CONDITION

Oral cancer

Oral cancer is cancer that begins in the lips or tissues inside the mouth.

WHAT IT IS
Cancer arising in the lips or mouth

BODY SYSTEM
Mouth and throat

MAIN SYMPTOMS
Non-healing ulcer, red or white patch, lump, persistent pain

WHAT CAUSES IT
DNA changes, often linked to tobacco and alcohol

HOW IT IS DIAGNOSED
Mouth examination and biopsy

MAIN TREATMENT
Surgery, radiotherapy, and sometimes drug treatment

CAN IT BE CURED?
Sometimes - early cancers are often curable

IS IT AN EMERGENCY?
Sometimes - uncontrolled bleeding or breathing difficulty

LONG-TERM OUTLOOK
Often good when found early; advanced cancer is harder to cure

Overview

Oral cancer, also called mouth cancer, begins in the lips or inside the mouth. It can affect the tongue, gums, inner cheeks, floor or roof of the mouth, or the area behind the wisdom teeth.

Most oral cancers are squamous cell carcinomas. These begin in the thin, flat cells that line the mouth. Less common cancers can develop in the salivary glands or other tissues.

Oral cancer is different from oropharyngeal cancer, which begins farther back in the throat, including the tonsils and base of the tongue. The two are sometimes discussed together, but their causes and treatment can differ. Human papillomavirus, or HPV, is particularly important in many oropharyngeal cancers but is less often the cause of cancer at the front of the mouth.

Finding oral cancer early matters. A small cancer that has not spread is usually easier to treat and may require less extensive treatment. Later-stage cancer may affect speech, swallowing,

nutrition, appearance, or movement of the tongue and jaw.

Many mouth ulcers, patches, and lumps are not cancer. Common causes include biting the cheek, dental problems, infections, and irritation from dentures. A persistent change still needs to be examined.

Symptoms

Oral cancer may begin as a change that is painless. This is why it can be overlooked at first.

Possible symptoms include:

A lip cancer may look like a sore, crusted area, lump, or patch that repeatedly breaks down.

These symptoms can have many causes. What matters is whether a change persists, returns repeatedly, or has no clear explanation. An ulcer lasting longer than three weeks should be checked by a dentist or healthcare professional.

- A mouth ulcer that does not heal
- A red, white, or mixed red-and-white patch
- A lump, thickened area, or unexplained swelling
- Persistent pain, numbness, or bleeding in the mouth
- Difficulty chewing, swallowing, speaking, or moving the tongue or jaw
- A loose tooth without a clear dental cause
- Dentures that suddenly stop fitting properly
- A lump in the neck
- A persistent sore throat or feeling that something is caught in the throat
- Unexplained weight loss

Causes and risk factors

Oral cancer develops when cells acquire changes in their DNA, the instructions that control cell growth. The altered cells can continue growing when they should normally stop. Over time, they may form a tumour and invade nearby tissue.

It is not always possible to identify why this happens. Factors that increase risk include:

HPV can contribute to cancers around the mouth and throat, but its strongest link is with cancers of the tonsils and base of the tongue rather than most cancers inside the oral cavity.

Oral cancer is not contagious. It cannot be passed to another person through kissing, sharing utensils, or close contact.

- Tobacco: Smoking cigarettes, cigars, or pipes raises the risk. Smokeless tobacco and chewing tobacco also expose the mouth to cancer-causing chemicals.
- Alcohol: Regular heavy alcohol use raises risk. Using alcohol and tobacco together creates a greater risk than either exposure alone.
- Betel quid or areca nut: Chewing betel quid, paan, gutka, or areca nut increases oral cancer risk, even when tobacco is not added.
- Previous oral cancer: A person treated for one mouth cancer has a higher chance of developing another cancer in the mouth, throat, or nearby areas.
- Sun exposure: Long-term ultraviolet exposure increases the risk of lip cancer, especially on the lower lip.
- Age: Oral cancer becomes more common with age, although younger adults can also develop it.
- A weakened immune system: This can result from certain health conditions or medicines that suppress immune activity.

Diagnosis

A dentist or healthcare professional will examine the lips, tongue, gums, cheeks, roof and floor of the mouth. They may also feel the neck and jaw for enlarged lymph nodes. Lymph nodes are small immune-system structures where cancer can sometimes spread.

If an area looks suspicious, the test that confirms oral cancer is a biopsy . During a biopsy, a small piece of tissue is removed and examined under a microscope by a pathologist. Local anaesthetic may be used to numb the area.

If cancer is found, further tests help show its size and whether it has spread. These may include CT, MRI, PET, or ultrasound scans. A needle sample may be taken from an enlarged lymph node.

The cancer is then assigned a stage. Staging considers the tumour's size and depth, whether nearby lymph nodes contain cancer, and whether cancer has spread to distant organs. The stage, exact location, cell type, and your general health all help shape treatment planning.

Treatment and management

Treatment is planned by a team that may include head and neck surgeons, cancer specialists, dentists, dietitians, speech and language therapists, and specialist nurses.

Surgery is a common treatment, particularly when the cancer can be removed. The operation may remove the tumour with a border of healthy-looking tissue around it. Nearby lymph nodes may also be removed if there is a risk that cancer has reached them.

Larger operations can leave a gap in the mouth or jaw. Reconstructive surgery may use tissue from another part of the body to restore shape and function.

Radiotherapy uses high-energy radiation to destroy cancer cells. It may be the main treatment for some cancers or may be given after surgery to reduce the chance of cancer returning. Treatment is carefully planned to limit exposure to nearby healthy tissue.

Drug treatment may include chemotherapy, targeted therapy, or immunotherapy. These treatments may be combined with radiotherapy or used when cancer has returned or spread. Immunotherapy helps the immune system recognise and attack cancer cells. The appropriate option depends on the cancer's stage and biological features.

Dental care is an important part of treatment planning. Radiotherapy can affect the teeth, gums, salivary glands, and jawbone, so dental problems may need attention before treatment begins.

Supportive care can help with pain, dry mouth, eating, swallowing, speech, fatigue, and emotional wellbeing. A dietitian may recommend ways to maintain nutrition. A speech and language therapist can help with swallowing and communication before and after treatment.

Complications

Oral cancer can grow into nearby structures or spread to lymph nodes in the neck. Advanced cancer may spread to other parts of the body, although local and neck involvement are more common concerns.

The condition and its treatment may cause:

Radiotherapy can cause a sore mouth, dry mouth, thick saliva, taste changes, tooth decay, and swallowing problems. Some effects improve after treatment, while dry mouth or dental risk may continue.

Surgery can affect speech and eating, depending on the area removed. Rehabilitation and reconstructive surgery can improve function, but recovery may take time.

Rarely, radiotherapy can damage the jawbone. Careful dental assessment, regular oral care, and telling dental professionals about previous radiotherapy help manage this risk.

- Difficulty chewing or swallowing
- Changes in speech, taste, or tongue movement
- Weight loss or poor nutrition
- Pain, bleeding, or infection
- Changes in facial or mouth appearance
- Reduced jaw movement
- Emotional distress or reduced confidence

Prevention

Not every oral cancer can be prevented. Some people develop it without a clear risk factor.

You can lower your risk by:

Stopping tobacco use is helpful even after years of use. Support from a stop-smoking service can improve the chance of quitting successfully.

HPV vaccination prevents infection with HPV types linked to several cancers. Its clearest relevance in this area is to cancers at the back of the throat rather than most cancers inside the mouth.

Routine dental visits can help identify unusual changes, but there is no single screening test that can rule out oral cancer in everyone.

- Not smoking or using smokeless tobacco
- Avoiding betel quid, areca nut, paan, and gutka
- Limiting alcohol
- Protecting your lips from strong sunlight with shade, a hat, and lip sunscreen
- Attending regular dental check-ups
- Reporting persistent mouth changes rather than waiting for them to become painful

Living with it and what to expect

What happens over the months and years after diagnosis is influenced by where the cancer started, its stage, the treatment used, and your overall health.

Early cancers may be treated with one main type of treatment, such as surgery or

radiotherapy. More advanced cancers often require combined treatment and a longer period of recovery. Some changes in eating, speech, taste, saliva, or appearance may improve gradually. Others may be long term.

Follow-up appointments are used to check healing, manage side effects, and look for signs that the cancer has returned or that a new cancer has developed. Follow-up is usually more frequent at first. Dental care remains important, particularly after radiotherapy.

Eating may require extra time or changes in food texture. Some people need temporary tube feeding during treatment. Others can continue eating by mouth with support. Speech and swallowing exercises may help maintain or rebuild strength and movement.

Returning to work and usual activities is often gradual. Fatigue can continue after treatment, even when scans show no remaining cancer. Changes in appearance or communication may affect confidence and relationships. Rehabilitation services, counselling, and peer support can help.

Some oral cancers return after treatment. Recurrence is more likely with larger or more advanced cancers, but no individual course can be predicted with certainty. New or returning symptoms should be assessed rather than saved for the next routine appointment.

When to get medical help

Arrange a routine but prompt appointment with a dentist or healthcare professional if you have:

If you have previously been treated for oral cancer, report a new lump, ulcer, swallowing change, or persistent pain to your cancer team. Do not wait for a scheduled follow-up visit.

Seek urgent medical help if swelling or swallowing difficulty is worsening quickly, or if you cannot keep down fluids.

Call emergency services for severe uncontrolled bleeding, serious breathing difficulty, or swelling that is blocking the airway. These are uncommon but require immediate care.

- A mouth ulcer lasting more than three weeks
- A persistent red, white, or mixed-colour patch
- An unexplained lump in the mouth or neck
- Ongoing mouth pain, numbness, or bleeding
- A loose tooth or denture-fit change without a clear cause
- Persistent difficulty chewing, swallowing, speaking, or moving your jaw

Common questions

Is every mouth ulcer a sign of oral cancer?

No. Most mouth ulcers result from minor injury, irritation, or other non-cancerous causes. An ulcer should be checked if it has not healed within three weeks, keeps returning in the same place, or occurs with a lump or unexplained numbness.

What does oral cancer look like at first?

It may look like a small ulcer, a red or white patch, a thickened area, or a lump. It may not hurt. Appearance alone cannot confirm cancer, so a suspicious area may need a biopsy.

Can oral cancer be cured?

Sometimes. Early oral cancers are often curable with surgery, radiotherapy, or both. Cancer that has spread widely is harder to cure, but treatment may still control it, reduce symptoms, and help maintain quality of life.

Does oral cancer always cause pain?

No. Early oral cancer can be painless. Pain may develop as a tumour grows, becomes ulcerated, or affects nearby nerves and tissues. A painless change can still need examination.

Can you get oral cancer if you have never smoked?

Yes. Tobacco is a major risk factor, but people who have never smoked can develop oral cancer. Other factors include alcohol, areca nut, sun exposure to the lips, immune suppression, and DNA changes without an identifiable cause.

Is oral cancer the same as throat cancer caused by HPV?

Not exactly. Oral cancer begins in the lips or front parts of the mouth. HPV-related cancers more often begin in the oropharynx, which includes the tonsils and base of the tongue. These cancers can have different causes, treatment considerations, and outlooks.

Sources

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