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## Human Papillomavirus (HPV)

### **WHAT IS THE HUMAN PAPILLOMAVIRUS?**

HPV, human papillomavirus, is the virus that causes warts. There are over 120 different types of HPV. Some HPV types produce warts on the hands or feet, but not on the genitals. Others produce warts only on the genitals.

It is an infection that is transmitted through direct skin-to-skin contact. When genital skin is involved, the infection is generally considered “sexually-transmitted.”

Most HPV infections do not cause any health problems because they are eliminated by the person’s immune system before they cause any dangerous changes in the body. There are 40 HPV types that affect only the genital and anal areas. A few types can cause mild changes (dysplasia) in cervical cells and cells in the anal canal; some can lead to cervical cancer and anal cancer if left untreated for many years.

### **CAN COLLEGE STUDENTS GET HPV?**

In a study done on female college students at Rutgers University Student Health Service, it was discovered that most sexually active students acquire HPV at some point during college. According to the Centers for Disease Control and Prevention, it has been estimated that up to 80% of adults have had genital HPV at some point during their life. Only a few will develop cancer as a result of exposure. It has been estimated that less than 5% of people with genital HPV develop warts, and that about 5% of women with genital HPV develop precancerous cervical abnormalities. Most people who have genital HPV will resolve spontaneously without any treatment.

### **IF HPV IS SO COMMON, WHAT’S THE BIG DEAL?**

In women, high-risk strains of HPV can infect cells of the cervix, producing precancerous changes. The same infection can happen to cells near the anus, particularly in men who have sex with men and women who have anal sex. The American Cancer Society estimated that 12,900 new cases of cervical cancer were diagnosed in the United States in 2001 and that there were 4,400 deaths from cervical cancer.

### **HOW DOES ONE CATCH HPV?**

Most people who are infected with HPV have no signs or symptoms. It is therefore easy to unknowingly spread the virus to a sexual partner through intimate contact. Direct skin-to-skin contact between the genitals, mouth or anus can transmit the virus.

There are some reports linking oral HPV with dysplasia in the mouth. If you have oral sex, consider dental dams/condoms to decrease transmission of the virus.

### **HOW DO I PREVENT CATCHING GENITAL HPV?**

Reducing the risk of contracting sexually transmitted HPV is no different than preventing any other sexually transmitted infection: abstinence, limiting the number of different sex partners, and using barrier protection. An HPV vaccine is recommended for all women between the ages of 9 and 26 for prevention of cervical cancer, for men age 9 to age 26 for the prevention of genital warts, and for men who have sex with men for the prevention of anal carcinoma up to age 26.

### **WILL I KNOW IF I HAVE WARTS?**

Genital warts are flesh colored, firm growths or bumps that appear on the vulva, in or around the vagina or anus, on the cervix, and on the penis, scrotum, groin, or thigh. The warts may be raised or flat, single or multiple, small or large, and some may cluster together to form a cauliflower-like shape.

### **IF I DON’T HAVE WARTS, HOW WOULD I KNOW IF I HAVE HPV?**

HPV is frequently first discovered on the Pap smear because the cells on the cervix are easily infected with the virus. The cells show changes suggestive of infection with HPV. In the last few years DNA tests have become available that can detect the presence of high-risk HPV types. When cervical dysplasia is diagnosed, it’s almost always caused by the human papillomavirus. Women generally should have their first Pap smear at age 21.

## WHEN IS AN HPV DNA TEST DONE?

There is no approved HPV DNA test for men, only a test for women. It is estimated that 30%-40% of sexually active females in college would test positive for HPV at any given time. These infections usually disappear within a few years without treatment and cause no harm. A "high-risk" HPV test is helpful for women whose Pap test reports "atypical squamous cells of undetermined significance," often abbreviated as "ASC-US" or "ASC." It means the pathologist is unsure if the patient has cervical dysplasia. A high-risk HPV DNA test is done to determine if either of several of the more dangerous strains of HPV are present. When one of the high-risk strains is present, the follow-up plan is modified.

## MY CLINICIAN TOLD ME I HAVE HIGH-RISK HPV ON MY PAP. WHAT HAPPENS NEXT?

If your pap is abnormal and if you have a positive "high risk" HPV test, the next step is usually colposcopy. A colposcope is very similar to a microscope and allows doctors to examine the cervix with magnification. When abnormal areas are seen on the cervix, the physician may do a biopsy. A biopsy is the removal of a small sample of tissue from the abnormal area. Women may feel a sharp pinch for a few seconds, and possibly some menstrual-like cramps (some women don't feel anything).

## I HAVE A POSITIVE HPV TEST. WHEN DID I GET HPV?

It usually is not possible to know when a person got HPV. Although condoms offer some protection, they do not offer complete protection from HPV. HPV may be found soon after sex or not until many years later.

## WILL I ALWAYS HAVE HPV?

The body's immune system usually successfully fights off human papillomavirus, even the "high risk" types. Most students who acquire HPV in college or before have an effective immune response that clears the infection within of 8–24 months. If one is infected with one of the "high risk" types and if it infects for more than two years, it may lead to cervical or anal epithelial dysplasia and later to cervical or anal cancer.

## WHAT DO I TELL MY PARTNER?

Couples in long-term, mutually monogamous relationships usually share the same HPV types. Repeated exposure through sexual intimacy does not appear to affect the body's ability to eliminate the virus. Once your immune system has rid itself of one HPV type, it is usually resistant to infection with the same type. Because there are so many types of HPV however, exposure to one type does not appear to confer immunity to the other types. If you recently entered a relationship, or if you're not sure both of you are mutually monogamous, condom use is important to decrease the risk of this and other sexually transmitted infections.

## CAN HPV INFECTION BE TREATED?

Good treatments exist for the problems HPV can cause, such as cervical cell changes or genital or perianal warts. Your healthcare provider will discuss these treatment options with you, if you need them.

## References

Ho G, Bierman R, Beardsley R, et al: *Natural History of Cervicovaginal Papillomavirus Infection in Young Women*. *New England Journal of Medicine* 338(7): 423-428, 1998.

American Society of Reproductive Health Professionals: *AARHP Quick Reference Guide to Patient Questions about HPV*. Web site at: <http://www.arhp.org>

American Society of Reproductive Health Professionals: *What Women Should Know about HPV and cervical health*. Web site at: <http://www.arhp.org>

American Social Health Association. *HPV: Get the Facts. HPV and Abnormal Cell Changes*. Web site at: <http://www.ashastd.org>

American Society for Colposcopy and Cervical Pathology. *HPV Testing – Is It for Me?* Web site at: [http://www.asccp.org/patient\\_edu.shtml](http://www.asccp.org/patient_edu.shtml)

If you are a registered University of Illinois student and you have questions or concerns, or need to make an appointment, please call: **Dial-A-Nurse at 333-2700**

If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

Visit the McKinley Health Center Web site at: <http://www.mckinley.illinois.edu>