PROCEDURE

HPV vaccine

The HPV vaccine is an injection that prevents infections linked to several cancers and genital warts.

PURPOSE
Prevent HPV infections linked to cancer and genital warts

PROCEDURE TYPE
Therapeutic prevention; bedside intramuscular injection

WHERE IT IS DONE
Outpatient clinic, pharmacy, school, or community clinic

ANAESTHESIA
None

HOW LONG IT TAKES
A few seconds to one minute

PREPARATION
No fasting; bring vaccination records and wear loose sleeves

RECOVERY
Same day; avoid driving if faint or dizzy

MAIN RISKS
Injection-site reactions, fainting, fever, severe allergy

RESULTS
Protection develops after the recommended dose series

Overview

The HPV vaccine is an injection that helps prevent infection with certain types of human papillomavirus, or HPV. HPV is a common virus passed mainly through intimate skin-to-skin contact.

Some HPV types can cause cancers of the cervix, anus, penis, vagina, vulva, and throat. Other types can cause genital warts. The vaccine cannot cause HPV infection.

The vaccine works best before exposure to HPV, but previous sexual contact does not necessarily mean there is no benefit. Most people have not been exposed to every HPV type covered by the vaccine.

This is a preventive vaccine. It does not remove an HPV infection that is already present or

treat existing genital warts, abnormal cervical cells, or cancer.

Why the procedure is performed

The main goal is to prevent new infections with the HPV types covered by the vaccine. Preventing these infections lowers the chance of developing HPV-related precancers, cancers, and genital warts.

Vaccination is routinely recommended during childhood because the immune response is strong at younger ages and vaccination can occur before HPV exposure. In the United States, routine vaccination is recommended at ages 11 or 12 and may begin at age 9.

Catch-up vaccination is recommended through age 26 for people who were not fully vaccinated earlier. For adults ages 27 through 45, vaccination is not routinely recommended for everyone. Some adults in this group may choose it after discussing their likely benefit with a healthcare professional.

You do not need an HPV test, cervical screening test, pregnancy test, or antibody test simply to decide whether you can receive the vaccine.

Who should and should not have it

The vaccine may be appropriate if you are within the recommended age range and have not completed the recommended series. It is recommended for people of all sexes.

The number of doses is based mainly on your age when the series began and whether your immune system is weakened:

The vaccine should not be given if you had a severe allergic reaction, such as anaphylaxis, after an earlier dose or to a vaccine ingredient. The HPV vaccine used in the United States is produced using yeast and is avoided in people with a history of immediate severe allergy to yeast.

Vaccination is usually delayed during pregnancy. If you received a dose before learning you were pregnant, this is not considered a reason for special intervention; remaining doses are generally postponed until after pregnancy. HPV vaccination can be given while breastfeeding.

A moderate or severe illness may be a reason to delay vaccination until you feel better. A mild illness, such as a minor cold, usually does not prevent vaccination.

Tell the person giving the vaccine if you have previously fainted after an injection, have severe allergies, are pregnant, or are taking medicines that weaken your immune system.

- Two doses are generally used when the first dose is given before age 15
- Three doses are generally used when the series begins at age 15 or later
- Three doses are recommended for certain people with weakened immune systems

How to prepare

Follow the treating facility's own instructions first, because its procedures may differ.

You do not need to fast. You may eat, drink, and take your usual medicines unless the facility has told you otherwise.

Bring any vaccination records you have. These can help the healthcare team determine which dose you need and whether an earlier dose still counts. A delayed series usually does not need to be restarted.

Wear clothing that allows easy access to your upper arm. Eating and drinking beforehand may help if you tend to feel faint around needles.

If you are anxious about injections or have fainted before, say so before the vaccine is given. You may be vaccinated while seated or lying down.

What happens during the procedure

A healthcare professional confirms your identity, checks which dose is due, and asks about allergies, illness, pregnancy, and reactions to previous vaccines.

The skin may be cleaned. A fine needle is used to inject the vaccine into a muscle, usually in the upper arm. In younger children, the thigh may sometimes be used.

The injection itself takes only a few seconds. Anaesthesia is not needed.

You will usually be asked to sit or lie down for about 15 minutes afterward. This observation period is mainly because fainting can occur after injections, especially in adolescents. It also allows staff to respond promptly to an immediate allergic reaction.

Recovery and what to expect afterward

Pain, tenderness, redness, or swelling around the injection site is common. A cool compress and gentle arm movement may help. Some people also develop a headache, tiredness, muscle aches, nausea, dizziness, or a mild fever.

You can eat and drink normally immediately afterward. Staying hydrated may help if you feel light-headed.

Most people can return to normal activity the same day. If you feel faint, dizzy, or unwell, sit or lie down and avoid strenuous activity until you feel steady.

There is no routine driving restriction. Do not drive yourself if you are dizzy, faint, or otherwise unable to drive safely.

Most people can return to school or work right away. If fever, fatigue, or arm soreness makes normal tasks difficult, a short period of rest may be helpful.

Risks and possible complications

The most frequent effects are temporary pain, redness, or swelling where the vaccine was given. Headache, fatigue, nausea, muscle aches, dizziness, and fever can also occur.

Fainting can happen during or after vaccination. The main concern is injury from falling, which is why seated observation is recommended.

A severe allergic reaction is uncommon but can occur after any vaccine. Vaccination sites should have the equipment and medicines needed to treat one.

The HPV vaccine does not contain live HPV. It cannot give you HPV, genital warts, or cancer. Safety monitoring has not shown that HPV vaccination causes infertility.

Results and follow up

There is no immediate test result. Your immune system gradually produces protection after vaccination.

Complete every recommended dose for your age and health situation. Before leaving, confirm whether another dose is needed and when it should be given. If you miss the planned date, contact the clinic to reschedule; the series usually continues without restarting.

The vaccine does not protect against every cancer-causing HPV type. If you have a cervix, continue cervical cancer screening at the recommended times even after completing vaccination.

Vaccination also does not test for or treat an existing HPV infection. An abnormal cervical screening result or known HPV infection should be followed separately according to your healthcare team's plan.

Alternatives

There is no other vaccine or medicine that provides the same protection against the HPV types covered by the vaccine.

Choosing to delay vaccination is an option, but it may reduce the chance of receiving it before HPV exposure. The vaccine prevents new infections; it cannot clear an infection acquired while waiting.

Condoms and other barriers lower the chance of HPV transmission but do not provide complete protection because uncovered skin can carry the virus. Limiting sexual partners or avoiding sexual contact reduces exposure but is not equivalent to vaccination.

Cervical screening can find HPV infection or abnormal cervical cells before cancer develops. It does not prevent HPV infection and only screens the cervix. It does not replace vaccination.

Genital warts and HPV-related precancers can be treated if they develop. Treatment may remove affected tissue, but it does not provide the broad preventive protection of vaccination.

When to call your healthcare team

Arrange routine follow-up if side effects are not improving after a few days, are interfering with normal activities, or if you are unsure when your next dose is due. Also contact the team if you later learn that you were pregnant when vaccinated; this is not usually an emergency.

Seek urgent medical help for signs of a severe allergic reaction, including:

Call emergency services rather than driving yourself if breathing is difficult or symptoms are rapidly worsening.

- Trouble breathing, wheezing, or throat tightness
- Swelling of the face, lips, or tongue
- Widespread hives with weakness, dizziness, or vomiting
- Collapse, inability to wake, or a seizure

Common questions

Will I be asleep?

No. The HPV vaccine is a quick injection and does not require sedation or anaesthesia. Tell the healthcare professional if needles make you anxious or you have fainted before.

Can I drive home?

Usually, yes. Wait through the requested observation period. Do not drive if you feel faint, dizzy, weak, or unwell.

How painful is it?

You may feel a brief pinch or sting. Arm soreness afterward is common and usually improves over the next few days.

When will I know it worked?

There is no routine blood test or immediate result. Protection develops as your immune system responds to the recommended doses.

Do I need to restart if I missed a dose?

Usually not. A delayed series generally continues from where it stopped. Bring your records so the clinic can confirm which dose is next.

Do I still need cervical screening?

Yes, if cervical screening is recommended for you. The vaccine does not cover every HPV type that can cause cervical cancer.

Sources

- Centers for Disease Control and Prevention. HPV Vaccination Recommendations . Reviewed July 9, 2024.
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