

**WHAT IS THE HUMAN PAPILLOMAVIRUS?**

Human papillomavirus (HPV) is a virus that infects skin. It is spread by direct skin-to-skin contact. There are over 100 different types of HPV, of which approximately 40 types prefer to infect skin in the genital area and therefore may be sexually transmitted. HPV is one of the most common sexually transmitted infections in the world. Unless you are in a lifelong mutually monogamous relationship, you will likely be exposed to HPV over your lifetime. At least 75% of all sexually active women will acquire an HPV infection in their lifetime.

Many people who become infected with HPV will not show any symptoms. These people are considered to have a subclinical infection. Most people who become infected with HPV will clear the infection on their own.

**WHAT ARE GENITAL WARTS?**

Certain types of HPV may manifest as genital warts, also known as condylomata accuminata. The virus causes cells in the skin to rapidly divide and pile up on each other. The resulting bumps are identified as warts. They tend to be flesh-colored or white. They may have a cauliflower-like appearance, as they grow larger. Not all bumps found in the genital region are warts. Any new bumps or growths should be assessed by your doctor.

In women, the warts tend to be found on the skin of the external genitals and in the anal region. They may also be found in the vagina and on the cervix. In men, the warts occur most often on the head or shaft of the penis, or in the anal region.

**HOW DID I GET GENITAL WARTS?**

If you have genital warts, it is because you were exposed at some point in time to one of the types of HPV that causes warts. Approximately 1% of the population will develop genital warts during their lifetime. Direct skin-to-skin contact, generally during vaginal or anal intercourse is required for transmission. You cannot get genital warts from toilet seats, towels, etc. The virus that causes genital warts prefers the genital region and cannot be spread to other parts of the body.

Although the average time between infection and development of visible warts is three months, some people may have a subclinical infection for months to years before developing visible warts. A weakening of your immune system, cause by other infections of illnesses, stress, or even pregnancy may cause the subclinical infection to manifest itself.

**WHAT ARE THE TREATMENT OPTIONS?**

Genital warts are not dangerous. The main reasons for treating genital warts are cosmetic or for relief of symptoms. Genital warts will often resolve spontaneously. In 30% of women, the warts will resolve on their own within three months. Treating the warts does not eliminate the virus from your body. Treatment does not prevent recurrences of the warts, nor does it decrease the infectiousness of the HPV. Your body's own immune system will clear the virus from your system. This may take several years. There is no medical cure to eliminate the HPV virus from your body.

If you choose to treat the warts, there are treatments that you apply yourself and treatments that your doctor applies for you. All of the treatments are equally as effective and clear the warts about 90% of the time. All of the treatments have similar recurrence rates, and 30% of the time you will have new warts within three months of the end of treatment.

Self Treatment:

1. *Podophyllotoxin (Podofilox)*. This is a liquid solution or gel that you apply directly to the warts with a cotton-tipped applicator twice a day for three days followed by four days off for up to four weeks. It acts

## **PATIENT HANDOUT      GENITAL WARTS: GENITAL HUMAN PAPILLOMAVIRUS**

by stopping the cells from growing and dividing, and stimulates your body to destroy the affected cells. Possible side effects include burning pain, redness, swelling and erosion at the sites of application.

2. *Imiquimod (Aldara)*. This is a cream that you apply to the warts three times per week for up to 16 weeks. It acts by stimulating your body's own immune system to fight the HPV. Possible side effects include burning, itch, redness, swelling, and erosion at the sites of application.

### **Provider-Applied Treatment:**

1. *Podophyllin*. This is a liquid solution similar to Podophyllotoxin that is applied by your doctor once a week for up to six weeks. It should be washed off with soap and water within 4-6 hours. Possible side effects include itching, burning, redness and swelling.
2. *Trichloroacetic Acid (TCA)*. This is an acid that causes the warts to dry up and fall off. It can be repeated 1-2 times per week as needed. Side effects are similar to Podophyllin.
3. *Cryotherapy*. This treatment freezes the warts using liquid nitrogen or nitrous oxide. Your doctor applies it once a week for up to three months. The most common side effect is pain during the therapy.
4. *Surgical Removal/Laser Therapy*. Surgical removal with cauterization burns off the warts. Laser therapy generates extreme heat, which vaporizes the warts. Often only one treatment is required. You may be required to undergo a general anesthetic in an operating room for these treatments. Pain following the procedures can last up to three weeks. Possible complications include lightening or darkening of the skin at the treatment sites, and potential scarring.

### **CAN I REDUCE MY RISK OF RECURRENCE AFTER TREATMENT?**

Cigarette smoking suppresses your immune system. Quitting smoking will help to clear HPV from your body. Using condoms each time you have sex will also help your body to clear the virus. Condoms may also help to prevent you from contracting other types of genital HPV and other sexually transmitted infections.

### **WILL I GET CANCER?**

Warts are not cancer. The types of HPV that cause genital warts are benign and are very rarely associated with genital cancers. Other types of HPV can lead to pre-cancerous and cancerous changes in the lower genital tract. Regular pap smears will screen you for those possible changes.

### **WILL GENITAL WARTS AFFECT MY PREGNANCY?**

Your warts may increase in size and number during your pregnancy. You do not need a cesarean section if you have genital warts, unless the warts are so large that they obstruct the birth canal. There is a very small risk of the baby developing warty growths in the throat called laryngeal papillomatosis. This can happen with both vaginal deliveries and cesarean sections.

Treatment of warts is often delayed until after you have delivered the baby, because many warts will resolve spontaneously after birth. Podophyllin is not safe in pregnancy. TCA and cryotherapy may be safely used in pregnancy.

### **SHOULD I GET THE HPV VACCINE?**

There is a new HPV vaccine that protects you from four different types of HPV. Two of these types may cause genital warts, and the other two types may cause pre-cancerous or cancerous changes of the cervix. In Canada, this vaccine is recommended for girls and women aged 9 to 26. It is given in three doses, and currently is not covered by any drug plans. The vaccine does not help your body fight an HPV infection that it already has, but it may provide you with protection from the other types of HPV if you have not yet come into contact with them.