

# THE VACCINATION PROCESS THAT BEGINS AT BIRTH (IN UZBEKISTAN)

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## Abstract

Vaccination is a method of creating artificial immunity, which is a method of protecting the body from disease-causing infections by introducing antigens of pathogenic microorganisms into the body. After introducing the antigen of the microorganism into the body, special antibodies are produced against it. Vaccination is carried out for preventive and therapeutic purposes. The vaccine is more effective if it is prepared from live but weakened strains of pathogenic microorganisms (approximately 10-15%), while vaccines prepared from dead microorganisms require the body to develop immunity for a long time. In modern medicine, both types of vaccines are administered, especially inactivated (dead microorganisms) vaccines are often used in children under school age. (1).

**Keywords:** Intramuscular, artificial immunity, Oral, OPV, KPK, AKDS.

## Introduction

Vaccination in children is carried out in several ways:

Intramuscularly - the most common and effective way of vaccination. In this case, the administered vaccine is quickly absorbed, immunity is formed and there are no adverse reactions to the drug. Since the muscles are located much deeper than the skin and are rich in blood vessels, the immune system quickly learns about the vaccine.

Technique and place of vaccination: In children under 2 years of age, the injection is made in the middle third of the thigh muscle, perpendicular to the inner front area (90 C). In children over 2 years of age, the injection is made in the middle part of the shoulder muscle, from the side. Since the syringe needles are no longer than 1.5 cm, it is better to vaccinate through the gluteal muscle, in which case the injection is injected subcutaneously, not intramuscularly.

Enterovirus vaccines are administered orally (by mouth), for example, the live poliomyelitis (OPV) vaccine.

Vaccination technique and site: the required amount of vaccine is dripped into the mouth, or dripped onto a small piece of sugar and given to the child. In this case, the child does not notice the unpleasant taste of the vaccine. This method of vaccination does not cause difficulties, but it has some



disadvantages, such as the possibility of miscarriage when administering the doses accurately or difficulty in absorption from the intestinal system.

Skin and intradermal injection - such as BCG (Bacillus Calmette-Guerin) against tuberculosis, live dried tularemia and chickenpox vaccines. Other types of vaccine preparations are not administered by this method.

Vaccination technique and site: usually the vaccine is administered subcutaneously in the skin of the upper third of the shoulder or in the skin of the forearm. For injection, a special thin-needle syringe is used to inject the vaccine into the arms in parallel. The correctness of the procedure can be determined by the appearance of a whitish color on the skin, which begins to form during the injection.

Subcutaneous injection is used for live and inactivated vaccines such as mumps (mumps), rubella, yellow fever. The disadvantage of subcutaneous administration of the vaccine is that immunity to this disease is formed slowly in the body, especially if inactivated vaccines are administered.

In addition, hepatitis B and rabies vaccines cannot be administered subcutaneously.

Technique and place of injection of the vaccine: the injection site is under the shoulder blade, one-third of the shoulder or the subcutaneous layer of the front of the thigh. The skin is pinched with the fingers and the syringe needle is inserted into this place. This method is effective in administering accurate doses of the vaccine.

Table 1 vaccine names and storage conditions

Types of vaccines,		Vaccine name and dose	Storage conditions
Live vaccines ADS		OPV (1 dose 2 drops orally) KPK (1 dose 0.5 ml t/o) BSJ (0.05 mg or 0.1 ml t/o)	OPV can be frozen. KPK and BSJ are stored at a temperature of +2 °C to 8 °C
Inactivated	Killed	AKDS, (0,5 ml m/o) whooping cough is coming.	Not all killed vaccines, anotoxins, recombinants can be frozen. Store at a temperature of +2° to + 8°.
	Anotoxin	AKDS, ADS-M, AD-M (0,5 ml)	
	Recombinant	Against hepatitis (1 doza 0,5 ml m/o)	

1. Live vaccines for MMR and MMR are sensitive to light and should be stored in a dark place.
2. Children should not be given antiallergic drugs (analgin, dimedrol) before vaccination.
3. All medical personnel are responsible for vaccinating children under 2 years of age.

Contraindications to vaccination:

1. If acute respiratory diseases are detected in children, and their condition is assessed as moderately severe, the child is vaccinated 3–14 days after recovery.
2. If a child has a high fever after the AMR vaccination and cries continuously for 3 days, such children are given AMR instead of AMR the next time.
3. If a child has neurological diseases, and the neurologist diagnoses them as “progressive disease”, the child is not vaccinated, but if the condition is assessed as stable, the child can be vaccinated.

Vaccination of children of kindergarten age

Before entering kindergarten, children should receive a number of additional vaccines.



They are as follows:

- It is advisable for a child to be vaccinated against Hepatitis A when entering kindergarten. As a result of the contact of the vaccinated child with the source of the disease in an organized group of children, the formation of an immune response to the disease will reduce the anxiety of parents and prevent the spread of the disease in kindergarten.
- It is very important for a child entering kindergarten to receive all vaccines in the vaccination calendar on time. Because there is collective immunity against the disease, that is, if vaccinations are carried out in accordance with the vaccination calendar at a rate of more than 95%, then collective immunity will be sufficient and children will be protected from the disease.

Getting a seasonal flu vaccine every fall helps reduce the risk of children getting sick during the flu season.

### Profilaktik emlashlar taqvimini

Yoshi	Emlash turlari
<b>1-kunida</b>	VGv-1
<b>2-5 kunida</b>	BSJ-1
<b>2 oylilikda</b>	penta-1 (AKDS-1, VGv-2, XIB-1), OPV-1 Rota-1, PNEVMO-1
<b>3 oylilikda</b>	penta-2 (AKDS-2, VGv-3, XIB-2), OPV-2 Rota-2, PNEVMO-2
<b>4 oylilikda</b>	penta-3 (AKDS-3, VGv-4, XIB-3), OPV-3, IPV-1
<b>9 oylilikda</b>	IPV-2
<b>12 oylilikda</b>	KPK-1, PNEVMO-3
<b>16 oylilikda</b>	AKDS-4, OPV-4
<b>6 yosh</b>	KPK-2
<b>7 yosh</b>	ADS-M - 5, OPV-5
<b>9 yosh</b>	VPCH
<b>16 yosh</b>	ADS-M - 6

Eslatma: KPK – uch valentli qizamiq, qizilcha, epid parotitga qarshi tirik vaktsina  
AKDS-VGV-XIB – besh valentli-ko'yo'tal, bo'g'ma, qoqshol, gepatit V va XIB infeksiyalariga qarshi vaktsina  
Rota – rotovirus infeksiyaga qarshi ichiriladigan vaktsina  
Pnevmo – pnevmonik infeksiyaga qarshi vaktsina  
IPV – inaktivlashgan poliomyelit vaktsinasi  
VPCH – odam sapitoma virusiga qarshi vaktsina  
OPV – og'iz orqali yuboriladigan poliomyelit vaktsinasi  
XIB – yiringli-septik kasalliklariga qarshi profilaktika uchun vaktsina  
BSJ – silga qarshi vaktsina  
ADS-M – bo'g'ma va qoqsholga qarshi vaktsina

Manba: ssv.uz 

When preparing children for vaccination, it is important to know the basic rules, which include:

- A pediatric neurologist's report;
  - Allergist recommendations, prevention of allergic reactions;
  - Avoid introducing new foods before vaccination;
  - Never scare children with vaccinations (even jokingly), and if they ask about the pain of the injection, explain it truthfully, saying "it hurts a little, but it's quick and tolerable."
  - Take your child's favorite toys with you (give them to the child during the vaccination process);
- After preparing for the vaccination, familiarize yourself with some tips that will be useful during the vaccination:
- Measure the child's body temperature when you leave the house for the vaccination - the body temperature should be below 37 C, ask the doctor to measure the child's body temperature before the injection;
  - Ask your doctor what vaccine your child is being vaccinated with, where it was manufactured and when;
  - Control your excitement, anxiety can quickly pass to your child;
  - If your child is worried, try to distract him, talk to him;



• It is normal for the child to cry after the injection, try to comfort him, tell him that the pain will go away when he takes a deep breath;

### After Vaccination

- Ask your doctor questions, get information about possible complications after vaccination and find out what measures should be taken;
- Stay in the clinic for at least 30 minutes after vaccination;
- It is better not to give the AKDS vaccine in hot weather, if vaccinated, give the child antipyretic drugs after returning home;
- If the child has a fever (this is the norm with AKDS) - you can wet the child with standing water at room temperature (do not use alcohol (!), it affects the delicate skin).
- Do not forget that antipyretic drugs for children have their own side effects and intake limits;
- It is strictly forbidden to give aspirin to children under 5 years of age to reduce fever;
- With AKDS vaccination, not only body temperature increases, but also general weakness and convulsions can be observed. This condition is conditionally considered the norm.
- The child's diet can also be changed 3 days after vaccination;
- If local reactions occur after the injection, it is necessary to apply a warm compress to the area, for example, with warm water;

Side effects of inactivated vaccines are often explained by concomitant conditions - for example, the child's teeth are erupting at the time of vaccination, or the child is starting to have complications from a cold;

### Conclusion

Another important point is that vaccinators should not vaccinate children who have not been examined by a doctor, have restrictions, or have contraindications. The vaccination process should be carried out without haste. Only then will the health of the population be protected. In order for the process to be good and high-quality, it is carried out in several stages. During the vaccination process, it is necessary to wear a mask, keep a distance, disinfect hands with antiseptic agents, disinfect vaccination rooms, and ventilate frequently.

Information about the vaccinations of children or adults is recorded in their medical records. Parents need to know what vaccinations their child has received and when they should be given them, and also follow the vaccination schedule, because timely vaccinations are very beneficial.

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