

The Cancer Council Queensland Information Sheet

Human Papilloma Virus

What is human papilloma virus?

Human papilloma virus (HPV) is the clinical name for the human wart virus. There are more than 200 types or strains of this virus. These viruses are of medical interest because some types are responsible for warts on the skin or genitals and because other types can cause cancer in the cervix and less commonly, in other parts of the body. The HPV virus strains that cause visible warts on the skin and genitals do not cause cancer. Cancer arises from, and is a rare consequence of, persisting infection with one of about ten genital strains of HPV viruses. These persisting infections are not obvious to the infected person, and can only be detected by laboratory tests such as the Pap smear.

How common is human papilloma virus?

It is estimated that the lifetime risk of catching a genital strain of the human papilloma virus is up to 85 per cent. Approximately one to five per cent of the population have active human papilloma virus infection in the genital tract at any one time. Most people (95 per cent) clear the infection by themselves in time, though this can take up to five years.

Not all HPV infections produce visible disease – most people who have an HPV infection don't know they have it.

How does the virus spread?

Genital human papilloma virus infection spreads by close body contact. Therefore, HPV viruses affecting genital areas are almost always transmitted through sexual activity, including genital contact without intercourse.

How is human papilloma virus detected?

HPV testing available in Australia looks for the strains of HPV that are responsible for cervical cancer. These tests cannot distinguish between HPV strains and are quite expensive. Because HPV infection is widespread and generally goes away without treatment, testing for the HPV infection is not common. Instead, cervical cancer risk is currently tested by using a Pap test to look for pre-cancerous cells that are caused by HPV.

Human papilloma virus infection may be recognised as:

- Visible warts on the genital and anal area. These are not caused by the same HPV strains associated with cancer.
- Chronic vulval or vaginal itch, and recurrent thrush infection, may indicate HPV infection, but generally doesn't.
- Abnormal cells detected from a Pap test or biopsy may be due to HPV.
- Abnormal appearance of the skin on colposcopic examination of the vulva, vagina or cervix may suggest HPV infection. A colposcope is an instrument which magnifies the part of the body being examined.

Why is human papilloma virus important?

Some HPV infections can, if persistent, start cancer in the cervix and elsewhere in the genitals (vulva, anus, penis). These cancers do not arise from warts. They arise from skin which shows cellular abnormalities detected by Pap smear or biopsy. Cervical cancer can be cured if caught early, and pre-cancerous lesions caused by HPV can also be detected in the cervix by Pap smear and cured. Abnormal cells due to HPV infection are commonly found in the cervix in young women. Mostly the abnormalities go away without treatment.

Persistent abnormalities in young women, and any cellular abnormalities in women over 30, should be assessed by a gynaecologist, as should any symptoms suggesting cancer such as bleeding after intercourse or between periods. Even if regular Pap smears are normal these symptoms require a gynaecological assessment.

Factors influencing human papilloma virus growth

There are some important factors which can affect the ability of a person to deal with the wart virus.

These include:

- **Genetics** – parts of our immune system are inherited. This is why some people's immune system deals better with viral infections than others.
- **Smoking** – smoking lowers a person's immunity to viral infections.

- **Other virus infections** – HIV/AIDS may reduce the body's ability to deal with a wart virus infection.
- **Other illnesses** – diabetes, diseases of the immune system and some forms of cancer may lower immunity.
- **Pregnancy** – wart viruses often flare during pregnancy but generally settle after pregnancy and breast feeding.
- **Prescription drugs** – chemotherapy and steroids lower immunity.
- **Excessive sun exposure** – ultraviolet light can lower immunity and wipe out the cells in the skin which fight viruses.
- **Excessive alcohol and marijuana** – these substances can lower immunity.
- **Lifestyle factors** – prolonged stress, eating disorders, poor diet, excessive exercise and inadequate rest can all lower immunity.

Who needs treatment for human papilloma virus?

Many infections with human papilloma virus which affect the neck of the womb, vulva or penis do not produce symptoms and do not need immediate treatment. They clear over a period of one to five years. There is no evidence that treating these infections reduces cancer risk, and no evidence that treatment reduces the risk of spread of infection.

The following circumstances however may require treatment:

- When the virus infects the cells at the neck of the womb, and produces pre-cancerous changes in those cells (this is detected on a routine Pap test);
- When there are visible warts, which are infectious or cosmetically unappealing;
- When there are symptoms due to the infection, such as cracking, itching, discharge or pain during intercourse; and
- When problems with one's natural defence against infection increases the risk of the virus producing pre-cancerous changes.

What treatment is used to remove warts?

- Podophyllotoxin or trichloroacetic acid solution is applied to warts on the vulva, anus or penis by a health professional.
- Diathermy (burning) or laser is used to remove abnormal areas on the cervix. Admission to hospital is usually as a day case only.
- Cryotherapy (freezing) is used when the abnormality in cervical cells is slight.
- Surgical excision involves the removal of a portion of the cervix under anaesthetic.
- Imiquimod cream may be used topically on visible external warts to increase a person's immune response, under the direction of their treating doctor.

Prevention

Two vaccines are now available in Australia that protect against the two types of HPV most commonly linked to cervical cancer. One of these vaccines also protects against the two types of HPV most commonly responsible for genital warts.

These vaccines do not treat existing infections, they can only prevent infection. They prevent about 70 per cent of the infections that cause cervical cancer, and are not a substitute for Pap smears. Rather, vaccination prior to exposure to the HPV virus significantly reduces a woman's risk of requiring treatment for an abnormal Pap smear later in life.

A national immunisation program has been introduced for HPV. Until June 2009, the vaccine will be available free for girls aged 12 -18 years through a school program. Women aged 18 - 26 can access the vaccine free from their general practitioner. From July 2009, all 12-year-old girls will be offered free vaccination each year.

Those not eligible for free vaccinations can choose to have the vaccine and pay for it themselves. The vaccine is given as a series of three injections over a six month period and to ensure maximum protection it is essential to have all three doses.

Should women still have regular Pap tests?

Yes. All women who have ever had sex need to continue having two-yearly Pap tests. Regular Pap testing is highly effective at preventing cervical cancer. Young girls who are vaccinated will still need to have Pap tests when they're older. This is because the vaccine does not protect against all types of cancer-causing HPV. It is effective against two specific types of HPV that cause up to 70 per cent of cervical cancers. Therefore, Pap tests are still important.

Preventing a recurrence of HPV

Maintaining good general health will help prevent a HPV recurrence after treatment.

For example:

- Maintain a balanced diet
- Quit smoking
- Reduce alcohol consumption
- Exercise regularly
- Get plenty of sleep
- Practice relaxation

For more information and support, contact
The Cancer Council Helpline on **13 11 20**
(toll free) Monday to Friday from 8am to 8pm.

