

## **Well Woman: Wise Choices-Podcast #5** **HPV and Gardasil**

**Voiceover:** Welcome to Well Woman: Wise Choices, pod casts that empower women with information to make wise healthcare choices. Your hostess is Darline Turner-Lee, physician assistant, exercise specialist, owner and founder of Next Step Fitness, Inc.

**Darline Turner-Lee:** Hello and welcome to Well Woman: Wise Choices. I'm Darline Turner-Lee. Well Woman: Wise Choices are pod casts for women who want to be in the best possible health so that they can live their best possible lives. The last podcast covered the most common sexually transmitted infections. You may have noticed that HPV, Human Papilloma Virus, the causative infection for genital warts and the major cause of cervical cancer, was not included. I did this purposely because I want to address HPV, and more specifically the new vaccine Gardasil®, separately.

There is so much in the press and in advertising about this vaccine that raises very strong emotions-both for and against the vaccine. I want to bring these issues to the forefront and discuss them openly.

So let's get started with the basics. What is HPV? HPV or Human Papilloma Virus is actually a family of 100 or more different viruses. Human Papilloma Virus causes all forms of warts-those on the hands, those on the soles of the feet and of course genital warts. Different strains of HPV cause different types of warts. HPV strains 6, 11, 16, and 18 are responsible for more than 90% of genital warts and more than 70% of cervical cancers.

According to the U.S. Centers for Disease Control and Prevention, genital warts caused by HPV is the most common sexually transmitted infection in the United States and in the World, with more than one million new cases reported annually. By the age of 50, approximately 80% of all American women will have or have had HPV infection. The incidence of genital HPV infections is greatest amongst men and women who've recently become sexually active. Approximately one half of all sexually active teens and young adults will contract HPV within 5 years of becoming sexually active and 75% of new infections occur in men and women aged 15-24.

The risk factors for contracting HPV are the following:

- Young age at first intercourse
- A high number of sexual partners
- Cigarette Smoking
- Oral Contraceptive use
- Men who have or have had multiple sex partners
- Knowing your partner for less than 8 months prior to having intercourse
- A history of genital herpes virus.

HPV strains #6 and 11 cause the majority of genital warts but they don't cause cervical cancer. While genital warts are not lethal in and of themselves, they can be extremely uncomfortable-both physically and emotionally. Warts can develop as individual papules or in clusters, cause pain and discomfort, vaginal discharge, and in extreme cases, vulvar cancer. They often require multiple treatments for eradication but can recur during times of stress or when the immune system is compromised such as during illness or even pregnancy. People with genital warts often cite frustration, embarrassment and depression as common emotions they experience as they try and manage their genital warts.

Genital warts can be very difficult to treat because HPV can exist indefinitely but be completely asymptomatic. While most healthy individuals with competent immune systems will ultimately get rid of HPV spontaneously, there is no cure for HPV, no medication available to get rid of the virus and no way to predict how long it will take to get rid of the virus. To date there are no

medications or treatments to boost the immune system to make it get rid of HPV faster. For now, one can only treat (remove) the warts and hope the body will do the rest to get rid of the virus.

There are several treatments available to get rid of genital warts, but the first step is proper diagnosis. Since there are often no visible warts externally, and warts inside the vagina or on the cervix may not be easily seen, Pap smears are the first line of detection for HPV infection. Pap Smears, which evaluate whether there are cellular changes within the cervix that could indicate cancer, are first to detect HPV in the absence of visible warts. If a woman has a Pap smear that comes back from the pathologist as abnormal, it should be repeated (between 6 weeks and 3 months) to confirm that the abnormalities really exist and that the first Pap smear was not a result of clinician or examination error. If abnormalities are present on the repeat Pap smear, a HPV DNA test should also be performed to specifically identify HPV and which strains are present. Most clinicians will also perform a colposcopy, a visual examination of the cervix under high power magnification, to examine the cervix for the early appearances of warts or cellular changes.

Warts noted on colposcopy are often treated at the time of examination. Podophyllin and Trichloroacetic Acid can be applied directly to warts to dissolve them away. Cryotherapy (removal with liquid nitrogen) can also be applied. Some clinicians will biopsy the warts they see and send them to pathology for more in depth evaluation.

Sometimes removing warts is all that is needed to get rid of warts and HPV. But if warts repeatedly come back or if an outbreak is extensive a woman may need to have a LEEP<sup>1</sup> (loop electrosurgical excision procedure) treatment, extensive cryotherapy, laser treatment or conization<sup>2</sup> of her cervix. She may also have to go through treatments repeatedly in to get rid of all the warts.

HPV is unique in that it has been definitively shown to cause cervical cancer. Molecular studies have identified HPV DNA in over 99% of cervical cancers at pathology examination. HPV #16 and #18 are primarily responsible for causing cervical cancer. HPV #16 causes 50-60% of cervical cancers and HPV #18 causes another 10-15% of cervical cancers.

It must be noted that HPV alone does not cause cervical cancer. Whether or not a person develops HPV infection, genital warts or cervical cancer depends on the immune system of the person and other physical and environmental exposures such as smoking or co-existing disease.

When a woman is diagnosed with HPV associated cervical cancer, if it is in the early stages, she may have conization, a procedure which will get rid of the cancer on superficial cell layers. If she has a more advanced stage of cervical cancer, she must have a hysterectomy. Whether or not she needs additional treatments with chemotherapy and/or radiation depend on the extent of her cancer. Despite the advances in gynecological preventive health and cervical cancer treatments, approximately 3700 American women will die from cervical cancer annually.

In an effort to further reduce the incidence of genital warts and cervical cancer, Merck and Company, a pharmaceutical company based in New Jersey, developed Gardasil®, a vaccine against HPV. Gardasil® is designed to prevent women from contracting HPV-in particular HPV strains #6, #11, #16 and #18. The vaccine is intended to be given to young girls before they become sexually active and would contract the virus, so it's indication is for young girls from aged 9 to young women aged 26. Gardasil® is a 3 step vaccine. After the initial dose, the second dose is given a month after the first and the third dose is given 5-6 months after the first. Gardasil® cannot cure HPV. However, if a woman has HPV and the causative strains are known, according to Merck it may still be beneficial for her to get the vaccine to prevent her from contracting the other strains of the virus. The entire vaccine series costs about \$360.

Now those are the facts as we know them. But since its approval by the FDA nearly 2 years ago, Gardasil® has been at the center of some of the most heated discussions in vaccine history.

Merck had been lobbying hard to have the vaccine added to the mandatory vaccine schedule for young girls. Parents have been outraged that such a vaccine is being recommended and made mandatory for their pre-pubertal daughters. Women's activists ask, "What about the boys? Why aren't they being vaccinated?" And other clinicians and researchers question the long term safety of the vaccine given that it had been studied for less than 10 years when it was approved.

For some of these questions there are no answers simply because the vaccine has not existed long enough for the questions to be answered. Merck claims that the vaccine is safe but since there isn't long term data, we really don't know what the long term effects of the vaccine are.

To date, several states, including my current resident state of Texas have mandated or tried to mandate that the vaccine be required for girls to enter school at the proposed age. However, public outcry has blocked such mandates in many states and tied up the debate in others. One thing is certain, Gardasil and the controversy that surrounds it won't soon go away. It's a topic that I am following closely as it will directly affect me and mine in 5 short years. As I know, I'll let you know.

So for now, I'm Darline Turner-Lee and Thank you for tuning in to Well Woman: Wise Choices.

If you want to read Merck and Company's clinical reports that they filed with the FDA to get Gardasil® approved, visit [http://www.merck.com/product/usa/pi\\_circulars/g/gardasil/gardasil\\_pi.pdf](http://www.merck.com/product/usa/pi_circulars/g/gardasil/gardasil_pi.pdf).

If you would like to comment on this podcast or weigh in on the HPV debate, send an e-mail to [mail@nextstepfitness.com](mailto:mail@nextstepfitness.com). I'll post the responses on the Next Step Fitness Website (provided they are not too vulgar or inappropriate! You have a right to your opinion, but remember others have a right to theirs as well. Let's be respectful!!)

1. **LEEP** uses a thin wire loop electrode which is attached to an electrosurgical generator. The generator transmits a painless electrical current that quickly cuts away the affected cervical tissue in the immediate area of the loop wire. This causes the abnormal cells to rapidly heat and burst, and separates the tissue as the loop wire moves through the cervix allowing it to be removed and further examined.

This technique allows your physician to send the tissue to the lab for further evaluation which insures that the lesion was completely removed, as well as allowing for a more accurate assessment of the abnormal area.

This definition comes from Tracee Cornforths' ***Your Guide to Women's Health*** Free Newsletter

2. **Conization** - A cone biopsy is an extensive form of a cervical biopsy. It is called a cone biopsy because a cone-shaped wedge of tissue is removed from the cervix and examined under a microscope. A cone biopsy removes abnormal tissue that is high in the cervical canal. A small amount of normal tissue around the cone-shaped wedge of abnormal tissue is also removed so that a margin free of abnormal cells is left in the cervix.

This definition comes from WebMD.