

HPV Vaccines

HPV (human papillomavirus) vaccination is cancer prevention. This is why it is important that all children get vaccinated against HPV.

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What is the HPV vaccine?

HPV vaccines can help protect children and young adults from some HPV infections. These vaccines are used to prevent some types of cancer that can result from an HPV infection. They will not treat an HPV infection. And they will not protect against cancer if a person already has an HPV infection.

Gardasil 9 is the only HPV vaccine available in the US. Other HPV vaccines are available outside the US, but these don't protect against as many types of HPV as Gardasil 9 does.

Each vaccine requires a series of injections (shots) – either 2 or 3 depending on a person's age. The injections are most often given in the muscle of the upper arm. Research is still being done on giving just 1 dose of HPV vaccine.

What does the HPV vaccine do?

Giving the vaccine to boys and girls between 9 and 12 years old can prevent more than 90% of HPV-related cancers when they get older.

The vaccine helps prevent infection from 2 low-risk cutaneous HPV types: HPV-6 and HPV-11.

It also protects against several high-risk mucosal HPV types, including:

- HPV-16 and HPV-18, which cause most [cervical cancers](#) and pre-cancers, as well as many cancers of the [anus](#), [penis](#), [vulva](#), [vagina](#), and [mouth and throat](#)
- Other high-risk HPV types: 31, 33, 45, 52, and 58

Research is being done to test a vaccine that will protect against other cancer-causing types of HPV as well.

When should the HPV vaccine be given and who should get it?

The HPV vaccine is strongly recommended for all boys and girls. Since vaccines are used to help prevent diseases, children are vaccinated for diseases before being exposed to the infection that causes the disease.

Most people in the US have skin-to-skin contact that can spread HPV during their teens and early twenties. So, it's best to get the vaccine before this. The body also produces the strongest immune response against HPV when the vaccine is given in

this age range.

The HPV vaccine works best in children and pre-teens. Vaccination at the recommended ages of 9 to 12 will prevent more cancers than vaccination at older ages, with cancer prevention decreasing as age at vaccination increases.

Pregnant women should not get any HPV vaccine at this time, even though they appear to be safe for both mother and the unborn baby. If a woman who is pregnant does get an HPV vaccine, it's not a reason to consider ending the pregnancy. Women who started a vaccine series before they learned they were pregnant should complete the series after the pregnancy.

Make sure the health care provider knows about any **severe allergies**. The following people should not get an HPV vaccine:

- Those with a severe allergy to yeast should not receive Gardasil 9.
- Anyone who has ever had a life-threatening allergic reaction to anything else contained in the vaccine
- Anyone who has had a serious reaction to an earlier dose of HPV vaccine

What are the American Cancer Society recommendations for HPV vaccination?

The American Cancer Society recommends:

- Girls and boys should get 2 doses of the HPV vaccine between the ages of 9 and 12.
- Teens and young adults ages 13 through 26 who have not been vaccinated, or who haven't gotten all their doses, should get the vaccine as soon as possible. Vaccination of young adults will not prevent as many cancers as vaccination of children and teens.
- The ACS does not recommend HPV vaccination for people older than age 26 years.

Does the HPV vaccine work?

The HPV vaccine works very well. Studies have shown that the vaccine provides nearly total protection against infections and pre-cancers caused by the types of HPV that cause 90% of HPV cancers as well as 90% of genital warts.

Research done so far shows that the protection against HPV infection does not seem

to decrease with time. Research will continue to look at how long protection against HPV lasts, and if booster shots will be needed.

Is the HPV vaccine safe?

HPV vaccines have been used since 2006. HPV vaccines went through extensive safety testing before becoming available. Hundreds of million doses of the HPV vaccine have been given worldwide.

Like any vaccination, there may be common mild side effects from the HPV vaccine that usually go away quickly, like headache or fever. There can be pain, redness, and/or swelling where the shot was given. A small number of people may have a more serious side effect that could occur with any vaccine, such as an allergic reaction or fainting when the vaccine is given. Anyone who has a severe allergy to yeast or any other ingredient in the vaccine should not receive the HPV vaccine.

The HPV vaccine is safe. The ingredients in the HPV vaccine, like all vaccines, help make sure that it is effective and safe. These ingredients occur naturally in the environment, the human body, and foods. For example, the HPV vaccine contains aluminum like the hepatitis B and Tdap vaccines. Aluminum boosts the body's immune response to the vaccine. People are exposed to aluminum every day through food, cooking utensils, water, and even breast milk. Aluminum-containing vaccines have been used for decades and have been given safely to many billions of people.

Scientists and health organizations around the world closely monitor the safety of HPV vaccines. Hundreds of studies in millions of people worldwide have shown that the HPV vaccine is safe.

In the US, vaccine safety is watched by several national systems that work together to make sure that any harmful effects of vaccines can be found early. The US Centers for Disease Control and Prevention (CDC) and the US Food and Drug Administration (FDA) review all serious side effects reported to the Vaccine Adverse Event Reporting System (VAERS) to watch for potential safety concerns that may need further study.

How long does the HPV vaccine last?

When a child gets the HPV vaccine, their body makes proteins called antibodies. Antibodies provide protection against the virus when a person is exposed to HPV. The antibodies give strong and long-lasting protection.

Does the HPV vaccine affect fertility?

The HPV vaccine is a safe way to help protect health and the ability to have healthy babies later in life. Research reviews do not suggest that getting the HPV vaccine leads to having fertility problems later in life. In fact, the HPV vaccine can help protect women from future fertility problems that are linked to treatment for cervical cancer and pre-cancer.

Do people who were vaccinated for HPV need to be tested for HPV?

People who have a cervix, even if they have gotten the HPV vaccine, still need regular screening for cervical cancer. This is because the vaccine does not prevent all of the types of HPV that can cause cervical cancer.

See [The American Cancer Society Guidelines for the Prevention and Early Detection of Cervical Cancer](#) to learn more.

How much does the HPV vaccine cost?

Most insurance plans cover the HPV vaccine cost if it is given according to national guidelines, between ages 9 and 26. But it's a good idea to check with your insurance plan to be sure.

The federal [Vaccines for Children \(VFC\) program](#) [↗](#) covers vaccine costs, including the HPV vaccine, for children and teens who don't have insurance. The VFC program provides free vaccines to children and teens until 19 years of age, who are either Medicaid-eligible, American Indian or Alaska Native, underinsured, or uninsured.

The VFC program also allows children and teens to get VFC vaccines through federally qualified health centers or rural health centers. For more on the VFC program or to find the VFC contact where you live, visit [cdc.gov](https://www.cdc.gov), or call 1-800-232-4636.

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