



Nasopharyngeal Cancer

What is the nasopharynx?

The nasopharynx is made up of the upper part of the pharynx (throat) behind the nose. The pharynx is a hollow tube that begins behind the nose and ends at the top of the trachea (windpipe) and esophagus (tube that goes from the throat to the stomach). The nostrils lead into the nasopharynx, while an opening on each side of the nasopharynx leads into each ear via the Eustachian tubes.

What is nasopharyngeal cancer?

Nasopharyngeal cancer occurs when malignant (cancerous) cells form in the tissues of the nasopharynx. Cancer is the uncontrollable growth of cells that invade and cause damage to surrounding tissue. In most cases, nasopharyngeal cancer begins in the thin, flat cells (squamous cells) that line the oropharynx (the part of the throat behind the mouth).

What are the risk factors for the development of nasopharyngeal cancer?

In many cases, nasopharyngeal cancer occurs during adolescence. This type of cancer affects more males than females. Other risk factors include:

- **Diet**—People who live in areas of Asia, Northern Africa, and the Arctic region, where NPC is common, typically eat diets very high in salt-cured fish and meat.
- **Epstein-Barr virus (EBV)**—This common virus, which remains dormant (inactive) in most people, has been linked to cancers including nasopharyngeal cancer.
- **Genetic factors**—Recent studies have found that people with certain inherited tissue types are at increased risk of developing nasopharyngeal cancer.

What are the symptoms of nasopharyngeal cancer?

The following symptoms might be potential symptoms of nasopharyngeal cancer:

- Difficulty hearing, breathing, or speaking
- Sore throat, recurrent nosebleed
- Pain or ringing in the ear
- Headaches

How is nasopharyngeal cancer diagnosed?

Doctors might use various tests to diagnose nasopharyngeal cancer. Some of these tests include:

- **Physical exam of the throat**—This exam might involve palpation (feeling) of the neck and looking down the throat.
- **Nasoscopy**—During this procedure, a doctor will use a nasoscope (thin lighted tube) to look inside the nose. The doctor might take tissue samples for a biopsy.
- **Biopsy**— This procedure involves the removal of tissue so it can be viewed under a microscope to check for cancer.
- **Neurological exam**—This exam might be made up of questions and tests to check the brain, spinal cord, and body's nerve function.
- **Head and chest X-rays**—These might include an X-ray of the skull, as well as the organs and bones in the chest.
- **Laboratory tests**—These procedures might test samples of blood, urine, tissue, or other

substances.

- **CT or CAT scan** (also called computed tomography, computerized tomography, or computerized axial tomography)—This is a scan that involves taking a series of detailed pictures of areas inside the body. The images are created by a computer linked to an X-ray machine.
- **MRI** (also called magnetic resonance imaging)— This is a procedure during which radio waves and a powerful magnet linked to a computer are used to create detailed pictures of areas inside the body.

What are the stages of nasopharyngeal cancer?

Stage 0

In this stage of nasopharyngeal cancer, cancer is found only in the lining of the nasopharynx.

Stage I

Cancer is contained within the nasopharynx only.

Stage II

Cancer is divided into Stage IIA and Stage IIB. In Stage IIA, cancer has spread from the nasopharynx to the oropharynx (the middle part of the throat that includes the soft palate) and/or to the nasal cavity. In stage IIB, one of two situations might occur: The cancer is found in the nasopharynx and has spread to the lymph nodes in one side of the neck, or has spread to the area surrounding the nasopharynx and might have spread to lymph nodes on one side of the neck.

Stage III

In this stage, the cancer:

- Is found in the nasopharynx and has spread to lymph nodes on both sides of the neck
- Has spread into the soft tissues (oropharynx and/or nasal cavity) and to lymph nodes on both sides of the neck
- Has spread beyond the soft tissues into areas around the pharynx and to lymph nodes on both sides of the neck
- Has spread to nearby bones or sinuses and might have spread to lymph nodes on one or both sides of the neck

Stage IV

Cancer is divided into Stage IVA, Stage IVB, and Stage IVC as follows:

Stage IVA:

The cancer has spread beyond the nasopharynx and might have spread to the cranial nerves, the hypopharynx (bottom part of the throat), areas in and around the side of the skull or jawbone, and/or the bone around the eye. Cancer might also have spread to lymph nodes on one or both sides of the neck, and the involved lymph nodes are smaller than 6 centimeters.

Stage IVB:

This stage of cancer has spread to lymph nodes above the collarbone, and/or the involved lymph nodes are larger than 6 centimeters.

Stage IVC:

The cancer has spread beyond nearby lymph nodes to other parts of the body.

Nasopharyngeal cancer treatment by stage

Nasopharyngeal cancer can be treated with radiation therapy, chemotherapy, and occasionally surgery. In some cases, the best approach involves two or more of these strategies.

The treatment of Stage I nasopharyngeal cancer usually involves radiation treatment of the tumor in the lymph nodes in the neck.

In Stage II nasopharyngeal cancer, chemotherapy might be combined with radiation therapy. This stage also involves radiation therapy to the tumor and lymph nodes in the neck.

The treatment of Stage III nasopharyngeal cancer might include:

- Chemotherapy combined with radiation therapy
- Radiation therapy to the tumor and lymph nodes in the neck
- Radiation therapy, followed by surgery to remove cancer-containing lymph nodes in the neck that persist or recur after radiation therapy
- A clinical trial of chemotherapy before, combined with, or after radiation therapy.

The treatment of Stage IV nasopharyngeal cancer can include:

- Chemotherapy combined with radiation therapy
- Radiation therapy to the tumor and lymph nodes in the neck
- Radiation therapy, followed by surgery to remove cancer-containing lymph nodes in the neck that persist or recur after radiation therapy
- Chemotherapy for cancer that has spread to other parts of the body
- A clinical trial of chemotherapy before, combined with, or after radiation therapy

Can nasopharyngeal cancer be prevented?

Most people in the United States who develop nasopharyngeal cancer have no known risk factors. Because of this, their cancers could not have been prevented.

Eliminating certain dietary factors is one way to reduce the number of cases in parts of the world where the disease is common. For example, descendants of Southeast Asians who immigrated to the United States and eat a typical "American diet" have a lower risk of developing the disease.

What is the prognosis (chance of recovery) for people with nasopharyngeal cancer?

The prognosis differs from person to person and depends on factors including the stage of the disease, the size and location of the tumor, and the patient's age and general health.

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The Cleveland Clinic
Department of Patient Education and Health Information
9500 Euclid Ave. NA31 Cleveland, OH 44195
216/444-3771 or 800/223-2273 ext.43771
healthI@ccf.org
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