CONDITION

Nasopharyngeal cancer

Nasopharyngeal cancer is cancer that begins behind the nose in the upper part of the throat.

WHAT IT IS
Cancer of the upper throat behind the nose

BODY SYSTEM
Head, neck, and breathing system

MAIN SYMPTOMS
Neck lump, blocked nose, nosebleeds, hearing changes

WHAT CAUSES IT
Epstein-Barr virus, environment, and inherited susceptibility

HOW IT IS DIAGNOSED
Nasal endoscopy and tissue biopsy

MAIN TREATMENT
Radiotherapy, often combined with chemotherapy

CAN IT BE CURED?
Sometimes - especially when found before spread

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

LONG-TERM OUTLOOK
Often treatable, but advanced cancer is harder to cure

Overview

Nasopharyngeal cancer begins in the nasopharynx. This is the upper part of the throat, behind the nose and above the roof of the mouth.

The nasopharynx is close to the ears, nasal passages, skull base, and several important nerves. A tumour in this area may therefore cause symptoms involving hearing, the nose, the face, or the eyes. It can also spread to lymph nodes, which are small immune-system structures found throughout the body. A painless lump in the neck is a common first sign.

This cancer is uncommon in many countries but is more frequent in parts of southern China, Southeast Asia, North Africa, and the Arctic. It is different from most other head and neck cancers because it has a particularly strong link with Epstein-Barr virus, or EBV.

Treatment and outlook are influenced by where the cancer has grown, whether it has spread, and your general health. Because the nasopharynx is difficult to reach with surgery, radiotherapy is usually the main treatment.

Symptoms

Symptoms can resemble common ear, nose, or throat problems. Having one of them does not mean that you have cancer. A symptom is more concerning when it persists, gets worse, has no clear explanation, or mainly affects one side.

Possible symptoms include:

A neck lump may appear before symptoms in the nose or throat. This happens when cancer cells reach nearby lymph nodes.

- A painless lump in the neck
- A blocked or stuffy nose, especially on one side
- Repeated nosebleeds or blood-stained nasal discharge
- Reduced hearing, ringing in one ear, or a feeling of pressure
- Repeated middle-ear fluid or infections in an adult
- Headaches
- Facial pain or numbness
- Double vision or other changes in eyesight
- Difficulty opening the mouth, swallowing, or speaking
- Unexplained weight loss or ongoing tiredness

Causes and risk factors

Nasopharyngeal cancer develops when cells in the lining of the nasopharynx acquire changes that allow them to grow without normal control. There is usually no single identifiable cause.

EBV is strongly associated with many cases. This virus is very common and usually causes no lasting problem. Most people infected with EBV never develop nasopharyngeal cancer, so infection alone is not enough to explain why the cancer develops.

Risk is also associated with:

These factors affect risk rather than providing a certain cause. Someone may develop this

cancer without having a known risk factor, while most people with one or more risk factors will not develop it.

Nasopharyngeal cancer itself is not contagious. You cannot catch it through close contact, sharing food, or breathing the same air.

- Family history of nasopharyngeal cancer
- Ancestry from a region where the cancer is more common
- Diets high in traditionally salt-cured fish or meat
- Smoking
- Heavy alcohol use
- Long-term exposure to some workplace dusts or chemicals, including wood dust and formaldehyde

Diagnosis

A healthcare professional will ask about your symptoms, examine your mouth and neck, and look for swollen lymph nodes. You may be referred to an ear, nose, and throat specialist.

The specialist usually examines the nasopharynx with a thin, flexible camera passed gently through the nose. This is called nasal endoscopy or nasendoscopy. A numbing spray may be used.

A biopsy is needed to confirm the diagnosis. During a biopsy, a small tissue sample is removed and examined under a microscope. A neck lump may also be sampled with a thin needle, but tissue from the nasopharynx is often required.

If cancer is confirmed, further tests show its size and whether it has spread. These may include MRI, CT, or PET-CT scans. Blood tests may check general health, kidney and liver function, and sometimes the amount of EBV genetic material in the blood.

The results are used to assign a stage. Staging describes how far the cancer has grown locally, whether lymph nodes are involved, and whether it has reached distant organs.

Treatment and management

Care is usually planned by a team that may include cancer specialists, radiologists, specialist nurses, dietitians, dentists, hearing specialists, and speech and swallowing therapists.

Radiotherapy uses high-energy beams to destroy cancer cells. It is the main treatment

because it can reach the nasopharynx and nearby lymph nodes without an operation. Modern techniques shape the radiation around the tumour while limiting exposure to healthy tissue.

Some early cancers may be treated with radiotherapy alone. Cancer that is larger or has reached lymph nodes is often treated with radiotherapy and chemotherapy together. Chemotherapy circulates through the bloodstream and can make cancer cells more sensitive to radiation. It may also be given before or after combined treatment in selected situations.

If the cancer has spread to distant parts of the body, treatment may include chemotherapy, immunotherapy, or radiotherapy to control specific areas. Immunotherapy helps the immune system recognize and attack cancer cells. The goal may be long-term control, symptom relief, or both.

Surgery is not usually the first treatment because the nasopharynx is close to the skull base and major nerves and blood vessels. It may sometimes be used for cancer that remains or returns after radiotherapy, including persistent lymph nodes in the neck.

Before treatment, you may need a dental assessment because radiation can affect the teeth, jaw, and saliva glands. Nutrition, hearing, swallowing, and speech support may also be arranged.

Complications

The cancer can affect nearby nerves, the eyes, the ears, swallowing, or breathing. It may spread to lymph nodes and, in advanced cases, to organs such as the bones, lungs, or liver.

Treatment effects differ between people. During radiotherapy, common problems include a sore mouth or throat, painful swallowing, skin irritation, tiredness, changes in taste, and reduced appetite.

Some effects can continue or develop later, including:

Rarely, treatment near the skull base can affect nerves, bones, blood vessels, or brain tissue. Follow-up is important so that problems can be found and managed early.

- Dry mouth from reduced saliva
- Tooth decay and other dental problems
- Hearing loss or ringing in the ears
- Difficulty swallowing or opening the mouth
- Neck stiffness or swelling
- An underactive thyroid gland

- Changes in speech, taste, or smell

Prevention

Nasopharyngeal cancer cannot always be prevented. Inherited susceptibility, ancestry, and past EBV infection cannot be changed, and there is no routine vaccine that prevents EBV infection.

You may reduce some risk by not smoking, limiting alcohol, and avoiding frequent consumption of traditionally salt-cured fish and meat. Workplace controls can reduce exposure to wood dust, formaldehyde, and other harmful substances.

Routine screening is not generally used for everyone. Some high-risk regions or research programmes offer EBV-based testing to selected groups, but this is not a standard test for most people.

Living with it and what to expect

Treatment often lasts several weeks, and its effects may build gradually. Eating and drinking can become difficult during radiotherapy, so early support from a dietitian or swallowing therapist can be useful. Some people need liquid nutrition or temporary tube feeding to maintain hydration and body weight.

Recovery from treatment can take months. Taste, appetite, energy, and swallowing may improve gradually, but dry mouth, hearing changes, or neck stiffness can be long-lasting. Dental care, prescribed mouth care, swallowing exercises, and hearing support may help with these effects.

Follow-up appointments usually include questions about symptoms and an examination of the nose, throat, and neck. Scans, endoscopy, blood tests, hearing checks, dental reviews, or thyroid tests may be used when appropriate. These visits are routine and do not mean that the cancer has returned.

Some cancers return in the nasopharynx, nearby lymph nodes, or elsewhere in the body. Further treatment may still be possible. Options are based on the site of recurrence, previous treatment, and overall health.

Many people return to work, study, family life, and regular activities after recovery, although adjustments may be needed. Emotional effects can also continue after treatment. Cancer support services, counselling, and rehabilitation can help with uncertainty, changes in appearance, and fear of recurrence.

When to get medical help

Arrange a routine medical appointment for an unexplained neck lump or persistent symptoms such as one-sided nasal blockage, repeated nosebleeds, reduced hearing in one ear, or blood-stained nasal discharge. These symptoms often have causes other than cancer, but they should be assessed if they do not settle.

If you have already been treated, contact your cancer team about a new lump, worsening swallowing, persistent new pain, unexplained weight loss, or symptoms that return between planned follow-up visits.

Seek urgent medical help for rapidly worsening swallowing, dehydration, a sudden major change in eyesight, new facial weakness, or bleeding that is difficult to control.

Call emergency services for severe breathing difficulty, heavy bleeding that will not stop, collapse, or a sudden neurological problem such as loss of movement or consciousness.

Common questions

Is nasopharyngeal cancer curable?

It can sometimes be cured, particularly when it has not spread to distant organs. Some more advanced cancers are also successfully treated, but cure becomes less likely after distant spread. Stage, treatment response, and general health all influence the outlook.

Is nasopharyngeal cancer the same as throat cancer?

It is one type of head and neck cancer, but it differs from cancers that begin lower in the throat or in the voice box. Its causes, location, and usual treatment approach are also different.

Can I pass nasopharyngeal cancer or EBV to my family?

Cancer cannot be passed between people. EBV can spread through saliva, but it is extremely common and usually causes no serious problem. Having EBV does not mean that someone will develop nasopharyngeal cancer.

Why can this cancer cause hearing problems?

The nasopharynx is close to the tubes that connect the middle ears to the throat. A tumour can block one of these tubes, causing pressure or fluid behind the eardrum. This may lead to muffled hearing, ringing, or repeated ear problems.

How quickly does nasopharyngeal cancer spread?

There is no single timetable. Some tumours grow slowly, while others spread earlier to lymph nodes or distant organs. Scans and biopsy results provide more useful information than the

length of time symptoms have been present.

Will treatment affect eating and speaking?

It can, especially during and shortly after radiotherapy. A sore throat, dry mouth, taste changes, or jaw stiffness may make eating and speaking harder. Dietitians and speech and swallowing therapists can provide rehabilitation and practical support.

Sources

- National Cancer Institute: Nasopharyngeal Cancer Treatment (PDQ®)-Patient Version
- National Cancer Institute: Nasopharyngeal Cancer Treatment (PDQ®)-Health Professional Version
- NHS: Nasopharyngeal cancer
- American Cancer Society: Nasopharyngeal Cancer
- European Society for Medical Oncology: Nasopharyngeal carcinoma clinical practice guideline 43119-8/fulltext)
- Cancer Research UK: Nasopharyngeal cancer