

HPV (Human Papillomavirus) & the HPV Vaccines

McKenzie Pediatrics 2010

What Is HPV?

Genital human papillomavirus (HPV) is the most common sexually transmitted virus in the United States. About 20 million people in the U.S. are infected, and about 6.2 million more get infected each year.

HPV is spread through sexual contact. More than 80% of sexually active men and women are infected with HPV at sometime in their lives. Most infections occur shortly after initiating sexual activity. Hence, vaccinating young boys and girls before they become sexually active is crucial.

Most HPV infections don't cause any symptoms, and go away on their own. But HPV is important mainly because it can cause cervical cancer in women. Every year about 11,000 women in the U.S. are diagnosed with cervical cancer, and about 4000 die from it.

Worldwide, cervical cancer affects 500,000 women annually, and is responsible for more than 250,000 deaths. Cancers of the vulva, vagina, penis, and anus, as well as a subset of head and neck cancers, are also associated with HPV infection.

There are about 40 types of HPV, of which about 15 strains are known to cause cancer. HPV types 16 and 18 are the most common cancer-causing strains, leading to about 70% of all cervical cancer cases worldwide. HPV types 6 and 11 are associated with about 90% of all cases of genital warts.

There is no treatment for HPV infection, but the conditions it causes can be treated.

Why Get Vaccinated?

HPV vaccine is an inactivated (not live) vaccine which protects against 4 major types of HPV. These include the two types (16 and 18) that cause about 70% of cervical cancer, and the two types (6 and 11) that cause about 90% of genital warts. In other words, HPV vaccine can prevent most genital warts, and most cases of cervical cancer.

Protection from HPV vaccine is expected to be long-lasting. But vaccinated women still need cervical cancer screening because the vaccine does not protect against all types of HPV types that cause cervical cancer.

Who Should Get The Vaccine, and When?

HPV vaccine is routinely recommended for girls (and, as of late in 2009, for boys, too!) 11-12 years of age. Doctors may give it to boys and girls as young as 9 years, and the vaccine is also recommended for girls, boys, women and men 13-26 years of age who did not receive it when they were younger.

It is important to get the HPV vaccine before the first sexual contact – because until then pre-teens have not been exposed to HPV. If a girl or woman is already infected with a type of HPV, the vaccine will not prevent disease from that type.

The vaccine is given as a 3-dose series, with the second dose 2 months after the first, and the third dose 4 months after the second. HPV vaccine may be given at the same time as other vaccines.

Are There Different Vaccines?

Yes. There are currently two different brands of HPV vaccine. Our clinic carries Gardasil™, which was approved by the FDA in June 2006 for the prevention of HPV strains 6, 11, 16 and 18. Ongoing studies thus far are showing that the vaccine is 98% effective at preventing cervical intraepithelial neoplasia (CIN) grades 2 and 3 (the precursor to cervical cancer) due to the HPV strains in the vaccine.

The vaccine contains no antibiotics, thimerosal, or other preservatives. Over twenty million people have to date received the vaccine, with almost no serious safety concerns.

There is another brand of HPV vaccine, Cervarix™, which has been used outside the U.S. since 2007, but approved by the FDA for use in this country in October 2009. This brand only protects against HPV strains 16 and 18, and thus far has proven 100% effective at preventing CIN caused by these strains.

Is There Anyone Who Shouldn't Get The HPV Vaccine?

Anyone who has ever had a life-threatening allergic reaction to yeast, to any other component of HPV vaccine, or to a previous dose of HPV vaccine should not get the vaccine. Pregnant women should also NOT get the vaccine, only because its safety to the mother and unborn baby is still being studied (though thus far it appears to be safe). Women who are breastfeeding may safely get the vaccine.

What Are The Side Effects Of The Vaccine?

HPV vaccine does not appear to cause any serious side effects. However, a vaccine, like any medicine, could possibly cause an allergic reaction in the area surrounding the site of the injection. These reactions are unusual, and mild, and respond well to over-the-counter Benadryl.

About 8 in 10 people feel soreness to the site after injection, possibly lasting up to a day. About 1 in 10 people will develop a mild (100.0F) fever sometime in the first 24 hours; about 1 in 65 people experience a fever up to 102 degrees. A few people complain of itchiness to the site after the vaccine, and about 1 in 4 people report mild redness and/or swelling lasting up to 24 hours.