Medical Xpress

Why throat cancers are on the rise, and why it matters to you

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Who among us hasn't had a sore throat, a hoarse voice or a lump in the neck? Usually these are minor problems that go away on their own or after a course of antibiotics—but if they don't, check in with your

doctor. These can all be signs of oropharyngeal cancer (a type of throat cancer) or, if the lump is in, on, or near the mouth, oral cavity cancer. (All of these fall into the category of head and neck cancers.) These forms of cancer are both hard to detect and on the rise. The good news is, they are treatable if caught early and, even better, entirely avoidable for people who follow the recommended schedule for HPV vaccination.

Oropharyngeal cancer, which refers to cancers that affect the back third of the tongue, soft palate, tonsils, and sides of the throat, is most commonly caused by the human papillomavirus (HPV), the most prevalent sexually transmitted infection in the United States. "This is an exceedingly common virus—in fact, most of us are exposed to it," says Benjamin L. Judson, MD, division chief of Otolaryngology and Chief Ambulatory Officer of the Smilow Cancer Hospital. "It's also preventable with a vaccine."

The Centers for Disease Control and Prevention (CDC) estimates that 79 million Americans are infected with HPV and that 90% of men and 80% of women will be infected with the virus at some point in their lives.

Half of those infections will be with the high-risk types of HPV. That's not in and of itself alarming, since most of the time, our immune systems can clear an HPV infection within a year or two on their own, without further issues. However, if a high-risk HPV infection lingers, cellular changes can occur that may cause cancer to develop over time (usually many years—or even decades—after acquiring the infection).

"Classically, heavy drinking and smoking were considered the primary risk factors for oropharyngeal cancer," says Melissa Young, MD, a Yale Medicine radiation oncologist who treats head and neck cancers through Smilow Cancer Hospital. "However, over the last several decades, the number of alcohol- and tobacco-associated cancers has declined, while there has been a marked increase in oropharyngeal cancers associated

with oral HPV infection. Now, 70% of oropharyngeal cancers are associated with HPV."

This cancer disproportionately affects middle-aged men who were never heavy drinkers or smokers, she says. There are an estimated 14,800 new cases of HPV-positive oropharyngeal cancers diagnosed in men, compared to 3,400 in women each year in this country. "While an HPV vaccine is available, it may only help those who haven't already come in contact with the high-risk strains of HPV that can cause cancer," explains Dr. Young.

Below, we asked our experts to cut through the confusion about HPV, oral sex, and oropharyngeal cancer. Here's what we found out:

Some HPV strains are riskier than others

Of the 100 kinds of HPV, some strains cause common warts (or papilloma) that school-aged kids often get on their hands and feet. They're acquired through skin-to-skin contact, by touching objects others have touched, and from the floors of public pools and locker rooms via small cuts or breaks in the skin. These warts can be embarrassing but are harmless—meaning they don't lead to cancer.

However, there are 40 types of HPV that can be spread through sexual contact (genital, oral, anal, deep kissing, sexual touching, and skin-to-skin sexual contact, which includes spreading an existing infection from one body location to another), as well as from mother to child during childbirth.

Low-risk sexually transmitted HPV, such as types 6 and 11, cause 90% of genital wart cases. (These are cauliflower-shaped bumps that can appear in the genital or anal area.) However undesirable and unsightly they are, genital warts can be treated by your doctor with prescription

medication. And, most importantly, they are not caused by the strains of HPV that cause cancer.

Most concerning is a small group of 15 high-risk types, which can cause oropharyngeal, cervical, vaginal, vulvar, anal, and penile cancers. Of those, says Dr. Judson, HPV Type 16 is far more likely to stay in the body and eventually develop into cancer than any of the other high-risk HPVs. It causes 95% of all oropharyngeal cancers caused by HPV.

There is a relationship between sexual practices and the rates of oropharyngeal cancer

You can acquire HPV from sexual contact through vaginal, anal, or oral sex or through intimate touching with someone who has an HPV infection. The virus spreads from the original point of transmission, genitally or orally. For example, when acquired genitally, it can be spread orally through oral-genital contact.

Eighty-five percent of sexually active adults (between 18 and 44) have had oral sex, according to the CDC. The rise in head and neck cancers of the oropharynx in nonsmoking young men is linked to oral sex—but not completely. While the total number of oral sexual partners over a lifetime increases the risk of oral HPV, just because someone is diagnosed with this cancer doesn't mean he/she had a lot of sexual relationships.

According to one study, even if you've engaged in oral sex with just one sex partner, there is 14.3% risk of acquiring HPV.

Unfortunately, it's not possible to know if you or someone you are in a relationship with has, or had, an oral HPV infection, since there are no visible signs in or around the mouth. Unlike other sexually transmitted

infections, there isn't a routine clinical test to check for oral HPV. It is possible to have an oral and genital HPV infection at the same time. However, there is no test to detect an active oral or genital HPV infection, or treatment for it.

Signs of oropharyngeal cancer can be initially overlooked

A sore throat, hoarse voice, lump in your throat, difficulty swallowing, or a lump or patch in your mouth (including on your tongue) might be symptoms of oropharyngeal cancer. Other signs of head and neck cancers can be swollen lymph nodes, pain when swallowing, and unexplained weight loss. But sometimes, there are no signs at all.

"Oropharyngeal cancer can be hard to detect," says Dr. Judson. "In the early stages, it may not have any symptoms, and many people don't experience any."

Because the oropharynx is located in the back of the throat, you can't necessarily see or feel anything suspicious yourself, explains Yale Medicine radiologist Amit Mahajan, MD, who specializes in neuroradiology. Dentists and primary care providers typically scan your mouth as part of your annual check-up. If an irregularity is found, a referral to a specialist—like an ear, nose, and throat doctor (ENT) or otolaryngologist—is the usual first step in evaluation. Further testing may then be considered if the ENT physician deems it suspicious, she says.

"Usually referral happens after patients with symptoms go to a doctor who sees a mass," Dr. Mahajan says. At that point, the doctor will order a series of imaging scans: A CT scan is often the first test to assess the mass and determine whether it has spread; if positive, a PET scan may

then be done to determine the stage of oropharyngeal cancer; and an MRI may be used to assess the involvement of surrounding areas and to determine what treatment is best for that particular patient.

Once detected, HPV-positive cancers can be treated through surgery, radiation, or a combination of chemotherapy and radiation. The choice of therapy is often guided by tumor location, size, and extent of lymph node involvement. Because the tissues in the mouth and back of the throat are delicate, oropharyngeal cancer requires highly specialized care to minimize long-term speech and swallowing difficulties.

"While patients can present with very bulky disease (masses that are visible on exam or imaging studies), patients with HPV-associated cancers can have very high cure rates," says Dr. Young. However, even with early-stage cancer, patients are at risk for subsequent speech and swallow difficulties due to side effects of curative treatment.

Most HPV-related head and neck cancers are preventable

"High-risk strains of HPV are almost entirely prevented by vaccination," says Dr. Judson. Getting vaccinated against HPV (preferably before you become sexually active) can dramatically decrease your risk. The FDA recently approved the HPV vaccine for people ages 27 to 45—previously it was only available to tweens and young adults up to age 26.

Many adults have not received the HPV vaccine because it wasn't available when they were children and they now fall outside the recommended age limits. It's important to know, also, that even if you do get the vaccine as an adult, it only protects against HPV strains you haven't been exposed to in the past. According to the CDC, the HPV vaccine was developed to prevent cancers in the reproductive tract.

Because the vaccine protects against the types of HPV that can cause oropharyngeal cancers, it may also prevent oropharyngeal cancers. But not enough studies have been done to verify this.

Rates of HPV-related cancer are expected to continue to rise for a good while, notes Dr. Judson, because the cancer takes years or decades to develop. That's why awareness is important, as this type of cancer is treatable. "But even if the vaccine doesn't help those of us who are over 40, we can prevent this cancer from affecting the next generation," Dr. Judson says.

To date, about half (49%) of adolescents have received all the recommended doses of the HPV vaccination so far (two doses for those under 15; three for those who are over 15).

The vaccine won't reverse the HPV-associated cancer trends we're seeing, epidemiologists estimate, until 2060.

Provided by Yale University

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