

## When to seek medical advice

Early signs and symptoms of NPC may be minor so if you notice any symptoms such as persistent (2 weeks or more) nasal congestion or nosebleeds, see your doctor. This is particularly important if you are Chamorro or Chinese.

## Screening and Diagnosis

### Screening

Screening for NPC may include tests to determine whether a person carries the Epstein-Barr virus and/or careful examinations of the nasopharynx using a tiny camera attached to the end of a flexible tube (endoscope).

### Diagnosis

Diagnosing NPC usually begins with a general examination. Your doctor will ask questions about your signs and symptoms. He or she may press on your neck to feel for swelling in your lymph nodes. Because early signs and symptoms of nasopharyngeal cancer aren't specific to the disease, it's common to be misdiagnosed at first. It may take several months of investigating other possible problems before a final diagnosis is made.

If your doctor suspects you have NPC, he may refer you to an ear, nose, and throat (ENT) specialist who will use an endoscope to see inside your nasopharynx and look for abnormal growths. The endoscope may be inserted through your nose or through the opening in the back of your throat that leads up into your nasopharynx. Endoscopy may require local anesthesia.

Unfortunately, NPC frequently spreads (metastasizes) beyond the nasopharynx before it is diagnosed. **This is why it is particularly important to see a doctor if you have persistent symptoms such as chronic sinusitis or nasal congestion, especially if you are of Chamorro or Chinese ancestry.**

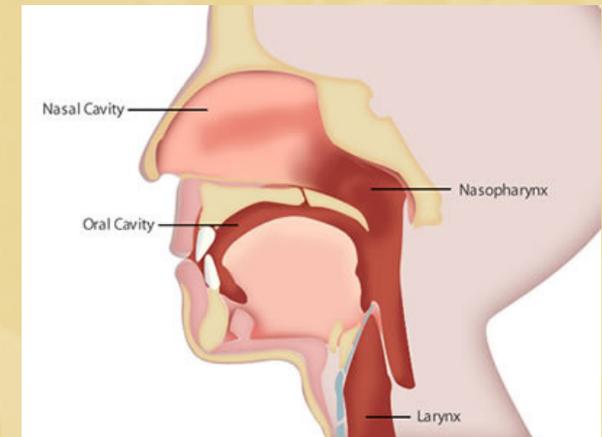
If diagnosis of NPC is delayed, cancer cells from the initial tumor may spread to nearby areas such as lymph nodes in the neck. If untreated, eventually cancer cells may spread beyond the head and neck and most commonly travel to the bones and bone marrow, lungs and liver. At this stage treatment is likely to be unsuccessful.

## Treatment

You and your doctor can work together to make a treatment plan based on the stage of your cancer, the type of cells involved, your treatment goals and the side effects you're willing to tolerate. Treatment for NPC usually begins with radiation therapy and may be followed by chemotherapy. While surgery is the mainstay of treatment for many cancers, surgery on the nasopharynx is a delicate procedure and requires an incision in the roof of your mouth in order to access the affected area.

## WHAT YOU SHOULD KNOW ABOUT

# NASOPHARYNGEAL CANCER



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## Signs and symptoms

Nasopharyngeal cancer (or NPC) refers to a cancer growing in the passages behind the nose. The nasopharynx is the passage that extends through the neck from behind the nasal passages to the back of the mouth.

### Is NPC common among Guam's people?

NPC is rare in the United States, with an incidence rate of less than 1 per 100,000 population. There were 69 new cases and 88 deaths due to NPC reported in Guam between 1998-2004. The NPC death rate among Guam's Chamorros was more than 40 times greater than that of the U.S.

Men are more likely than women to develop NPC and it is commonly diagnosed at a relatively young age. NPC may cause signs and symptoms that suggest a variety of diseases and conditions. That fact, combined with the hidden location of the nasopharynx, means many people are not diagnosed with NPC until the cancer has spread. As the cancer becomes more advanced, it also becomes more difficult to treat so it is important to recognize the early signs and symptoms.

Signs and symptoms of NPC may include:

- A lump in the neck caused by a swollen lymph node
- Nosebleeds
- Hearing loss in one ear
- Headaches
- A feeling of fullness in the throat and sinus areas and ear
- Pain or ringing in the ear
- Sore throat
- Trouble breathing or speaking

## NPC Risks

In many cases, it isn't clear what causes nasopharyngeal cancer, although some risk factors that increase the risk of this cancer have been identified.

In areas where nasopharyngeal cancer is most common, researchers have identified the following risk factors:

- **Epstein-Barr virus.** When first infected, this common virus usually produces mild signs and symptoms, such as those of a common cold. However, it can also cause infectious mononucleosis and is strongly linked to several cancers, including NPC.
- **Ethnicity.** Ethnicity is a major risk factor for NPC. NPC is much more common among certain ethnic groups such as the Chinese, North Africans and Chamorros.

- **Salt-cured foods.** Eating salt cured foods may increase your risk of NPC. In China, NPC has also been linked to high consumption of salted fish.
- **Preserved meats.** Eating preserved meats such as Spam® that contain high levels of nitrates may also increase the risk of NPC.

Nasopharyngeal cancer does not appear to be as closely linked to smoking and excessive alcohol use as are most other head and neck cancers. **The Cancer Research Center of Guam hopes to undertake studies to determine if the high rate of NPC on Guam may be related to betel nut chewing or other local practices.**

## Ways to lower your risk

Although there is no proven way to prevent NPC, you may be able to take steps to reduce your risk of the disease. For instance, some studies suggest that you should cut back on the amount of salt-cured and salt-preserved foods that you eat (especially during childhood), or avoid these foods altogether. People from areas of high NPC incidence who immigrate to North America and adopt a typical American diet have a reduced risk of nasopharyngeal cancer. However, the risk never completely goes away, which indicates that other unknown or uncontrollable risk factors such as genetics may play a role in developing this type of cancer.