

## **HPV, Oral Cancer, and the LGBT Community**

### **By Jennifer Moon**

Many people in the LGBT community don't know that oral cancer can be caused by the human papilloma virus (HPV)—the most common sexually transmitted infection in the US. However, not all HPV infections lead to cancer and not all oral cancers are caused by HPV infection.

There are over 100 different strains of HPV. Some types of HPV infection can cause genital warts, some appear to have no negative health impact, and other strains can lead to cancer. The vast majority of people infected with HPV (about 90%) never develop any symptoms, and the virus leaves the body naturally within two years (1). HPV vaccines for young LGBT people may help prevent these health problems from occurring at all.

Oral cancer caused by HPV affects the tonsils and the base of the tongue—an area referred to as the oropharynx. The technical term for cancer affecting this site is oropharyngeal cancer. It may also be referred to as throat cancer. In this article, we will use the term oral cancer.

Over the past twenty years, rates of oral cancer have been rising, and now younger white men are the most likely to be affected. Since HPV is a sexually transmitted disease, individuals who are more sexually active are more likely to be infected—and are therefore at higher risk for subsequent oral cancer. In the past couple of decades, changes in sexual behavior, such as more oral sex starting at a younger age, seem to be altering the odds of who may go on to develop oral cancer.

### **What is HPV?**

HPV is a very common infection and can be passed between same-sex and opposite-sex partners during vaginal, anal, and oral sex. It is transmitted by skin-to-skin contact, so traditional methods of protecting oneself against a sexually transmitted infection, such as using a condom, can reduce, but not eliminate the risk of HPV infection. About half of all sexually active men and women will be infected with HPV during their lifetimes (1). Within the LGBT community, up to 13% of women who have sex with women may have genital HPV infections (2). About 75% of HIV-negative and nearly all HIV-positive men who have sex with men (MSM) are infected with anal HPV (3-4). Still, approximately 90% of people who become infected with HPV remain symptom-free, and the body clears the virus on its own within two years (1).

HPV vaccines for young LGBT people may help prevent these health problems from occurring. However, if a person is already infected with HPV, that strain of HPV may still cause disease even if he or she receives the vaccine. Vaccination will protect against new infections from other forms of HPV.

For women, cervical cancer is the most common form of cancer associated with HPV infection. In fact, HPV is the cause of almost all cases of cervical cancer (5). HPV can also lead to oral and anal cancer in men and women, penile cancer in men, and vaginal and vulvar cancer in women (1). These other forms of cancer related to HPV are relatively uncommon in the general population. However, rates for oral, anal, and vulvar cancer have been increasing over the past

couple of decades, especially anal cancer in gay and bisexual men.

In the United States, it is estimated that approximately 7% of men and women between the ages of 14-69 have oral HPV infection (6). Gay, lesbian, and bisexual individuals are just as likely to be infected with oral HPV as heterosexuals. Individuals in two age groups—between the ages of 30-34 years and between 60-64 years—have the highest likelihood of being infected. Oral sex is thought to account for the high rate of oral HPV infection in individuals in their early 30s. Men and women in their early 60s may be more likely to have chronic oral HPV infections that do not go away. Currently there is no way to predict which people with HPV infection may go on to develop cancer.

### **Link between Oral HPV Infection and Oral Cancer**

There are two general forms of oral cancer: those caused by oral HPV infection, and those associated primarily with smoking and alcohol use. In the past, most cases of oral cancer were related to cigarette smoking and alcohol. Now, HPV is one of the major causes of oral cancers in North America, Europe, and Japan (7). More than 60% of cases of oral cancer are due to oral HPV infection (5). This means that each year about 1,500 women and 5,600 men in the United States will develop oral cancer due to HPV (1). Many of these cancers may also be related to smoking and heavy drinking—two behaviors that are more prevalent in the LGBT community (6).

There are about a dozen forms of HPV that have been shown to cause cancer, but a type called HPV 16 is the primary culprit behind oral cancer. Infection with HPV 16 is thought to increase the risk for oral cancer by a factor of 50 (6). Approximately 1% of the US population is infected with HPV 16.

Rates of oral cancer in the US have increased considerably from 1984-2004. However, not all forms of oral cancer increased—just those related to HPV infection. Cases of oral cancer that were not linked to HPV infection and that were primarily related to smoking and alcohol use actually fell by 50% during this same time period. This decrease is likely due to a parallel decline in smoking. By contrast, the number of oral cancer cases caused by HPV infection more than doubled. Patients diagnosed with this type of oral cancer were more likely to be younger (aged 40-55 years), male, and white (8-9). The risk for developing HPV-related oral cancer may also be increased by marijuana use (10). By 2020, it is projected that oral cancer will be the most common form of cancer caused by HPV, surpassing the rates of cervical cancer (8).

The recent rise in HPV-related oral cancer is thought to be due in large part to changes in sexual behavior that affect LGBT individuals as well as heterosexuals. Today, people are becoming sexually active at a younger age, may have a higher number of sexual partners, and may be more likely to engage in oral sex (7). All of these factors may increase the risk of oral HPV infection and subsequent oral cancer. For example, one large study found that the risk of being infected with oral HPV was related to the number of sexual partners (6). Sexually experienced individuals were 8 times more likely to have oral HPV infection compared to those with no sexual experience. Among people who had more than 20 lifetime sexual partners, 20% were infected with oral HPV. Another small study of college-aged men showed that the odds of oral

HPV infection increased with the number of recent oral sex partners, but not vaginal sex partners (11). Oral HPV does not appear to be transmitted through kissing or casual contact (7).

Men are almost three times more likely to have oral HPV infection compared to women. The difference in risk is only partly explained by men typically having more sexual partners than women. More research is needed to understand why men are at higher risk for oral HPV infection and why some people with oral HPV infection, but not others, may go on to develop oral cancer.

### **HPV and Men Who Have Sex with Men**

Currently, not a lot is known about oral HPV infection and oral cancer in MSM. Studies have found that MSM are 17 times more likely to develop HPV-related anal cancer than men who only have sex with women (12), but it has not been established what the risk for oral cancer is in MSM. However, MSM should be concerned about oral cancer for 3 reasons: 1) oral cancer is increasingly being found in younger men, 2) this increase is thought to be related to oral sexual behavior, and 3) the number of MSM with HPV infection or anal cancer is high.

People with compromised immune systems, such as those who are HIV-positive, are at moderately high risk for developing oral cancer. Persons with AIDS are about 1.5-to-2-times more likely to develop oral cancer compared to the general population (13-14). In comparison, the risk for anal cancer is about 34 times higher in persons with AIDS (13).

### **Prevention of HPV and Associated Cancers**

Condoms offer only limited protection against HPV since the virus can be transmitted through skin-to-skin contact of areas not covered by a condom. For children and younger LGBT men and women, two vaccines for HPV are currently available and can prevent certain types of HPV-related cancers.

One of the vaccines, called Gardasil, protects against HPV infection, genital warts, and cervical, vaginal, vulvar, and anal cancers in females aged 9-26 years. It also prevents HPV infection, genital warts, and anal cancer in boys and men in this same age group. The other vaccine, Cervarix, is used for the prevention of cervical cancer in women, but not genital warts. Both vaccines are given in 3 shots (7).

US guidelines recommend that all individuals between the ages of 9-26 be vaccinated for HPV. The vaccine is most effective when given to girls and boys aged 11 or 12 years. Younger MSM (26 years old or younger) and all HIV-positive individuals between the ages of 9-26 should especially be vaccinated. Lesbian and bisexual women should also receive the vaccine since HPV can be transmitted through sexual contact with a woman or a man.

It is important to note that the HPV vaccine has not yet been proven to protect against oral cancer in men or women. However, since the vaccines protect against HPV infection and other types of HPV-related cancers, it is likely that they also protect against oral cancer (5).

## Diagnosis and Treatment

No tests are currently available to check a person's overall HPV status. Warts on the mouth or lips from HPV, which are relatively rare, may appear raised, flat, or cauliflower-shaped. Oral cancer is generally detected at a late stage, but people who develop oral cancer from HPV tend to have better health outcomes than those who develop oral cancer from smoking (8). Symptoms of oral cancer include a sore throat or ear pain that doesn't go away, constant coughing, pain or trouble swallowing or breathing, unexplained weight loss, hoarseness or voice changes that last more than 2 weeks, and a lump or mass in the neck (12). If you experience any of these symptoms, you should check with your doctor and be open about your sexual behavior. Treatment for oral cancer may include a combination of radiation therapy, chemotherapy, and surgery. For a list of LGBT-welcoming cancer screening providers, consult our national directory at <http://cancer-network.org/screenings/facilities>.

## Conclusion

With rates of oral cancer on the rise, especially in younger white men, it is essential that everyone—particularly MSM and individuals who are HIV-positive—be informed about the risks associated with HPV and be vaccinated against HPV if they are 26 years or younger. Talk to your doctor about your sexual orientation, HIV status, and sexual practices when asking about the HPV vaccine.

In addition, make sure to take care of your body. The risk of developing cancer is lower if you stop smoking, eat healthy, drink in moderation, and exercise regularly. Have regular medical check-ups with an LGBT-friendly provider, and stay informed about the health risks that affect our community. The fight against cancer begins with knowledge.

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