CONDITION

Oral human papillomavirus infection

Oral human papillomavirus infection is HPV affecting the lining of the mouth or throat.

WHAT IT IS
HPV infection of the mouth and throat lining

BODY SYSTEM
Mouth and throat

MAIN SYMPTOMS
Usually none, mouth growth, sore throat, neck lump

WHAT CAUSES IT
Human papillomavirus spread through intimate contact

HOW IT IS DIAGNOSED
HPV DNA testing or biopsy of a lesion

MAIN TREATMENT
Observation or removal of persistent lesions

CAN IT BE CURED?
Sometimes - immune system clears most infections

IS IT AN EMERGENCY?
Sometimes - breathing or swallowing difficulty

LONG-TERM OUTLOOK
Most clear; persistent high-risk infection can cause cancer

Overview

Oral human papillomavirus infection means that human papillomavirus, or HPV, is present in cells lining the mouth or throat. The throat area behind the mouth, including the tonsils and base of the tongue, is called the oropharynx .

There are many types of HPV. Some low-risk types can cause harmless growths such as squamous papillomas or warts. Certain high-risk types, especially HPV 16, can contribute to oropharyngeal cancer if the infection remains for years.

Most oral HPV infections cause no symptoms. The immune system clears many infections within one or two years. Having oral HPV does not mean that you have cancer or will develop it.

Oral HPV is different from HPV-related changes of the cervix, anus, penis, vulva, or vagina, although the same virus can affect these areas. A positive cervical HPV test does not show

whether HPV is present in your mouth.

Symptoms

Most people with oral HPV do not know they have it. There may be no pain, visible change, or other symptom.

Low-risk HPV can sometimes cause one or more small growths in the mouth. They may be smooth, rough, finger-like, or shaped like a tiny cauliflower. Similar-looking growths can have other causes, so appearance alone cannot confirm HPV.

Symptoms such as the following are more often related to a persistent lesion or another mouth or throat condition than to uncomplicated HPV infection:

These symptoms have many possible causes. They need assessment if they continue, but they do not by themselves mean that HPV or cancer is present.

- A mouth growth or ulcer that does not heal
- A sore throat, hoarse voice, or swallowing problem that persists
- A lump in the neck
- One-sided ear pain without an obvious ear problem

Causes and risk factors

Oral HPV is caused by contact with infected skin or moist body linings. It can be passed during oral sex and other close sexual contact. Transmission through deep kissing may occur, but its importance is not fully understood.

HPV can pass between people even when neither person has symptoms or visible warts. Condoms and dental dams reduce contact but do not cover every area where the virus may be present.

An infection may be detected long after exposure. HPV can remain unnoticed, and there is usually no way to identify when it was acquired or who transmitted it. Finding HPV is not evidence that a partner has recently been unfaithful.

Factors linked with a greater chance of acquiring or keeping oral HPV include:

Alcohol does not cause HPV infection. However, heavy alcohol use and tobacco use can increase the risk of head and neck cancers through separate biological effects.

- A higher lifetime number of sexual partners
- Tobacco use
- A weakened immune system, including from HIV or immune-suppressing treatment
- Older age and male sex, particularly for persistent high-risk oral HPV

Diagnosis

There is no standard screening test for oral HPV in people without symptoms. Unlike cervical HPV testing, oral rinse and throat-swab tests are not approved for routine screening. Some research or specialist laboratories can detect HPV DNA in oral samples, but a positive result cannot show whether the infection will clear or cause disease.

A dentist or medical professional can examine the mouth, tongue, tonsil area, and neck. If there is an unusual or persistent growth, a specialist may take a biopsy . This means removing a small tissue sample so a pathologist can examine it under a microscope. The tissue can also be tested for signs of HPV when appropriate.

If oropharyngeal cancer is diagnosed, the tumour is usually tested for HPV involvement. One common test looks for a protein called p16, which often acts as a marker of HPV-related cancer. Additional HPV testing may sometimes be used.

A routine blood test, cervical HPV test, or Pap test cannot diagnose oral HPV. Regular dental examinations may help find visible mouth abnormalities, but they are not a specific HPV screening test.

Treatment and management

There is no medicine that removes an asymptomatic oral HPV infection from the body. In many cases, no treatment is needed because the immune system controls and clears the infection.

A persistent or bothersome HPV-related growth may be removed. Depending on its location and size, treatment may involve surgical removal, laser treatment, freezing, or another procedure performed by a trained professional. Removal treats the growth, but HPV may remain in nearby cells, so a lesion can return.

Do not use over-the-counter skin wart removers inside your mouth. These products can damage delicate mouth and throat tissue.

Treatment for an HPV-related cancer is different from treatment for an uncomplicated infection. It may include surgery, radiation therapy, medicines, or a combination. The plan is

based on the tumour's site and stage, the person's general health, and whether the tumour is HPV-related.

Complications

Most oral HPV infections do not cause complications. Possible problems include persistent or recurring benign growths, discomfort from a lesion, and anxiety about transmission.

The main long-term concern is persistent infection with a high-risk HPV type. Over many years, it can lead to cell changes and, in a small proportion of infected people, oropharyngeal cancer. Cancer linked to HPV most often begins in the tonsils or at the base of the tongue rather than on the visible front part of the mouth.

A positive oral HPV result alone cannot predict who will develop cancer. There is also no established treatment for a positive result when no lesion or other abnormality is present.

Prevention

Oral HPV cannot always be prevented because it spreads through common intimate contact and may be present without symptoms.

HPV vaccination reduces the risk of new infections from the HPV types included in the vaccine. It prevents infection; it does not clear HPV that is already present. In the United States, routine vaccination is recommended at ages 11 or 12 and can begin at age 9. Catch-up vaccination is recommended through age 26. Some adults ages 27 through 45 may choose vaccination after discussing its likely benefit with a healthcare professional. Recommendations differ between countries.

Other ways to reduce exposure include:

Barrier protection lowers risk but cannot remove it completely. There is no mouthwash, supplement, or home remedy proven to prevent or clear oral HPV.

Vaccination does not replace recommended cervical screening for people who have a cervix. It also does not remove the need to have persistent mouth or throat changes examined.

- Using condoms or dental dams during oral sex
- Limiting tobacco use and seeking help to stop smoking
- Avoiding sexual contact with visible mouth or genital warts until assessed

Living with it and what to expect

For most people, oral HPV causes no noticeable illness and becomes undetectable within one or two years. Clearing one type does not provide reliable protection against every other HPV type.

Because routine oral HPV testing is not recommended, many people never know that they had an infection. If HPV is found through a research test or evaluation, repeated testing is not usually helpful unless a specialist recommends it for a specific reason.

A removed oral papilloma or wart may not return, but recurrence is possible. Follow-up is based on the type of lesion, biopsy findings, location, and whether symptoms continue.

Persistent high-risk infection can remain for years before serious cell changes develop. This does not mean that cancer is expected. Paying attention to lasting mouth, throat, or neck changes is more useful than repeatedly checking for HPV without a clinical reason.

It is usually impossible to determine when oral HPV was acquired. Clear, non-blaming communication can help when discussing it with a partner. Most sexually active adults have been exposed to HPV at some point.

When to get medical help

Arrange a routine appointment with a dentist or medical professional if you notice a new mouth growth, wart-like area, or unexplained change. This is especially important if it remains for more than two or three weeks.

Seek a prompt medical assessment for:

These symptoms often have causes other than cancer, but persistent changes should not be ignored.

Seek emergency care if swelling or another mouth or throat problem makes it difficult to breathe, if you cannot swallow saliva, or if bleeding from the mouth will not stop. Oral HPV infection without these problems is not an emergency.

- A neck lump that persists or grows
- Ongoing one-sided throat or ear pain
- Pain or difficulty when swallowing
- A lasting hoarse voice or sore throat
- A mouth ulcer, red or white patch, or growth that does not heal

- Unexplained weight loss alongside mouth or throat symptoms

Common questions

Can oral HPV go away on its own?

Yes. The immune system clears or suppresses most oral HPV infections within one or two years. Some infections persist longer, and there is no routine test that can predict the outcome for one person.

Does oral HPV mean I have throat cancer?

No. Oral HPV infection is not the same as cancer. Most infections never cause cancer. Persistent infection with certain high-risk types can contribute to oropharyngeal cancer over many years.

Can I kiss someone if I have oral HPV?

HPV may be transmitted through deep kissing, although the exact risk is uncertain. There are no standard recommendations to avoid ordinary social kissing. Avoid direct contact with a visible mouth lesion until it has been assessed.

Can my dentist test me for oral HPV?

Dentists can examine your mouth and refer or biopsy a suspicious lesion, but there is no approved routine oral HPV screening test. Commercial oral tests may detect viral DNA without showing whether the infection will persist or cause harm.

Can I get oral HPV after having the vaccine?

Yes, but vaccination lowers the risk from the HPV types it covers. It does not protect against every type and does not treat an infection acquired before vaccination.

How long after exposure do symptoms appear?

Most oral HPV infections never cause symptoms. A benign growth may appear months or longer after exposure, while HPV-related cancer usually develops only after a persistent infection has been present for years. The timing cannot be used to identify when or from whom HPV was acquired.

Sources

- Centers for Disease Control and Prevention. HPV and Oropharyngeal Cancer



- Centers for Disease Control and Prevention. HPV Vaccination Recommendations
- National Cancer Institute. HPV and Cancer
- National Institute of Dental and Craniofacial Research. Oral Cancer
- US Preventive Services Task Force. Oral Cancer: Screening
- Kreimer AR, Pierce Campbell CM, Lin HY, et al. Incidence and clearance of oral human papillomavirus infection in men: the HIM cohort study. The Lancet . 2013;382:877-887 60809-0)