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## **Human papillomavirus and Head and Neck Cancer**

### **What are the aims of this leaflet?**

This leaflet has been written to help you understand more about human papillomavirus (HPV) and its role head and neck cancers. It tells you about the virus, what can be done about it and where you can find out more information.

### **What is HPV?**

Human papillomavirus (HPV) is a common virus that infects the skin and mucous membranes (lining) of the mouth, nose, throat, respiratory tract or genital area. HPV can affect people of any age, gender or sexual orientation. Almost every person will have HPV at some point in their lives without knowing.

There are around 200 types of HPV which are labelled as numbers. Most of the types are low-risk causing minor problems such as warts. A small number of HPV types are considered high-risk as they may cause cancers. The most common types which cause head and neck cancer are HPV-16 and HPV-18.

### **What causes HPV?**

HPV can spread when your skin or mucosa comes in contact with an infected individual's skin or mucosa. This includes vaginal, anal or oral sex with someone who has the virus. You do not have to have sexual contact with a lot of people to get HPV. You can get HPV the first time you are sexually active. However, an increased number of oral sex partners increases the risk of oral HPV infection. It is not always possible to know who you caught HPV from or when you were infected as symptoms may develop many years later.

We don't know how exactly HPV causes head and neck cancer. The virus enters the body and causes changes in the cells themselves and their arrangement in the mucosa, which leads it to become unstable (dysplasia). In some cases, this may ultimately transform into cancer. HPV is well recognised as a cause of cervical



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cancers, however it has now become implicated in head and neck cancers, in particular, oropharyngeal (throat) cancers. More rarely, it may cause cancer towards the front of the mouth, in sites such as the tongue.

Only a very small proportion of people with HPV develop cancer. Cancer as a result of HPV infection can take many years to develop, sometimes as long as 30 years. People who are immunocompromised (with a weakened immune system), may be more at risk of cancer. This includes people with HIV or taking immunosuppressive medication. People with HPV, who also smoke or drink heavily currently or in the past, may be more at risk of developing cancer.

### **Is HPV hereditary?**

HPV is a sexually transmitted disease, passed through skin-to-skin or mucosal contact. A pregnant mother who has HPV can pass on the infection to her child through the bloodstream before birth or through the vaginal canal during birth. This is called perinatal transmission.

### **What does HPV look like?**

HPV-related dysplasia or cancer cannot always be seen by the naked eye, especially towards the back of the mouth or throat. In the front of the mouth and in visible parts of the throat, it may appear as a red or white patch, raised area, lump or ulcer.

### **What are the symptoms of HPV?**

The symptoms for head and neck dysplasia or cancer will differ depending on the site, but may include a persistent sore throat, hoarse voice, lump in the neck, difficulty swallowing or pain, ulcers or red / white patches in the mouth. If you notice any of these symptoms for more than 3 weeks with no improvement, you should see your GP or dentist for a check-up.

### **How is HPV and cancer diagnosed?**

Unlike for cervical cancer screening, there are no current effective screening tests to detect the presence of HPV in the mouth. If you have any suspicious changes in the

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mouth or throat, such as a red or white patch, ulcer or lump; a small sample of the tissue called a biopsy can be taken under local anaesthetic to confirm the diagnosis. Special tests are used in the laboratory to detect the presence of HPV in the sample.

### **Can HPV be cured?**

There is no cure for HPV infection. Most people clear the virus from their body within two years, before it causes any health problems. Children can be protected against HPV infection with vaccination. In the UK, boys and girls are offered free vaccinations by the NHS at the age of 12 or 13, with a booster 6-12 months after. Adults are not currently offered free vaccination. A vaccination does not eliminate an existing active infection, however does protect you from other types of HPV or reactivation of an existing infection in the future. So if you already have HPV, it could still benefit you to have the vaccine.

### **Is HPV contagious?**

High-risk HPV is not spread by physical contact such as hugging, holding hands or kissing on the cheek or lips. It also cannot be caught from toilet seats, swimming pools or sharing food or cutlery in the same way as the low risk types of HPV that cause warts. If you have HPV, your partner is likely to have been exposed to the infection. They are not at any greater risk of developing cancer than anyone else. You do not need to change your intimate sexual contact with your current partner. With new partners, barrier protection is encouraged. There is no need to inform any past partners about an HPV infection.

### **How can HPV be treated?**

HPV infection itself does not require any treatment. The treatment of HPV-positive dysplasia or cancer depends on the site of the lesion. Throat and tonsillar cancers are often treated with chemotherapy or radiotherapy and have better reported outcomes than those with HPV-negative cancers. Dysplasia or cancer of the mouth is often treated with surgery, as with conventional cancers. Your doctor will advise you on the best treatment option for you. The opportunity for cure is greatest when dysplasia or cancer is detected at an early stage.

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## What can I do?

- Many pre-cancers and cancers of the head and neck can be found early. Regular screening examination by the dentist or dental hygienist is highly recommended for early detection. You can also self-examine your mouth every month to look for any unusual signs.
- Do not use tobacco or any of its products. Reducing the amount you smoke can also reduce the risk. If you have difficulty giving up the habit help is available from your doctor or your local hospital. There is also an NHS quit smoking line<sup>1</sup> and weblink<sup>2</sup> site for advice.
- Do not chew paan (betel nut alone or in combination with areca nut or tobacco). It is known to cause mouth cancer.
- If you drink alcohol do so in moderation. Men and women should not drink more than 2-3 units a day and no more than 14 units in total over a week. That is no more than a standard 175ml glass of wine (2.4 units) (ABV 14%). or a pint of strong lager, beer or cider (ABV 5.2%).
- Eating at least 5 helpings of fruit and vegetables a day can reduce the risk of developing mouth cancer.
- For the early detection of cervical cancers, women should attend regular cervical screening. Men do not need any special tests as there is no routine screening process offered for males.

## Where can I get more information about HPV?

- <sup>1</sup>Call smoke free: 0800 022 4 332 - <http://smokefree.nhs.uk/>
- <sup>2</sup><http://www.cancerresearchuk.org/cancer-help/type/mouth-cancer>
- The Memorial Sloan Kettering Cancer Centre website:  
<https://www.mskcc.org/cancer-care/patient-education/hpv-and-head-neck-what-do-i-need-know>
- The Throat Cancer Foundation website: [www.throatcancerfoundation.org](http://www.throatcancerfoundation.org)
- Macmillan Cancer Support: [www.macmillan.org.uk](http://www.macmillan.org.uk)
- NHS website regarding vaccination:  
<https://www.nhs.uk/conditions/vaccinations/hpv-human-papillomavirus->



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vaccine/

Note: If you wish to know more about epithelial dysplasia or mouth cancer, please refer to our patient information leaflets on “Oral Epithelial Dysplasia” and “Mouth Cancer”.

*This leaflet has been prepared by the British and Irish Society for Oral Medicine (BISOM). It is reviewed periodically to reflect relevant advances and improved understanding. Not all the information will be relevant to all patients. For individual advice please see your Oral Medicine specialist. The BISOM is not responsible for information on web sites where links are provided.*

*This leaflet is available online at [www.bisom.org.uk](http://www.bisom.org.uk)*

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