

# The Vaccines and Cervical Cancer

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Many women are concerned about cervical cancer.

In the United States, cervical cancer is the second most common cause of cancer-related death in women ages 20 to 30.

In this country, each year, 11,000 women will be diagnosed with cervical cancer and 4000 of these will die.

Cervical cancer is caused by the human papilloma virus also known as HPV. There are at least 100 types of HPV. But, as far as cervical cancer is concerned the main culprits are the types 16 and 18). HPV is a sexually transmitted disease. The progression from HPV infection to precancerous lesion can happen in 1 to 10 years.

Cervical cancer is a preventable disease. For years we have tried teaching abstinence and safe sex (at least using condoms with sexual activity). Yet, we have had very little impact on limiting the spread of this disease and the cancer that can result from an HPV infection.

There are rarely any warning signs in the early precancer stages of the disease when it is most easily treated.

Until recently, our primary defense was early detection of the precancer changes of the cervix using Pap smears. However, now we have a new weapon in our arsenal to aid in the war against cervical cancer: the HPV vaccine.

There are currently two vaccines available in the United States to protect against contracting HPV: Gardasil and Cervarix. Cervarix helps protect against HPV-16 and HPV-18 which, as we know, can cause cervical and other genital cancers. Gardasil protects against types 16 and 18 and an additional two HPV types, HPV-6 and HPV-11 that cause external genital warts.

Each immunization requires a total of 3 injections over a six-month time span.

Both of the vaccines are more than 90% effective in preventing the disease. Each are less effective in preventing precancerous lesions in women already exposed to HPV strains 16 and 18, since you cannot vaccinate against an infection that is already present.

Were the vaccines studied for safety? Yes. Each vaccine was studied in over 21,000 young girls and women. Currently, the Centers for Disease Control (CDC) and the Food and Drug

Administration (FDA) monitor the vaccines for safety.

**What sort of side effects have been reported?** Mild to moderate side effects including tenderness, itching and perhaps redness at the injection site, headache nausea and low-grade fever have been reported as has fainting. Fainting is a common event in preteen and teenagers, after any injection. Simply sitting or lying down for 15 minutes after the injection generally solves the problem of fainting. All of these side effects usually do not last long and do resolve without medical treatment.

**What is an adverse event?** First, let's define the term *adverse event*. An adverse event is any problem that is reported after receiving a vaccine or medication that may or may not have been caused by the vaccine or medication. For instance, thousand people may attend a concert. On the way home, one of those thousand people had a flat tire and one got a speeding ticket. Did attending the concert cause these "adverse events" or would they have eventually happened regardless of whether or not those people attended the concert?

**Have serious adverse events been associated with these vaccines?** There is a rare disorder, Guillian Barre Syndrome (GBS), that can cause muscle weakness. (Most people eventually recover completely or nearly completely, but some people have permanent nerve damage and between 5% and 6% of people who develop GBS die. GBS affects people of both sexes and all ages, and has been reported in all races according to the Center for Disease Control (CDC). It has been suggested that one person out of 1 million vaccinated persons may be at risk of GBS associated with the vaccine received.). Though GBS has been reported after receiving other vaccines, currently, there is no evidence that the Gardasil or Cervarix vaccines cause or have increased the rate of GBS. In other words, in this age group (9-26 yrs) GBS occurs at the same rate whether or not a woman has been vaccinated with Gardasil or Cervarix.

Also, blood clots have been reported, occurring in the heart, lungs and legs. The majority had increased risk for developing blood clots such as using tobacco or taking oral contraceptives.

In the cases studies, there was no pattern to suggest that death was caused by the vaccine. In many cases, death could be explained by factors other than the vaccine. Some of these other causes were diabetes, viral illness, heart failure and illegal drug use.

**What are the current recommendations for giving the vaccine?** The CDC and the FDA have issued statements concluding that the vaccines are safe and effective in preventing infection with the HPV virus. Currently, the CDC recommends vaccination with 3 doses of either of the vaccines. Gardasil – The FDA has approved Gardasil for use in females for the prevention of cervical cancer, and some vulvar and vaginal cancers, caused by HPV types 16 and 18 and for

use in males and females for the prevention of genital warts caused by HPV types 6 and 11. The vaccine is approved for these uses in females and males ages 9 to 26.

**Cervarix- The FDA has approved Cervarix for use in females ages 10 to 25 for the prevention of cervical cancer caused by HPV types 16 and 18.**

**Neither of these HPV vaccines has been proven to provide complete protection against persistent infection with other HPV types, although some initial results suggest that both vaccines might provide partial protection against a few additional HPV types that can cause cervical cancer. Overall, about 30 percent of cervical cancers will not be prevented by these vaccines. Also, in the case of Gardasil, 10 percent of genital warts will not be prevented by the vaccine. Neither vaccine prevents other sexually transmitted diseases nor do they treat HPV infection or cervical cancer.**

**Because the vaccines do not protect against all HPV infections that cause cervical cancer, it is important for vaccinated women to continue to undergo cervical cancer screening as recommended for women who have not been vaccinated.**

**Are there other ways to prevent HPV?**

**The only sure way to prevent HPV is to abstain from all sexual activity. For those who are sexually active, condoms may lower the chances of getting HPV, if used all the time and the right way. But HPV can infect areas that are not covered by a condom—so condoms may not fully protect against HPV.**

**Sexually active adults can also lower their risk of HPV by being in a mutually faithful relationship with someone who has had no or few sex partners, or by limiting their number of sex partners. The fewer partners a person has had – the less likely he or she is to have HPV. But even persons with only one lifetime sex partner can get HPV, if their partner has had a previous partner.**