

**Annex 7.**

Dear parent!

I would like your consent for the vaccination of your child (first name and surname)

\_\_\_\_\_ against **human papillomavirus (HPV)**.

The vaccination course consists of one injection.

General information about HPV and vaccination is attached.

If you have any questions, please call \_\_\_\_\_, Mon–Fri \_\_\_\_\_

or send an email to \_\_\_\_\_

School nurse \_\_\_\_\_

Parent \_\_\_\_\_  
(first name and surname)

I agree: \_\_\_\_\_  
(date, signature)

### **What is HPV?**

HPV stands for human papillomavirus. Most strains of papillomavirus cause benign changes on the skin (eg warts) and mucous membranes (eg condyloma accuminata). Few strains of papillomavirus may cause malignant tumours to develop in the genital area (eg cervical, vulvar, vaginal, anal and penile cancer) and in the oral cavity (eg oral and throat cancer).

The strains of human papillomavirus are classified based on cancer risk as follows:

- strains of high risk: 16, 18, 45, 31, 33, 52, 58, 35, 59, 56, 51, 39
- strains of limited carcinogenicity: 68, 73
- strains of low risk: 6, 11, 26, 40, 42, 43

Cervical cancer accounts for 80% of tumours caused by human papillomavirus. Papillomavirus strains HPV 16 and 18 cause 70% of cervical cancer cases. Estonia has one of the highest rates of cervical cancer morbidity and mortality in Europe.

### **How does a person get infected with HPV?**

The source of infection is always a person infected with human papillomavirus. Papillomaviruses are very easily transmitted from person to person when their skin or mucous membranes come into contact. Around 80% of people will be infected with HPV at least once in their life. Low-risk and high-risk HPV strains are transmitted both via sexual intercourse and intimate touching. You can become infected even during your first sexual intercourse. Using a condom reduces the risk of infection, but does not guarantee protection, as you can still get infected by touching skin that is not covered by a condom.

### **What happens in a person's body after being infected with HPV?**

Once infected, the virus can live in the body for a long time without any symptoms or signs of illness. In most cases, the immune system is able to destroy the virus within a few months or years. Some people's bodies cannot clear the virus, and they may develop a malignant tumour, ie cancer, in the future. Cancer usually develops slowly, over a period of 20 years or more. For cervical cancer to develop, there must be high-risk HPV present in the body.

### **Which factors contribute to cancer?**

- early sexual debut;
- high number of sexual partners;
- smoking;
- immunodeficiency (eg HIV);
- long-term use of hormonal contraceptives; and
- coinfection with sexually transmitted illnesses (eg chlamydia, genital herpes).

### **How can I protect myself against papillomaviruses?**

- avoid casual sexual intercourse;
- use a condom;
- avoid smoking;
- have regular check-ups at your gynaecologist; and
- vaccinate.

### **What is the optimal age to vaccinate against HPV?**

It is recommended to vaccinate children before the onset of sexual activity, approximately at the age of 12, before exposure to the virus.

### **How are children vaccinated against HPV in Estonia?**

From 2024, as part of the free of charge immunization program, vaccination will be available for all children aged 12–14, and additionally, vaccination will be provided to 15–18-year-olds who have not previously been vaccinated against HPV. For children who have previously received one dose of the vaccine, their vaccination is considered complete.

The vaccine obtained by the state for vaccination is Gardasil 9, manufactured by Merck Sharp and Dohme B.V.

HPV vaccination is mostly done at the school. The school health service provider informs the parent about the child's vaccination and asks for consent for the vaccination of a 12-17-year-old child at least one week before the planned immunization. 18-year-olds can consent to vaccination independently.

For a justified reason (e.g. the school does not have a school health service provider), target group people can be vaccinated against HPV by their family doctor or family nurse.

**What does the HPV vaccine protect against and how is it given?**

The Gardasil 9 HPV vaccine contains purified virus-like proteins of nine HPV strains and helps prevent the diseases they cause: cervical, vulvar, vaginal and anal precancerous conditions and cancer, and genital warts (condyloma acuminata). The vaccine does not contain live virus and does therefore not cause the disease and is not dangerous.

The vaccination course for 12–18-year-olds consists of a single dose. The vaccine is administered intramuscularly in the deltoid muscle area of the upper arm

**For whom is the HPV vaccine contraindicated?**

The Gardasil 9 vaccine is contraindicated in people who are hypersensitive to the active substances or excipients of the vaccine.

**What are the possible side effects of the HPV vaccine?**

After vaccination, local side effects may occur: soreness, redness and swelling at the injection site. You can use a cold compress to relieve these symptoms.

Other side effects described include fatigue, headache, muscle pain, and gastrointestinal disorders that may be accompanied by nausea and vomiting. Itching, rash, hives, joint pain and fever ( $\geq 38\text{ }^{\circ}\text{C}$ ) may also occur. Such symptoms are the body's natural reaction to the vaccine and a normal part of the onset of immunity. Most vaccination side effects are mild and resolve without treatment within 1–2 days. In case of fever and headache, you can take paracetamol and ibuprofen to alleviate the symptoms. It is important to keep in mind that if symptoms persists longer than a few days, are unpleasant or become more severe over time, you should tell your doctor.

According to the Global Advisory Committee on Vaccine Safety of the World Health Organization, HPV vaccines do not cause new chronic illnesses, including autoimmune illnesses.

**How effective is the HPV vaccine?**

The efficacy of the Gardasil 9 vaccine is high: in a clinical study, 93–100% of girls with no prior infection acquired antibodies after completing the vaccine course. Vaccination provides long-term protection.

If the child has been infected with one of the virus strains in the vaccine, they will not gain immunity to diseases caused by that strain, but will be protected against the other virus strains in the vaccine. The vaccine does not have a therapeutic effect.