to remain under observation in the healthcare facility for an additional fifteen minutes after receiving the vaccine injection.

Specific contraindications, side effects, and precautions for each vaccine are detailed in the vaccine package insert.

Vaccines have been in use for decades, and no connection has been established between vaccination and other childhood neurological diseases or permanent health disorders.

Approximately 15 000 children are born in Estonia each year. Unfortunately, not all children are born completely healthy, and health issues can arise in infancy and early childhood. Extensive research has been conducted on vaccines, and no causal link has been found between vaccinations and diseases such as autism, diabetes, sudden infant death syndrome, asthma, atopic dermatitis, and others.

One common misconception is that vaccination weakens the immune system. However, vaccination actually strengthens immunity against the specific disease the vaccine targets. Scientific studies have confirmed that vaccination does not make children more susceptible to other infections or make the course of other infections more difficult.

ANY SIDE EFFECTS OF VACCINATION SHOULD BE REPORTED TO THE FAMILY PHYSICIAN

Monitor your child more closely than usual for a few days after vaccination. If needed, contact your family doctor or call the family doctor's helpline at 1220. For urgent medical assistance, call the emergency number 112.

- A fever above 38°C can be reduced with paracetamol. Be sure to carefully read the recommended doses in the medicine leaflet. If needed, consult a pharmacist, family nurse, or doctor.
- To alleviate swelling and redness at the injection site, apply a cool, moist compress with chamomile tea or cold water.
- Restlessness and crying in the child may indicate pain at the injection site, which can also be relieved by paracetamol.
- Although very rare, a severe allergic reaction known as anaphylaxis may occur. This reaction happens within a few minutes after vaccine administration and requires urgent treatment. It's advisable to stay in the healthcare facility for an additional fifteen minutes after vaccination. Vaccination doctors and nurses are trained to manage this allergic reaction.

Seek immediate medical attention if your child develops a large, itchy rash; swelling of the eyes and face; or difficulty breathing or swallowing.

All side effects following vaccination should be reported to the family doctor. This ensures that side effects are accurately recorded, and the child receives appropriate treatment if needed. Vaccine safety is rigorously monitored worldwide using a variety of monitoring systems.