

# **HPV and Head & Neck Cancer**

## What is HPV?

Human Papilloma Virus (HPV) is a common virus that infects the skin and lining of your hands, feet, mouth, throat, respiratory tract, genitals, and anal area. Some cancers are caused by HPV. These are also called HPV-related cancers, HPV-associated cancers, or HPV-associated malignancies.

Most adults will get an HPV infection at some point in their life. Most people do not have symptoms and may not know they have the virus. HPV infection can cause benign (not cancer) growths, such as warts.

#### How is HPV spread?

You can get an HPV infection from vaginal, anal, and oral sex. You must have skin-to-skin genital contact with someone who has HPV. It is not spread through other types of skin-to-skin contact like holding hands or kissing. It is not spread by sharing drinks or food.

There is a small possibility that HPV can spread through open-mouth kissing. More research is needed to see if this is true.

### How long have I had the HPV infection?

Most people (9 out of 10) will clear an HPV infection in 2 years. Once your body has cleared the infection, you are less likely to get infected with the same type of HPV (but this is not guaranteed). This is because your immune system now knows how to fight the virus. However, since there are many different types of HPV, you can be infected with a different type of HPV.

A small number of people (1 in 10) will not be able to clear the infection. For these people, HPV is often dormant (in your cells but not causing problems) for many years. It can then become active (detectable and potentially causes problems). These people are **at risk** of developing a cancer caused by HPV (HPV-associated malignancy).

#### How does HPV cause cancer?

There are over 170 different types of HPV. Not all types of HPV cause cancer. Some types of HPV can damage cells which cause a tumour (cancer) to grow. These types are called high risk types.

It takes a long time for a high risk type of HPV infection to cause a cancer to grow. A person usually needs to have the virus for 20-25 years before a cancer grows.

We are not sure why some people can clear their HPV infection before it causes cancer and why others cannot.



### How do you know if a cancer is caused by an HPV infection?

It is expensive and difficult to do tests to detect HPV in cancer cells. Also, this test would not tell us if the HPV caused the cancer (biologically active) or not.

p16 is a gene that is over-expressed (more of the protein is made) when HPV is active in cells. We can test your biopsy or tissue sample for p16 to see if the cancer is caused by HPV.

If you have an oropharyngeal cancer (Cancer of the tonsil or base of tongue), and it is "p16 positive", we assume your cancer is caused by HPV.

#### Will I always have the HPV infection?

After cancer treatment, most people no longer have HPV DNA in their oral cells. There is no testing or treatment recommended for residual (leftover) HPV.

### Can I spread HPV?

Risk to friends and family: An HPV infection cannot be spread through day-to-day activities.

**Risk to your current partner:** An oral HPV infection can be sexually transmitted. However, since your long-term partner has already been exposed to the virus, you do not need to change your current sexual behaviours.

**Risk to future partners:** We do not test for HPV after treatment. For any future sexual activity, you should talk to your partner about protection.

Barrier protection (such as condoms) lowers the risk of HPV spreading from a person's genitals to another person's mouth. There is limited research on whether HPV in the mouth or throat can be spread to the genitals.

### Should my partner be screened for HPV-associated cancers?

Testing your partner for HPV is not useful because there is no treatment to get rid of the HPV infection. Also, most HPV infections do not cause cancer.

Your partner may have a slightly higher risk of getting a cancer caused by HPV, such as cervical, penile, anal, and head and neck cancer. However, the risk is low.

There are no HPV screening tests for head and neck cancers.

Partners who have not had a recent cervical cancer screening should get a screening test. For more information: <a href="http://www.bccancer.bc.ca/screening/cervix/get-screened">www.bccancer.bc.ca/screening/cervix/get-screened</a>



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#### Does having an HPV-associated cancer affect my treatment and outcomes?

By having an HPV-associated oropharyngeal cancer, you are more likely to be cured after treatment compared to not having an HPV-associated oropharyngeal cancer. There are ongoing studies investigating if we should be treating HPV-associated cancers differently from HPV-unassociated cancers. Currently, it is not recommended to treat them differently.

### Am I at risk of having other HPV-associated cancers?

There is not a lot of research on this. We feel the risk is low. If you have a cervix, routine cervical cancer screening is recommended.

#### What is the role of the HPV vaccine?

The HPV vaccines aim to prevent someone from becoming infected if they are exposed to the virus. The vaccines protect against several types of HPV, including those most likely to cause cancer. Most HPV vaccine studies looked at how well the vaccine protected people from getting cervical cancer. However, it is likely that they are also helpful against head and neck cancer.

Two HPV vaccines (Cervarix and Gardasil) are approved in British Columbia. Please see the ImmunizeBC website for more information: immunizebc.ca/hpv

Vaccine when you already have HPV: The vaccines do not help your body clear the infection if you already have the virus.

Vaccine for your partner: Since your partner has likely already been exposed to HPV, it will not help against any strains their body has already been exposed to.

**Vaccine after cancer:** The vaccine could protect you from the types of HPV you have not been exposed to. However, it will not help against any types you have already had. It will also not help against the type that caused your cancer.

Based on the limited information we have, you and your partner may consider the vaccine.

#### Where can I find more information?

www.bccancer.bc.ca/library-site/Documents/pathfinder\_HeadandNeck-General.pdf

#### immunizebc.ca/hpv

If you have any questions about HPV talk to your family doctor, nurse practitioner or oncologist.