About Nasopharyngeal Cancer

Overview and Types

If you've been diagnosed with nasopharyngeal cancer or are worried about it, you likely have a lot of questions. Learning some basics is a good place to start.

- What Is Nasopharyngeal Cancer?

Research and Statistics

See the latest estimates for new cases of nasopharyngeal cancer in the US and what research is currently being done.

- Key Statistics for Nasopharyngeal Cancer
- What's New in Nasopharyngeal Cancer Research?

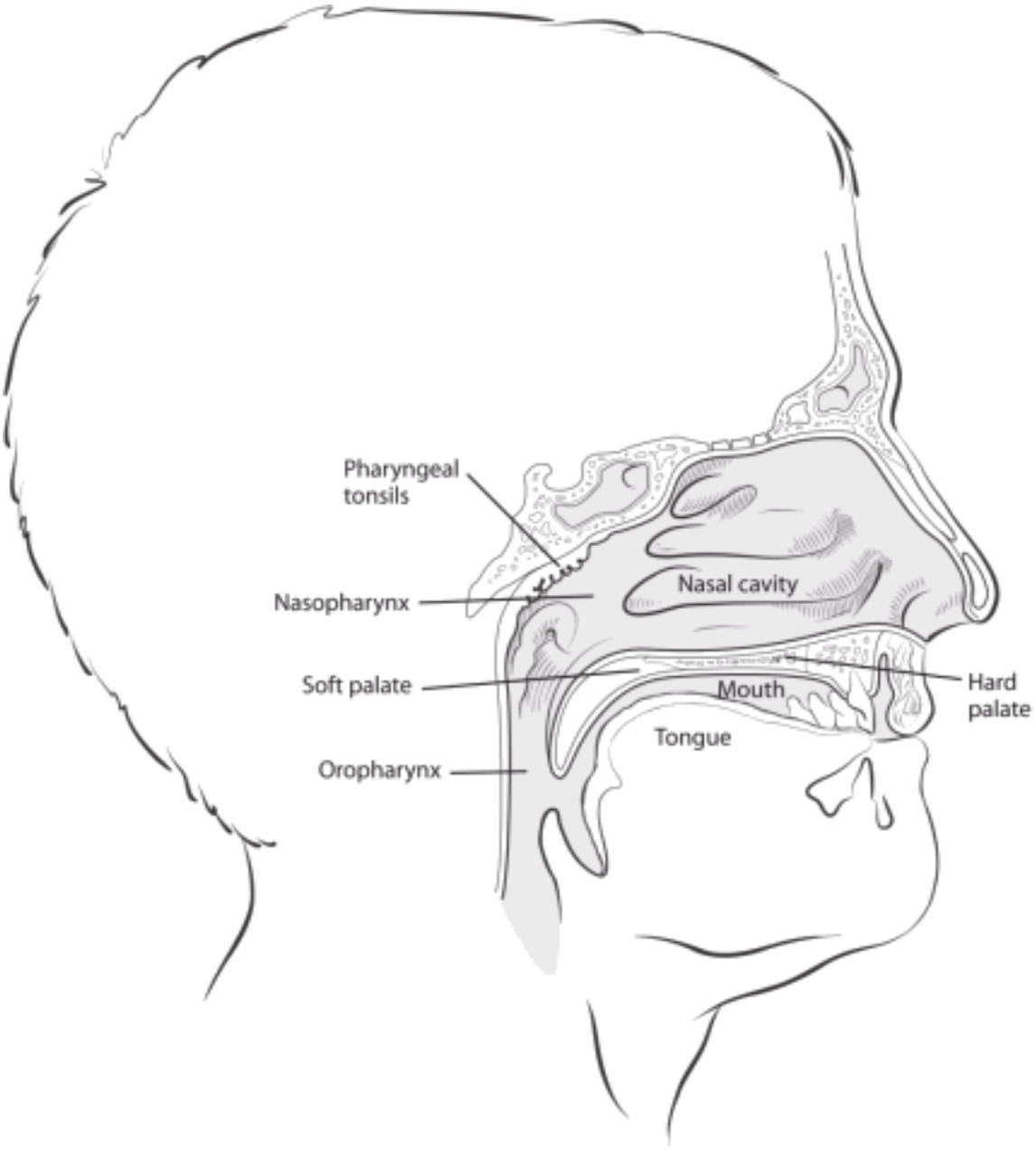
What Is Nasopharyngeal Cancer?

Nasopharyngeal cancer is a type of head and neck cancer. It starts in the nasopharynx, the upper part of the throat behind the nose and near the base of skull. Cancer starts when cells begin to grow out of control. Cells in nearly any part of the body can become cancer, and can spread to other areas. (To learn more about how cancers start and spread, see What Is Cancer?[1])

Where nasopharyngeal cancer forms

The nasopharynx is the upper part of the throat (pharynx) that lies behind the nose. It's a box-like chamber about 1½ inches on each edge. It lies just above the soft part of the roof of the mouth (soft palate) and just in back of the nasal passages.

The nasopharynx serves as a passageway for air traveling from the nose to the throat (and then on to the lungs).



Types of nasopharyngeal tumors

Several types of tumors can develop in the nasopharynx. Some of these tumors are benign (not cancer), but others are malignant (cancer). It's important to talk with your doctor about what type of tumor you might have.

Nasopharyngeal carcinoma (NPC)

Most nasopharyngeal cancers are nasopharyngeal carcinoma (NPC). It is by far the most common cancer in the nasopharynx. *Carcinoma* is cancer that starts in the cells that line the internal and external surfaces of the body (called *epithelial cells*).

There are 3 types of NPC. They all start from epithelial sells that line the nasopharynx, but the cells of each type look different under a microscope:

- Non-keratinizing undifferentiated carcinoma (this is the most common type of NPC in the US.)
- Non-keratinizing differentiated carcinoma
- Keratinizing squamous cell carcinoma

The treatment is the same for all types of NPC. The non-keratinizing types tend to respond better to treatment, but the stage of the cancer – how far it has grown and spread – is often more important than the type in predicting a person's outlook (prognosis).

Many NPCs also contain lots of immune system cells, especially white blood cells called *lymphocytes*. The term *lymphoepithelioma* is sometimes used to describe an undifferentiated NPC with many lymphocytes among the cancer cells. The presence of these cells does not usually affect the choice of treatment options. But they may help researchers develop new treatments, because they may be a clue to how the body attempts to fight the tumor. (See What's New in Nasopharyngeal Cancer Research?)

Other cancers in the nasopharynx

Other types of cancers can also be found in the nasopharynx:

- *Lymphomas* can sometimes start in the nasopharynx. They are cancers of immune system cells called *lymphocytes*, which are found throughout the body, including in the nasopharynx. See Non-Hodgkin Lymphoma[2] to learn more.
- *Adenocarcinoma* and *adenoid cystic carcinoma* are cancers that can start in the

minor salivary glands in the nasopharynx. But these cancers are more commonly found in the nose (nasal cavity) or mouth (oral cavity). See Oral Cavity and Oropharyngeal Cancer[3], Nasal Cavity and Paranasal Sinuses Cancer[4], or Salivary Gland Cancer[5] for more about these cancers.

Benign nasopharyngeal tumors

Benign nasopharyngeal tumors are fairly rare and tend to develop in children and young adults. These tumors do not spread to other parts of the body and are usually not life-threatening. They include tumors or malformations of the vascular (blood-carrying) system, such as *angiofibromas* and *hemangiomas,* and benign tumors of minor salivary glands within the nasopharynx.

Benign nasopharyngeal tumors don't always need treatment. When they do, the treatment is not the same as for nasopharyngeal cancer. If you have a benign tumor, talk to your doctor about what to expect.

Hyperlinks

1. www.cancer.org/cancer/cancer-basics/what-is-cancer.html
2. www.cancer.org/cancer/non-hodgkin-lymphoma.html
3. www.cancer.org/cancer/oral-cavity-and-oropharyngeal-cancer.html
4. www.cancer.org/cancer/nasal-cavity-and-paranasal-sinus-cancer.html
5. www.cancer.org/cancer/salivary-gland-cancer.html

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See all references for Nasopharyngeal Cancer (www.cancer.org/cancer/nasopharyngeal-cancer/references.html)

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Key Statistics for Nasopharyngeal Cancer

Nasopharyngeal cancer (NPC) is quite rare. In most parts of the world (including the United States), there's less than one case for every 100,000 people each year.

This cancer is much more common in certain parts of South Asia, the Middle East, and North Africa. In some parts of China there are as many as 21 cases per 100,000 people. It's also more common among Inuits of Alaska and Canada.

The risk of NPC increases slowly throughout life, but it can occur in people of any age, including children. About half of the people with NPC in the United States are younger than 55 years old.

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What's New in Nasopharyngeal Cancer Research?

Research into the causes, prevention, and treatment of nasopharyngeal cancer (NPC) is being done in many university hospitals, medical centers, and other institutions around the world. Because NPC is rare, it's has been hard to study it well. Most experts agree that treatment in a clinical trial should be considered for any type or stage of NPC. This way people can get the best treatment available now and may also get the new treatments that are thought to be even better. The new and promising treatments discussed here are only available in clinical trials.

Causes, prevention, and early detection

Many studies are looking at how Epstein-Barr virus (EBV) infection as well as other risk factors cause cells of the nasopharynx to become cancer.These studies may someday lead to vaccines to help prevent some cases of NPC by preventing EBV infection.

Recent discoveries about EBV, its interaction with nasopharyngeal cells, and the immune system’s reaction to EBV have led to new blood tests that may help detect NPC early and better predict the response to treatment.

Researchers hope that newer, very sensitive tests for EBV might lead to screening tests for NPC, and better ways to predict when NPC is likely to come back after treatment. These possibilities are now being studied in areas of the world where this cancer is more common.

Researchers believe there also may be certain gene changes that make a person more likely to have NPC. Studies to look for other gene changes linked to NPC are going on in countries where NPC is more common.

Treatment

New radiation therapy techniques

Most types of radiation therapy use radiation in the form of x-rays. Other types of radiation uses protons and carbon ions to kill cancer cells. These are being studied, especially in China, but so far haven't been proven to be better than standard x-ray radiation.

Doctors are also studying the best schedule for giving radiation therapy. External beam radiation treatments are usually given once a day, 5 days a week, for many weeks in a row. Studies are now under way to see if schedules that either give the doses over fewer days or give smaller doses twice a day might work better.

Photodynamic therapy

Researchers are looking at ways to use this cancer-focused treatment for NPC. Photodynamic therapy or PDT uses a cell-killing drug that's activated by a laser light. It's already used to treat some head and neck cancers. Doctors are studing how it might be used to shrink NPC tumors that are causing problems, and its role in treating tumors that come back after radiation.

Chemotherapy

Researchers continue to develop new chemo drugs , new drug combinations, and new ways to give drugs that might be more effective against advanced NPC. Several drugs that are already used to treat other cancers, such as capecitabine, oxaliplatin, and gemcitabine, have been studied for use against NPC as well. Clinical trials are looking for the best combination of chemo drugs and how they should be used along with radiation therapy. For example, studies are comparing how well chemo works when given before, during, or after radiation therapy.

Immunotherapy

NPC seems to be caused at least in part by infection with the Epstein-Barr virus (EBV). Although patients’ immune systems can be shown to have reacted against EBV, this doesn’t seem to be enough to kill the cancer. Finding and targeting cell proteins linked to EBV and the cells it affects could lead to new, more cancer-focused treatment options. Understanding how EBV interacts with the immune system could also lead to treatments that boost the immune system's response to NPC and maybe even keep it from developing.

One way to do this is to remove T lymphocytes (immune system cells) from a patient's and alter them in the lab to make more cells and increase their power to kill EBV. The cells are then injected back into the patient. Early results with small numbers of patients have been promising, and larger studies of this technique are now under way.

Predicting treatment outcomes

Researchers are looking for ways to know how well NPC will respond to treatment and

understand how likely it is to come back after treatment. This information would allow doctors to tailor treatment for each patient so that the best treatment is used. One area of research is looking for a link between a person's blood cell counts and overall survival. Results have suggested a link, but a lot more research is needed.

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Our team is made up of doctors and oncology certified nurses with deep knowledge of cancer care as well as journalists, editors, and translators with extensive experience in medical writing.

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Nasopharyngeal Cancer Causes, Risk Factors, and Prevention

Risk Factors

A risk factor is anything that raises your chance of getting a disease such as cancer. Learn more about the risk factors for nasopharyngeal cancer.

- Risk Factors for Nasopharyngeal Cancer
- What Causes Nasopharyngeal Cancer?

Prevention

There's no way to prevent all nasopharyngeal cancers. But there are things you can do that might help lower your risk. Learn more.

- Can Nasopharyngeal Cancer Be Prevented?

Risk Factors for Nasopharyngeal Cancer

A risk factor is anything that raises a person’s chance of getting a disease such as cancer. Different cancers have different risk factors. Some risk factors, like smoking or diet, can be changed. Others, like a person's age or family history, can’t be changed.

But risk factors don’t tell us everything. Having a risk factor, or even many risk factors,

does not mean that you will get the disease. And many people who get the disease may have few or no known risk factors.

Scientists have found risk factors that make a person more likely to develop nasopharyngeal cancer (NPC). These include:

- Gender
- Ethnicity and where you live
- Diet
- Infection with the Epstein-Barr virus
- Family history

Smoking, alcohol, and some workplace exposures may also increase the risk of this cancer.

Gender

NPC is found about twice as often in males as it is in females.

Race/ethnicity and where you live

NPC is most common in southern China (including Hong Kong), Singapore, Vietnam, Malaysia, and the Philippines. It's also fairly common in Northwest Canada and Greenland.

People of south China have a lower risk of NPC if they move to another area that has lower rates of NPC (like the US or Japan), but their risk is still higher than for people who are native to areas with lower risk. Over time, their risk seems to go down. The risk also goes down in new generations. Although whites born in the United States have a low risk of NPC, whites born in China have a higher risk.

In the United States, NPC is most common in Asian and Pacific Islanders (particularly Chinese Americans), followed by American Indian and Alaskan natives, African Americans, whites, and Hispanics/Latinos.

Diet

People who live in parts of Asia, northern Africa, and the Arctic region where NPC is common, typically eat diets very high in salt-cured fish and meat. Indeed, the rate of this

cancer is dropping in southeast China as people begin eating a more Westernized diet. In contrast, some studies have suggested that diets high in nuts, legumes, fruits, and vegetables and low in dairy products and meat may help lower the risk of NPC.

Epstein-Barr virus infection

Almost all NPC cells contain parts of the Epstein-Barr virus (EBV), and most people with NPC have evidence of EBV infection in their blood. Infection with EBV is very common throughout the world, often occurring in childhood. In the United States, where infection with this virus tends to occur in teens, it's commonly known as mononucleosis (“mono”).

The link between EBV infection and NPC is complex and not yet completely understood. EBV infection alone is not enough to cause NPC, since infection with this virus is very common and this cancer is very rare. Other factors, such as a person’s genes, may affect how the body deals with EBV, which in turn may affect how EBV contributes to the development of NPC.

Family history

Family members of people with NPC are more likely to get this cancer. It's not known if this is because of inherited genes , shared environmental factors (such as the same diet or living quarters), or some combination of these.

Just as people have different blood types, they also have different tissue types. Studies have found that people with certain inherited tissue types have an increased risk of developing NPC. Tissue types affect immune responses, so this may be related to how a person's body reacts to EBV infection.

Other possible risk factors

Tobacco and alcohol use: Most (but not all) studies have found that smoking[1] may contribute to the development of NPC, especially the keratinizing type. Some studies have also linked heavy drinking[2] to this type of cancer.

Workplace exposures: Some studies have suggested that workplace exposure to formaldehyde increases the risk of NPC. Still, not all studies have shown this and this link isn’t clear.

Hyperlinks

1. www.cancer.org/cancer/cancer-causes/tobacco-and-cancer.html
2. www.cancer.org/cancer/cancer-causes/diet-physical-activity/alcohol-use-and-cancer.html

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What Causes Nasopharyngeal Cancer?

The exact cause of most cases of nasopharyngeal cancer (NPC) is not known. But scientists have found that it's linked with certain diets, infections, and inherited characteristics. (See Risk Factors for Nasopharyngeal Cancer.)

In recent years, scientists have studied how the Epstein-Barr virus (EBV) may cause cells in the nasopharynx to become cancer, but there's still a lot to learn. In developed countries, most people infected with EBV have infectious mononucleosis (mono), and their immune system is able to recognize and destroy the virus. These people recover without any long-term problems. But in some cases, pieces of EBV DNA mix with the DNA of cells in the nasopharynx.

DNA is the chemical in each of our cells that makes up our genes, the instructions for how our cells work. For instance, we often look like our parents because they're the source of our DNA. But DNA affects more than how we look. Some genes contain instructions that control when cells grow and divide into new cells. Viruses like EBV also contain DNA. When a cell is infected with the virus, the viral DNA may mix with the normal human DNA. Then the EBV DNA may instruct the cells of the nasopharynx to divide and grow in an abnormal way. Still, EBV infection rarely leads to NPC, so other factors probably play a role in whether or not it causes cancer.

For instance, eating a diet high in salt-cured fish and meat seems to increase the ability of EBV to cause NPC. Studies show that foods preserved in this way may produce chemicals that can damage DNA. The damaged DNA then alters a cell’s ability to control its growth and replication.

Some studies suggest that inheriting certain tissue types may contribute to a person’s risk of developing NPC. Because the tissue type plays a role in the function of the immune system, some scientists suspect that an abnormal immune reaction to EBV infection may be involved. The details of how certain tissue types might increase NPC risk are still being worked out.

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Can Nasopharyngeal Cancer Be Prevented?

Most people in the United States who develop nasopharyngeal cancer (NPC) have no risk factors that can be controlled, so their cancers could not have been prevented. The possible links with tobacco[1] and heavy alcohol use[2] are not yet clear, so we don't know if avoiding these can lower a person's risk of NPC. Still, both tobacco and alcohol use have clearly been linked to many other cancers, as well as other health problems, so avoiding them can have many health benefits.

Infection with Epstein-Barr virus (EBV) has been linked to NPC. Scientists are trying to create an EBV vaccine, but at this time there's no known way to prevent this infection.

Because certain types of foods have been linked with NPC risk, reducing or not eating some types of food may lower the number of cases. This is especially true in parts of the world where NPC is common, such as southern China, northern Africa, and the Arctic region. Descendants of Southeast Asians who immigrated to the United States and eat a typical American diet, for example, have a lower risk of developing NPC. But these dietary factors are not thought to account for all cases of NPC in most other parts of the world. Other factors, such as genetics, are likely to play a part as well.

Hyperlinks

1. www.cancer.org/cancer/cancer-causes/tobacco-and-cancer.html
2. www.cancer.org/cancer/cancer-causes/diet-physical-activity/alcohol-use-and-cancer.html

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Nasopharyngeal Cancer Early Detection, Diagnosis, and Staging

Detection and Diagnosis

Finding cancer early, when it's small and before it has spread, often allows for more treatment options. Some early cancers may have signs and symptoms that can be noticed, but that's not always the case.

- Can Nasopharyngeal Cancer Be Found Early?
- Signs and Symptoms of Nasopharyngeal Cancer
- Tests for Nasopharyngeal Cancer

Stages and Outlook (Prognosis)

After a cancer diagnosis, staging provides important information about the extent of cancer in the body and likely response to treatment.

- Nasopharyngeal Cancer Stages
- Survival Rates for Nasopharyngeal Cancer

Questions to Ask About Nasopharyngeal Cancer

Here are some questions you can ask your cancer care team to help you better understand your cancer diagnosis and treatment options.

- Questions to Ask About Nasopharyngeal Cancer

Can Nasopharyngeal Cancer Be Found Early?

In the United States and other countries where nasopharyngeal cancer (NPC) is fairly rare, doctors do not recommend routine screening for this cancer. (Screening is testing for cancer in people without any symptoms.) There are no simple exams or blood tests that can find this cancer early. Still, regular check-ups and visits to the dentist are recommended. The throat, mouth, and nose are looked at during these visits.

But in some parts of the world such as China, where NPC is more common, some people are being screened routinely for this cancer. They're first selected because their blood shows evidence of infection with the Epstein-Barr virus (EBV), although EBV infection is much more common than NPC. They get regular exams of the nasopharynx and neck. This approach can also be used in families when one member has developed NPC. It still isn't known if this lowers the death rate from NPC.

Sometimes NPC is found early because symptoms cause a person to see a doctor. The symptoms may seem unrelated to the nasopharynx (for instance, a constant feeling of fullness in one ear). But in most people, NPC doesn't cause symptoms until it reaches an advanced stage.

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Signs and Symptoms of Nasopharyngeal Cancer

Most people with nasopharyngeal cancer (NPC) notice a **lump ormass in the neck**that leads them to see a doctor. There may be lumps on both sides of the neck towards the back. The lumps are usually not tender or painful. They're caused by the cancer spreading to lymph nodes in the neck, causing them to swell. Lymph nodes are glands or organs that contain collections of immune system cells. They're found throughout the body. Normally, they're smaller than the size of a pea.

Other possible symptoms of NPC include:

- Hearing loss, ringing in the ear, pain, or feeling of fullness in the ear (especially on one side only)
- Ear infections that keep coming back
- Nasal blockage or stuffiness
- Nosebleeds
- Headaches
- Facial pain or numbness
- Trouble opening the mouth
- Blurred or double vision
- Trouble breathing or talking

Ear infections are common in children, but are less common in adults. If you develop an infection in one ear and you haven't had ear infections in the past, it's important to have a specialist examine your nasopharynx. This is especially true if you don't have an upper respiratory tract infection (like a “cold”) along with the ear infection.

Many of the symptoms and signs of NPC are more often caused by other, less serious diseases. Still, if you have any of these problems, it's important to see a doctor right away so the cause can be found and treated, if needed.

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Tests for Nasopharyngeal Cancer

Nasopharyngeal cancer (NPC) is most often diagnosed when a person goes to a doctor because of symptoms such as a lump in the neck or stuffy nose, but no signs of a cold. The doctor will take a history and do an exam. The patient may then be sent to see an ear, nose and throat (ENT) specialist. The nasopharynx is hard to examine. Most other kinds of doctors do not have the specialized training or equipment to do a thorough exam of this part of the body.

Medical history and physical exam

If you have signs or symptoms that suggest you might have NPC, the doctor will want to get your complete medical history. You will be asked about the changes you've noticed, possible risk factors[1], and your family history.

A physical exam will be done to look for signs of NPC or other health problems. A more thorough exam of your nasopharynx will be done. During the exam, the doctor will pay special attention to your head and neck, including your nose, mouth, and throat; your facial muscles; and the lymph nodes in your neck. A hearing test may also be done.

Exams of the nasopharynx

The nasopharynx is deep inside the head and isn't easily seen, so special techniques are needed to examine this area. There are 2 main types of exams used to look inside the nasopharynx for abnormal growths, bleeding, or other signs of disease. Both types

are usually done in the doctor's office.

- For *indirect nasopharyngoscopy*, the doctor uses special small mirrors and bright lights to look at the nasopharynx and nearby areas.
- For *direct nasopharyngoscopy*, a fiber-optic scope known as a *nasopharyngoscope* to look directly at the lining of the nasopharynx. The scope is a thin, flexible, lighted tube that's put in through your nose. Numbing medicine is sprayed into your nose before the exam to make it easier. This is the method most often used to carefully examine the nasopharynx.

If a tumor starts under the lining of the nasopharynx (in the tissue called the *submucosa*), the doctor may not be able to see it. Because of this, imaging tests, like CT or MRI scans (see below), may be needed.

Biopsy

Symptoms and the results of exams can suggest that a person might have NPC, but the only way to be sure is by taking out cells from the abnormal area and looking at them under a microscope. This is called a *biopsy*. Different kinds of biopsies may be done, depending on where the abnormal area is.

Endoscopic biopsy

If a suspicious growth is seen in the nasopharynx, the doctor may take out a tiny piece of it with small instruments and the aid of a fiber-optic scope. Often, biopsies of the nasopharynx are done in the operating room as an outpatient procedure. The tissue sample is then sent to a lab, where a pathologist (a doctor who specializes in diagnosing and classifying diseases in the lab) looks at it under a microscope. If the biopsy sample contains cancer cells, the pathologist sends back a report describing the type of the cancer.

NPC cannot always be seen during an exam. If a person has symptoms suggesting NPC but nothing looks abnormal on exam, the doctor may biopsy normal-looking tissue, which may be found to contain cancer cells when looked at under the microscope.

Fine needle aspiration (FNA) biopsy

An FNA biopsy may be used if you have a suspicious lump in or near your neck. To do this, the doctor puts a thin, hollow needle into the lump. The needle is attached to a syringe which is used to aspirate (withdraw) a few drops of fluid containing cells and tiny

bits of tissue. The skin where the needle will be inserted might be numbed with a local anesthetic, but sometimes this isn't needed.

The cells are then looked at under a microscope to see if they're cancer cells.

An FNA biopsy can show if an enlarged lymph node in the neck is caused by a response to an infection, the spread of cancer from somewhere else (such as the nasopharynx), or a cancer that starts in lymph nodes – which is called a *lymphoma.* If the cancer started somewhere else, the FNA biopsy alone might not be able to tell where it started. But if a patient already known to have NPC has enlarged neck lymph nodes, FNA can help find out if the spread of NPC caused the swelling.

Imaging tests

Imaging tests use x-rays, magnetic fields, sound waves, or radioactive particles to make pictures of the inside of your body. Imaging tests may be done for a number of reasons, including to help find a suspicious area that might be cancer, to learn how far cancer may have spread, and to help see if treatment is working.

Chest x-ray

If you've been diagnosed with NPC, a plain x-ray of your chest[2] may be done to see if the cancer has spread to your lungs. This is very unlikely unless your cancer is far advanced. If the results are normal, you probably don’t have cancer in your lungs.

Computed tomography (CT) scan

The CT scan[3] is an x-ray test that produces detailed cross-sectional images of your body.

A CT scan of the head and neck can provide information about the size, shape, and position of a tumor and can help find enlarged lymph nodes that might contain cancer. CT scans or MRIs are important in looking for cancer that may have grown into the bones at the base of the skull. This is a common place for nasopharyngeal cancer to grow. CT scans can also be used to look for tumors in other parts of the body.

Magnetic resonance imaging (MRI) scan

Like CT scans, MRI scans[4] make detailed images of soft tissues inside the body. But MRI scans use radio waves and strong magnets instead of x-rays. A contrast material

called *gadolinium* is often injected into a vein before the scan to better see details.

MRIs can be used to try to find out if the cancer has grown into structures near the nasopharynx. MRIs are a little better than CT scans at showing the soft tissues in the nose and throat, but they're not quite as good for looking at the bones at the base of the skull, a common place for NPC to grow.

Positron emission tomography (PET) scan

PET scans[5] use a form of radioactive sugar that's put into the blood. Because cancer cells in the body are growing rapidly, they absorb large amounts of the sugar. After about an hour, you lie on the table for about 30 minutes while a special camera creates a picture of areas of radioactivity in the body. The picture is not finely detailed like a CT or MRI scan, but it provides helpful information about your whole body. Some machines are able to do both a PET and CT scan at the same time (PET/CT scan). This lets the doctor compare areas of higher radioactivity on the PET with the more detailed appearance of that area on the CT.

Your doctor may use this test to see if the cancer has spread to your lymph nodes. It can also help give the doctor a better idea of whether an abnormal area on a chest x-ray may be cancer. A PET scan can also be useful if your doctor thinks the cancer may have spread but doesn't know where.

Blood tests

Blood tests are not used to diagnose NPC, but they may be done for other reasons, such as to help find out if the cancer has spread to other parts of the body.

Routine blood counts and blood chemistry tests

Routine blood tests[6] can help determine a patient's overall health. These tests can help diagnose nutrition problems, anemia (low red blood counts), liver disease, and kidney disease. And they may suggest the possibility of spread of the cancer to the liver or bone, which may lead to more testing.

Epstein-Barr virus (EBV) DNA levels

Tests to measure the blood level of EBV DNA may be done before and after treatment to help show how well treatment is working.

Hyperlinks

1. www.cancer.org/cancer/nasopharyngeal-cancer/causes-risks-prevention/risk-factors.html
2. www.cancer.org/treatment/understanding-your-diagnosis/tests/x-rays-and-other-radiographic-tests.html
3. www.cancer.org/treatment/understanding-your-diagnosis/tests/ct-scan-for-cancer.html
4. www.cancer.org/treatment/understanding-your-diagnosis/tests/mri-for-cancer.html
5. www.cancer.org/treatment/understanding-your-diagnosis/tests/nuclear-medicine-scans-for-cancer.html
6. www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-lab-test-results.html

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See all references for Nasopharyngeal Cancer (www.cancer.org/cancer/nasopharyngeal-cancer/references.html)

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Nasopharyngeal Cancer Stages

After someone is diagnosed with nasopharyngeal cancer (NPC), doctors will try to figure out if it has spread, and if so, how far. This process is called **staging**. The stage of a cancer describes how much cancer is in the body. It's used help know how serious the cancer is and how best to treat[1] it. Doctors also use a cancer's stage when talking about survival statistics.

The earliest stage of NPC is stage 0, also known as **carcinoma in situ** (CIS). The other stages range from I (1) through IV (4). Some stages are split further, using capital letters (A, B, etc.). As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV, means cancer has spread more. And within a stage, an earlier letter means a lower stage. Although each person's cancer experience is unique, cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

How is the stage determined?

The staging system most often used for NPC is the American Joint Committee on Cancer (AJCC) **TNM** system, which is based on 3 key pieces of information:

- The extent of the main **tumor (T):** How far has the tumor grown into nearby structures?
- The spread to nearby lymph **nodes (N):** Has the cancer spread to nearby lymph nodes in the neck? If so, how large are they?
- The spread (**metastasis**) to distant sites **(M):** Has the cancer spread to distant parts of the body? (The most common sites of spread are the lungs, liver, bones, or lymph nodes in distant parts of the body.)

These categories are mainly based on the results of any exams, biopsies, and imaging tests that have been done (described in How Is Nasopharyngeal Cancer Diagnosed?). Numbers or letters after T, N, and M provide more details about each of these factors.

Once the T, N, and M categories of the cancer have been determined, this information is combined in a process called **stage grouping** to assign an overall stage. For more on this, see Cancer Staging[2].

The system described below is the most recent AJCC system for NPC, effective January 2018.

NPC staging can be complex. If you have questions about your cancer's stage and what it might mean for you, ask your doctor to explain it to you in a way you understand.

Stages of nasopharyngeal cancer

AJCC stage	Stage grouping	Stage description*
0	**Tis N0 M0**	The tumor is only in the top layer of cells lining the inside of the nasopharynx, and has not grown any deeper (Tis). The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
I	**T1 N0 M0**	The tumor is in the nasopharynx. It might also have grown into the oropharynx (the part of the throat in the back of the mouth) and/or nasal cavity but no farther (T1). The cancer has not spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
II	**T1 (or T0) N1 M0**	The tumor is in the nasopharynx. It might also have grown into the oropharynx (the part of the throat behind the mouth) and/or nasal cavity but no farther (T1). OR, no tumor is seen in the nasopharynx, but cancer is found in lymph nodes in the neck and is Epstein-Barr virus (EBV) positive, which makes it very likely to be NPC (T0). The cancer has spread to 1 or more lymph nodes on one side of the neck, or it has spread to lymph nodes behind the throat. In either case, no lymph node is larger than 6 cm (centimeters) across (N1). The cancer has not spread to distant parts of the body (M0).
	OR	
	T2 N0 or N1 M0	The tumor has grown into the tissues of the left or right sides of the upper part of the throat, but not into bone (T2). The cancer has not spread to nearby lymph nodes (N0). OR, it has spread to 1 or more lymph nodes on one side of the neck, or it has spread to lymph nodes behind the throat. In either case, no lymph node is larger than 6 cm across (N1).

		The cancer has not spread to distant parts of the body (M0).
III	**T1 (or T0) N2 M0**	The tumor is in the nasopharynx. It might also have grown into the oropharynx (the part of the throat behind the mouth) and/or nasal cavity but no farther (T1). OR, no tumor is seen in the nasopharynx, but cancer is found in lymph nodes in the neck and is Epstein-Barr virus (EBV) positive, which makes it very likely to be NPC (T0). The cancer has spread to lymph nodes on both sides of the neck, none of which is larger than 6 cm across (N2). The cancer has not spread to distant parts of the body (M0).
	OR	
	T2 N2 M0	The tumor has grown into the tissues of the left or right sides of the upper part of the throat, but not into bone (T2). The cancer has spread to lymph nodes on both sides of the neck, none of which is larger than 6 cm across (N2). The cancer has not spread to distant parts of the body (M0).
	OR	
	T3 N0 to N2 M0	The tumor has grown into the sinuses and/or the bones nearby (T3). The cancer might or might not have spread to nearby lymph nodes in the neck or behind the throat, but none are larger than 6 cm across (N0 to N2). The cancer has not spread to distant parts of the body (M0).
IVA	**T4 N0 to N2 M0**	The tumor has grown into the skull and/or cranial nerves, the hypopharynx (lower part of the throat), the main salivary gland, or the eye or its nearby tissues (T4). The cancer might or might not have spread to nearby lymph nodes in the neck or behind the throat, but none are larger than 6 cm across (N0 to N2). The cancer has not spread to distant parts of the body (M0).
	OR	
	Any T N3	The tumor might or might not have grown into structures

	M0	outside the nasopharynx (any T). The cancer has spread to lymph nodes that are either larger than 6 cm across, or located in the shoulder area just above the collarbone (N3). The cancer has not spread to distant parts of the body (M0).
IVB	**Any T** **Any N M1**	The tumor might or might not have grown into structures outside the nasopharynx (any T). The cancer might or might not have spread to nearby lymph nodes (any N). The cancer has spread to distant parts of the body (M1).

*The following additional categories are not listed in the table above:

- TX: Main tumor cannot be assessed due to lack of information.
- NX: Nearby lymph nodes cannot be assessed due to lack of information.

Hyperlinks

1. www.cancer.org/cancer/nasopharyngeal-cancer/treating.html
2. www.cancer.org/treatment/understanding-your-diagnosis/staging.html

References

American Joint Committee on Cancer. Nasopharynx. In: *AJCC Cancer Staging Manual*. 8th ed. New York, NY: Springer; 2017: 103-111.

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Survival Rates for Nasopharyngeal Cancer

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed. They can’t tell you how long you will live, but they may help give you a

better understanding of how likely it is that your treatment will be successful.

Keep in mind that survival rates are estimates and are often based on previous outcomes of large numbers of people who had a specific cancer, but they can't predict what will happen in any particular person's case. These statistics can be confusing and may lead you to have more questions. Talk with your doctor about how these numbers may apply to you, as he or she is familiar with your situation.

What is a 5-year relative survival rate?

A **relative survival rate** compares people with the same type and stage of cancer to people in the overall population. For example, if the **5-year relative survival rate** for a specific stage of nasopharyngeal cancer is 80%, it means that people who have that cancer are, on average, about 80% as likely as people who don't have that cancer to live for at least 5 years after being diagnosed.

Where do these numbers come from?

The American Cancer Society relies on information from the SEER* database, maintained by the National Cancer Institute (NCI), to provide survival statistics for different types of cancer.

The SEER database tracks 5-year relative survival rates for nasopharyngeal cancer in the United States, based on how far the cancer has spread. The SEER database, however, does not group cancers by AJCC TNM stages (stage 1, stage 2, stage 3, etc.). Instead, it groups cancers into localized, regional, and distant stages:

- **Localized:** There is no sign that the cancer has spread outside of the nasopharynx.
- **Regional:** The cancer has spread outside the nasopharynx to nearby structures or lymph nodes.
- **Distant:** The cancer has spread to distant parts of the body, such as the lungs or liver.

5-year relative survival rates for nasopharyngeal cancer

(Based on people diagnosed with cancers of the nasopharynx between 2008 and 2014.)

SEER stage	5-year relative survival rate
Localized	82%

Regional	70%
Distant	51%
All SEER stages combined	62%

Understanding the numbers

- **These numbers apply only to the stage of the cancer when it is first diagnosed.** They do not apply later on if the cancer grows, spreads, or comes back after treatment.
- **These numbers don't take everything into account.** Survival rates are grouped based on how far the cancer has spread. But other factors, such as your age and overall health, and how well the cancer responds to treatment, can also affect your outlook.
- **People now being diagnosed with nasopharyngeal cancer may have a better outlook than these numbers show.** Treatments improve over time, and these numbers are based on people who were diagnosed and treated at least five years earlier.

*SEER = Surveillance, Epidemiology, and End Results

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Noone AM, Howlader N, Krapcho M, Miller D, Brest A, Yu M, Ruhl J, Tatalovich Z, Mariotto A, Lewis DR, Chen HS, Feuer EJ, Cronin KA (eds). SEER Cancer Statistics Review, 1975-2015, National Cancer Institute. Bethesda, MD, https://seer.cancer.gov/csr/1975_2015/, based on November 2017 SEER data submission, posted to the SEER web site, April 2018.

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Questions to Ask About Nasopharyngeal Cancer

As you deal with nasopharyngeal cancer (NPC) and the process of treatment, you need to have honest, open discussions with your cancer care team. Feel free to ask any question, no matter how minor it might seem. Here are some questions you might want to ask:

- What kind of nasopharyngeal cancer[1] do I have? Does this affect my options?
- Has my cancer spread beyond the nasopharynx?
- What is the stage of my cancer? What does the stage mean in my case?
- Are there other tests that need to be done before we can decide on treatment?
- Are there other doctors I need to see?
- How much experience do you have treating NPC?
- What treatment choices[2] do I have?
- What do you recommend and why?
- What's the goal of the treatment?
- What are the chances the cancer can be cured with treatment?
- How quickly do we need to decide on treatment?
- What should I do to be ready for treatment?
- How long will treatment last? What will it involve? Where will it be done?
- How will treatment affect my daily activities?
- What risks and side effects can I expect? How long are they likely to last?
- Is there anything I can do to help reduce side effects?
- What are the chances that my cancer will come back (recur)?
- What would we do if the treatment doesn’t work or if the cancer recurs?
- What type of follow-up[3] might I need after treatment?

Along with these sample questions, you might want to write down some of your own. For instance, you might want more information about recovery times so you can plan your work or activity schedule. Or you may want to ask about getting a second opinion[4] or about clinical trials[5] for which you may qualify. Keep in mind, too, that doctors aren't the only ones who can give you information. Other health care professionals, such as nurses and social workers, may have the answers you seek.

Hyperlinks

1. www.cancer.org/cancer/nasopharyngeal-cancer/about/what-is-nasopharyngeal-cancer.html
2. www.cancer.org/cancer/nasopharyngeal-cancer/treating.html
3. www.cancer.org/cancer/nasopharyngeal-cancer/after-treatment.html
4. www.cancer.org/treatment/finding-and-paying-for-treatment/choosing-your-treatment-team/seeking-a-second-opinion.html
5. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html

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Treating Nasopharyngeal Cancer

Surgery for Nasopharyngeal Cancer

Because the nasopharynx is a hard place to operate on and because other types of treatment often work well, surgery is not usually the main treatment for people with nasopharyngeal cancer (NPC). Surgery is more often done to remove lymph nodes in the neck that haven't responded to other treatments.

Surgery to remove the tumor

With newer endoscopic surgery techniques, doctors can use flexible fiberoptic scopes and long, thin surgical instruments to completely remove some nasopharyngeal tumors. But this is only an option for a small number of patients. These complex procedures are done only in specialized centers.

Surgery does have some advantages over other treatments such as radiation therapy – for example, it lets doctors look at the removed tumor (and nearby tissues) closely in the lab to make sure that no cancer has been left behind.

Surgery to remove lymph nodes

Cancers of the nasopharynx often spread to the lymph nodes in the neck. These cancers often respond well to treatment with radiation therapy (and sometimes chemotherapy). But if some cancer remains after these treatments, an operation called a *neck dissection* may be needed to remove these lymph nodes. Lymph nodes in the

neck might also be taken out to see if there are cancer cells in them.

There are several types of neck dissection surgery. They differ in the amount of tissue removed from the neck. Depending on the location of the tumor, lymph nodes may be removed from both sides of the neck.

- A *partial* or *selective neck dissection* removes only lymph nodes that are closest to the tumor and most likely to have cancer spread.
- A *modified radical neck dissection* removes lymph nodes on one side of the neck between the jaw bone and collarbone, as well as some muscle and nerve tissue. The main nerve to the shoulder muscle is usually saved.
- A *radical* or *comprehensive neck dissection* removes nearly all lymph nodes on one side as well as even more muscles, nerves, and veins.

Possible risks and side effects of surgery

The risks and side effects of any surgery depend on the extent of the operation and a person's general health before the surgery. If you are considering surgery, your doctor will discuss the likely side effects with you beforehand. Be sure you understand how surgery may affect how you look and how your body works.

All surgeries carry some risk, including the possibility of bleeding, infections, complications from anesthesia, and pneumonia. Most people will have some pain for a while after the operation, although this can usually be controlled with medicines. Other possible side effects of surgery in the head and neck area can include problems with speech or swallowing.

The most common side effects of any neck dissection are numbness of the ear, weakness when raising the arm above the head, and weakness of the lower lip. Surgery can lead to nerve damage and cause these side effects. Nerves heal slowly. After a selective neck dissection, the weakness of the shoulder and lower lip usually go away after a few months. But if either of the nerves that supply these areas is removed as part of a radical neck dissection or because of involvement with tumor, the weakness will be permanent.

After more extensive neck dissections, physical therapists can teach you exercises to improve neck and shoulder strength and movement.

More information about Surgery

For more general information about surgery as a treatment for cancer, see Cancer Surgery[1].

To learn about some of the side effects listed here and how to manage them, see Managing Cancer-related Side Effects[2].

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery.html
2. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html

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Amerian Society of Clinical Oncology. Nasopharyngeal Cancer: Treatment Options. 07/2016. Accessed at www.cancer.net/cancer-types/nasopharyngeal-cancer/treatment-options on April 23, 2018.

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See all references for Nasopharyngeal Cancer (www.cancer.org/cancer/nasopharyngeal-cancer/references.html)

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Radiation Therapy for Nasopharyngeal Cancer

Radiation therapy uses high-energy x-rays or particles to kill cancer cells or slow their rate of growth. It's usually at least part of the main treatment for nasopharyngeal cancer (NPC) because most of these cancers are very sensitive to radiation.

For many cases of NPC, chemotherapy is given along with radiation to try to increase its effects. This treatment, known as *chemoradiation*, can work better than radiation alone, but it also tends to have more side effects. (You can find more on this in Chemotherapy for Nasopharyngeal Cancer.)

Radiation therapy is usually given both to the main nasopharyngeal tumor and to nearby lymph nodes in the neck. Even if the lymph nodes are not abnormally firm or large, radiation is still used, just in case a few cancer cells have spread there. If the lymph nodes are known to have cancer cells, higher radiation doses are used.

Types of radiation therapy used to treat NPC

External beam radiation therapy (EBRT)

This type of radiation therapy uses x-rays that are aimed at the tumor from a large machine. It's the most common form of radiation therapy for NPC.

Before your treatments start, the radiation team will take careful measurements to determine the correct angles for aiming the radiation beams and the proper dose of radiation. Radiation therapy is much like getting an x-ray, but the radiation is stronger. It doesn't hurt and the machine doesn't touch you. Each treatment lasts only a few minutes, but the setup time – getting you in place for treatment – takes longer. Most often, radiation treatments are given 5 days a week for about 7 weeks.

EBRT is most often given using a technique called **intensity-modulated radiation therapy (IMRT)**. IMRT focuses the radiation better and lowers the radiation exposure to nearby healthy tissues. This helps reduce side effects.

Stereotactic radiosurgery is a type of radiation treatment that sends a large, precise radiation dose to the tumor area in a single session. (There's no actual surgery involved in this treatment.) The machines used to deliver this type of radiation are known as a *Gamma Knife, X-Knife*, *CyberKnife*, and *Clinac.*

Brachytherapy (internal radiation)

Though seldom used , another way to deliver radiation is to insert (implant) very thin metal rods or wires into or very near the cancer. Small pellets of radioactive materials are then placed into the rods or wires. The radiation travels a very short distance, so it affects the cancer without causing much harm to nearby healthy tissues.

The implant is usually left in place for several days while you stay in a private hospital

room. The length of time that visitors, nurses, and other caregivers can spend with you may be limited because of potential radiation exposure, but this depends on the type of radiation. The implant is removed before you go home.

Brachytherapy may be used if the cancer comes back after EBRT (although stereotactic radiosurgery may be used instead). Sometimes, internal and external beam radiation therapy are used together.

Possible side effects of radiation therapy

Common side effects of external beam radiation to the head and neck include:

- Skin changes in the area where the radiation passes through, with redness or blistering
- Nausea and vomiting
- Fatigue (tiredness)
- Sores in the mouth and throat which can lead to trouble swallowing and weight loss from not eating
- Hoarseness
- Loss of taste

These side effects get better once radiation has stopped. Other side effects may not get better over time, such as **damage to the bones of the skull**, or **problems with hearing or vision because of damage to certain nerves**. Other long term side effects might include:

- **Tooth Problems:** Radiation to these areas can make any tooth problems that you already have worse and hard to fix. Most doctors have you get your teeth checked by a dentist before starting radiation therapy to the head or neck area. In some cases, the dentist may even advise removing some teeth before treatment to lessen the chance that you'll have problems later.
- **Damage to the salivary glands:** This is a major concern with radiation therapy for NPC. This damage can cause dry mouth that doesn't go away and makes it hard to swallow food. Dry mouth can also lead to severe tooth decay. To help prevent dental problems, people treated with radiation to the head or neck area need to practice careful oral hygiene. Dry mouth is less of a problem if IMRT is used. Some of the damage to the salivary glands may also be lessened if a drug called amifostine (Ethyol®) is given before each radiation treatment. This drug can have bothersome side effects, though.

- **Damage to the thyroid gland:** The thyroid gland is often damaged if the neck area is treated with EBRT. The damage doesn't cause problems that are noticed right away, so your doctor will watch your thyroid function with blood tests in the years after treatment. If your thyroid function goes down, pills to replace thyroid hormone may be needed.
- **Damage to the pituitary gland:** The pituitary gland is responsible for controlling many hormones in the body. Damage from radiation threatment can be found with blood tests. If the damage is serious enough, this might require taking certain hormones to replace the ones that are missing.
- **Damage to the carotid arteries:** These are major blood vessels in the neck that carry blood to the brain. They can sometimes become narrowed after radiation. This could raise a person's risk of stroke or other problems. This usually takes several years to occur.

It's important to discuss the possible side effects of radiation therapy with your doctor before starting treatment. Also be sure everything is being done to try to limit these side effects as much as possible.

More information about radiation therapy

To learn more about how radiation is used to treat cancer, see Radiation Therapy[1].

To learn about some of the side effects listed here and how to manage them, see Managing Cancer-related Side Effects[2].

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation.html
2. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html

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See all references for Nasopharyngeal Cancer (www.cancer.org/cancer/nasopharyngeal-cancer/references.html)

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Chemotherapy for Nasopharyngeal Cancer

Chemotherapy (chemo) is the use of anti-cancer drugs to treat cancer. These drugs are most often given into a vein (IV) or by mouth. They enter the bloodstream and reach throughout the body, making this treatment useful for cancers that have spread beyond the head and neck.

Chemo may be used in different situations to treat nasopharyngeal cancer (NPC):

- Chemo is often used together with radiation therapy as the first treatment for more advanced stages of NPC because some chemo drugs make cancer cells more sensitive to radiation. This treatment is called **chemoradiation**.
- Chemo may be given before chemoradiation. This is called induction chemo. Not all doctors agree on using chemo this way.
- Chemo may also be given after radiation (or after chemoradiation). This is known as *adjuvant treatment*.
- Chemo is used for patients whose NPC has spread to distant organs such as the lungs, bones, or liver. It may be used alone or along with radiation.

Doctors give chemo in cycles, with each period of treatment followed by a rest period to allow the body time to recover. Cycles generally last about 3 to 4 weeks. Chemo is often

not used for patients in poor health, but advanced age by itself should not keep anyone from getting chemo.

Common chemo drugs for NPC

Cisplatin is the chemo drug used most often to treat NPC. It's used alone as part of chemoradiation. It may be combined with another drug, 5-fluorouracil (5-FU), if it's given after chemoradiation or radiation.

Some other drugs may also be helpful in treating NPC that has spread. These include:

- Carboplatin (Paraplatin®)
- Doxorubicin (Adriamycin®)
- Epirubicin (Ellence®)
- Paclitaxel (Taxol®)
- Docetaxel (Taxotere®)
- Gemcitabine (Gemzar®)
- Bleomycin
- Methotrexate

Often 2 or more of these drugs are used.

Possible side effects of chemotherapy

Chemo drugs attack cells that are dividing quickly, which is why they work against cancer cells. But other cells in the body such as those in the bone marrow, the lining of the mouth and intestines, and the hair follicles, also divide quickly. These cells are also likely to be affected by chemo, which can lead to certain side effects.

The side effects of chemo depend on the type and dose of drugs you're given and how long you get them. Common side effects include:

- Hair loss
- Mouth sores
- Loss of appetite
- Nausea and vomiting
- Diarrhea
- Increased chance of infections (due to low white blood cell counts)
- Easy bruising or bleeding (due to low blood platelet counts)

- Fatigue (due to low red blood cell counts)

These side effects are usually short-term and go away over time after treatment ends. Once chemo starts, let your health care team know if you have side effects, so they can be treated. There are ways to prevent or treat many of the side effects of chemo. For example, many good drugs are available to help prevent or treat nausea and vomiting.

Certain drugs can have other side effects. For example, cisplatin can damage nerves (called *neuropathy*). This can sometimes lead to hearing loss or pain, burning, or tingling sensations; sensitivity to cold or heat; or weakness in the hands and feet. In most cases this gets better after treatment is stopped, but it may last a long time in some people. For more on nerve damage, see Peripheral Neuropathy Caused by Chemotherapy[1].

In some cases, the doses of the chemo drugs may need to be reduced or treatment may need to be delayed or stopped to keep side effects from getting worse.

More information about chemotherapy

For more general information about how chemotherapy is used to treat cancer, see Chemotherapy[2].

To learn about some of the side effects listed here and how to manage them, see Managing Cancer-related Side Effects[3].

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/peripheral-neuropathy.html
2. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html
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Targeted Therapy for Nasopharyngeal Cancer

As researchers have learned more about the changes in cells that cause cancer, they have been able to develop newer drugs that target these changes. These targeted drugs work differently from standard chemotherapy (chemo) drugs. They may work in some cases when chemo drugs don't, or they may help chemo drugs work better. Targeted drugs also often have different (and often less severe) side effects.

Cetuximab (Erbitux®)

Cetuximab is a monoclonal antibody (a man-made version of an immune system protein) that targets the epidermal growth factor receptor (EGFR). EGFR is a protein found on the surface of cells. It normally receives signals telling the cells to grow and

divide. Nasopharyngeal cancer (NPC) cells sometimes have more than normal amounts of EGFR, which can help them grow faster. By blocking EGFR, cetuximab may slow or stop this growth.

The exact role of cetuximab in treating NPC is still being studied. It's most often used along with chemo and/or radiation in cases where the cancer has spread, come back, or continued to grow after initial chemo.

Cetuximab is given by IV infusion, usually once a week. Common side effects include:

- Skin problems, such as an itchy, acne-like rash on the face and chest, which can lead to infections
- Headache
- Tiredness and weakness
- Fever
- Diarrhea
- Nausea and vomiting
- Weight loss

A rare but serious side effect of cetuximab is an allergic reaction during the first infusion, which could cause breathing problems and low blood pressure. You will be given medicine before treatment to help prevent this.

More information about targeted therapy

To learn more about how targeted drugs are used to treat cancer, see Targeted Cancer Therapy[1].

To learn about some of the side effects listed here and how to manage them, see Managing Cancer-related Side Effects[2].

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html
2. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html

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Treatment Options, by Stage of Nasopharyngeal Cancer

Your cancer care team will recommend treatment options depending on the stage – the extent of the cancer in the nasopharynx and if and how far the cancer has spread. Nasopharyngeal cancer (NPC) in children is treated largely the same way as NPC in adults. Experts agree that the best way to treat NPC in the more advanced stages is in a clinical trial.

Stages 0 and I

The usual treatment for these early stage cancers is radiation therapy aimed at the tumor.

The cancer has not yet spread to lymph nodes in these stages, but the nearby lymph nodes in the neck are usually treated with radiation therapy as well. This is preventive (prophylactic) radiation. It's done because some patients may have cancer cells in these lymph nodes that can’t be detected. Although there are too few cancer cells in the lymph nodes to cause them to be enlarged, these cells could continue to grow and spread if not destroyed by radiation therapy.

Stages II, III, IVA, and IVB

These cancers have spread outside of the nasopharynx, which may mean spread to lymph nodes in the neck or above the collarbone.

Patients with these stages of NPC usually get chemoradiation (chemotherapy given along with radiation therapy) to the nasopharynx and neck lymph nodes. The chemo drug most often used is cisplatin, but sometimes it's given along with another drug. This is usually followed by more chemo, most often with cisplatin plus 5-FU. Most studies have found that chemoradiation helps patients live longer than just radiation therapy alone. But adding chemo leads to more side effects, which can affect quality of life. It's important to understand what the side effects are likely to be before starting this treatment.

Other treatment options in these stages include induction chemo followed by chemoradiation or just chemoradiation.

If cancer is still in the lymph nodes after this treatment, surgery (neck dissection) may be done to remove the lymph nodes.

Stage IVC

Some NPCs diagnosed before the current staging system was in place may have been given the stage IVC. These NPCS have spread to distant parts of the body and can be hard to treat. The usual treatment is chemo, often with cisplatin and one other drug. If there's no sign of the cancer after chemo, either radiation therapy to the nasopharynx and the lymph nodes in the neck or chemoradiation is given to try to kill any remaining cancer cells. Another option in some cases is to give chemoradiation as the first treatment.

If there are still signs of cancer after the initial chemo, another chemo regimen using different drugs may be tried. Chemotherapy plus the targeted drug cetuximab (Erbitux®) may be another option.

Recurrent nasopharyngeal cancer

Cancer is called *recurrent* when it come backs after treatment. Recurrence can be local (in or near the same place it started) or distant (spread to organs such as the lungs or bone). If NPC returns after treatment, your choices depend on the location and extent of the cancer, which treatments were used the first time around, and your overall health. It's important to understand the goal of any further treatment – whether it's to try to cure the cancer, to slow its growth, or to help relieve symptoms – as well as the likelihood of benefits and risks.

Some tumors that recur in the nasopharynx can be removed by surgery that's done through the nose (called *endoscopic skull base surgery*). This is a specialized surgery that should only be done by a surgeon with a great deal of experience with it, so it's not available at all medical centers.

Recurrent NPC in regional (neck) lymph nodes can sometimes be treated with radiation therapy. But if doctors believe that more radiation would cause serious side effects or if the cancer didn't respond to radiation the first time, surgery (neck dissection) may be used instead.

Cancer that recurs in distant sites is usually treated with chemotherapy. If chemo has been given already, different chemo drugs may be tried. Thetargeted drug cetuximab may be given along with chemo, but this is usually done as part of a clinical trial.

If chemo is no longer working, an option might be treatment with an immunotherapy drug such as pembrolizumab (Keytruda®) or nivolumab (Opdivo®). These drugs can help the body's own immune system attack the cancer. (See Cancer Immunotherapy[1] to learn more.)

New drug treatments and new surgical procedures being tested in clinical trials[2] may help some people with recurrent NPC, as well as improve knowledge that can help others with NPC in the future.

If the cancer can't be cured, further treatments may be aimed at slowing its growth or relieving symptoms caused by the cancer. For example, if the cancer has spread to the spine, radiation may be given to the area to relieve pain and reduce the chances of further problems. Even if a cure is not possible, it's important to remember that there are many options to relieve symptoms[3] of advanced cancer.

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/immunotherapy.html
2. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html
3. www.cancer.org/treatment/treatments-and-side-effects/palliative-care/supportive-care-guide.html

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Our team is made up of doctors and oncology certified nurses with deep knowledge of cancer care as well as journalists, editors, and translators with extensive experience in medical writing.

After Nasopharyngeal Cancer Treatment

Living as a Cancer Survivor

For many people, cancer treatment often raises questions about next steps as a survivor.

- Living as a Nasopharyngeal Cancer Survivor

Cancer Concerns After Treatment

Treatment may remove or destroy the cancer, but it's very common to have questions and concerns about cancer coming back or treatment no longer working.

- Second Cancers After Nasopharyngeal Cancer

Living as a Nasopharyngeal Cancer Survivor

For most people with nasopharyngeal cancer (NPC), treatment can remove or destroy the cancer. The end of treatment can be both stressful and exciting. You may be relieved to finish treatment, yet it’s hard not to worry about cancer coming back. This is very common if you’ve had cancer.

For other people, the cancer might never go away completely. Some people may get

regular treatment with chemotherapy or other treatments to try and help keep the cancer in check. Learning to live with cancer that does not go away can be difficult and very stressful.

Life after cancer means returning to some familiar things and also making some new choices.

Follow-up care

After you have completed treatment, your doctors will still want to watch you closely. It's very important to go to all of your follow-up appointments. During these visits, your doctors will ask questions about any problems you may have and may do exams and lab tests or imaging tests (such as MRI or CT scans) to look for signs of cancer or treatment side effects. Your health care team will discuss which tests should be done and how often based on the stage[1] of your cancer and the type of treatment you had.

Most doctors recommend follow-up exams at least every few months for the first 2 years after treatment, then less often as time goes on. If you had radiation therapy to the neck, your doctor will check your thyroid function with blood tests once or twice a year.

You may be advised to see your dentist after treatment to check on the health of your teeth. Your doctor will also want to keep a close eye on your hearing, speech, and swallowing, which can be affected by treatment. If you're having problems with any of these, your doctor may refer you to a therapist.

Imaging tests such as CT or PET/CT scans may be done within 6 months after treatment to get an idea of what the nasopharynx and neck area now look like. Further imaging tests may be done if you later develop any signs or symptoms that might be caused by a return of the cancer.

Almost any cancer treatment can have side effects. Some may last for a few weeks to months, but others can last the rest of your life. This is the time for you to talk to your cancer care team about any changes or problems you notice and any questions or concerns you have.

It's very important to report any new symptoms to the doctor right away, because they may prompt your doctor to do tests that could help find recurrent cancer as early as possible. This is when the chance of successful treatment is greatest.

Ask your doctor for a survivorship care plan

Talk with your doctor about developing a survivorship care plan for you. This plan might include:

- A suggested schedule for follow-up exams and tests
- A schedule for other tests you might need in the future, such as early detection (screening) tests for other types of cancer, or tests to look for long-term health effects from your cancer or its treatment
- A list of possible late- or long-term side effects from your treatment, including what to watch for and when you should contact your doctor
- Diet and physical activity suggestions
- Reminders about your appointments with your primary care provider (PCP), who will monitor your general health care

Keeping health insurance and copies of your medical records

Even after treatment, it's very important to keep health insurance. Tests and doctor visits cost a lot, and even though no one wants to think about cancer coming back, this could happen.

At some point after your cancer treatment, you might find yourself seeing a new doctor who doesn't know about your medical history. It's important to keep copies of your medical records to give your new doctor the details of your diagnosis and treatment. Learn more in Keeping Copies of Important Medical Records[2].

Can I lower my risk of NPC progressing or coming back?

If you have (or have had) NPC, you probably want to know if there are things you can do that might lower your risk of the cancer growing or coming back, such as exercising, eating a certain type of diet, or taking nutritional supplements. Unfortunately, it's not yet clear if there are things you can do that will help.

Adopting healthy behaviors such as not smoking[3], eating well[4], getting regular physical activity[5], and staying at a healthy weight[6] might help, but no one knows for sure. Still, we do know that these types of changes can have positive effects on your health that can extend beyond your risk of NPC or other cancers.

About dietary supplements

So far, no dietary supplements[7] (including vitamins, minerals, and herbal products) have been shown to clearly help lower the risk of NPC progressing or coming back. This doesn't mean that no supplements will help, but it's important to know that none have been proven to do so.

Dietary supplements are not regulated like medicines in the United States – they do not have to be proven effective (or even safe) before being sold, although there are limits on what they're allowed to claim they can do. If you're thinking about taking any type of nutritional supplement, talk to your health care team first. They can help you decide which ones you can use safely while avoiding those that might be harmful.

If the cancer comes back

If the cancer does recur at some point, your treatment options will depend on where the cancer is located, what treatments you've had before, and your overall health. For more information on how recurrent cancer is treated, see Treatment Options, by Stage of Nasopharyngeal Cancer[8].

For more general information on dealing with a recurrence, you may also want to see When Your Cancer Comes Back: Cancer Recurrence.[9]

Could I get a second cancer after treatment?

People who've had NPC can still get other cancers. In fact, NPC survivors are at higher risk for getting some other types of cancer. Learn more in Second Cancers After nasopharyngeal Cancer.

Getting emotional support

Some amount of feeling depressed, anxious, or worried is normal when cancer is a part of your life. Some people are affected more than others. But everyone can benefit from help and support from other people, whether friends and family, religious groups, support groups, professional counselors, or others. Learn more in Life After Cancer[10].

Hyperlinks

1. www.cancer.org/cancer/nasopharyngeal-cancer/detection-diagnosis-staging/staging.html
2. www.cancer.org/treatment/survivorship-during-and-after-treatment/be-healthy-

after-treatment/keeping-copies-of-important-medical-records.html
3. www.cancer.org/healthy/stay-away-from-tobacco.html
4. www.cancer.org/healthy/eat-healthy-get-active/eat-healthy.html
5. www.cancer.org/healthy/eat-healthy-get-active/get-active.html
6. www.cancer.org/healthy/eat-healthy-get-active/take-control-your-weight.html
7. www.cancer.org/treatment/treatments-and-side-effects/complementary-and-alternative-medicine/dietary-supplements.html
8. www.cancer.org/cancer/nasopharyngeal-cancer/treating/by-stage.html
9. www.cancer.org/treatment/survivorship-during-and-after-treatment/understanding-recurrence/coping-with-cancer-recurrence.html
10. www.cancer.org/treatment/survivorship-during-and-after-treatment/be-healthy-after-treatment/life-after-cancer.html

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Second Cancers After Nasopharyngeal Cancer

Cancer survivors can be affected by a number of health problems, but often their greatest concern is facing cancer again. If a cancer comes back after treatment it is called a *recurrence*. But some cancer survivors may develop a new, unrelated cancer later. This is called a *second cancer*. No matter what type of cancer you have had, it's still possible to get another (new) cancer, even after surviving the first.

Unfortunately, being treated for cancer doesn't mean you can't get another cancer. People who've had cancer can still get the same types of cancers that other people get. In fact, certain types of cancer and cancer treatments can be linked to a higher risk of certain second cancers.

Survivors of nasopharyngeal cancer (NPC) can get any second cancer, but they have an increased risk of:

- Cancer of the tongue[1]
- Cancer of the nose and nasal cavity[2]
- Cancer of the esophagus[3]
- Cancer of the bone and joints[4](mostly the jaw bone or mandible)

Follow-up after treatment

After completing treatment for NPC, you should still see your doctor regularly. Your doctor may order tests to look for signs that the cancer has come back or spread. These tests are also useful in finding some second cancers, particularly a new lung cancer or cancer of the mouth or throat. Experts don't recommend any other tests to look for second cancers in patients who don't have symptoms. Let your doctor know about any new symptoms or problems, because they could be caused by the cancer coming back, a new disease, or a second cancer.

Survivors of NPC should follow the American Cancer Society guidelines for the early detection of cancer[5] and stay away from tobacco products[6]. Smoking increases the risk of getting certain second cancers as well as other health problems.

To help maintain good health, survivors should also:

- Get to and stay at a healthy weight[7]
- Adopt a physically active lifestyle[8]
- Consume a healthy diet[9], with an focus on plant foods
- Limit alcohol[10] use to no more than 1 drink per day for women or 2 per day for men

These steps may also lower the risk of some cancers.

See Second Cancers in Adults[11] for more information about causes of second cancers.

Hyperlinks

1. www.cancer.org/cancer/oral-cavity-and-oropharyngeal-cancer.html
2. www.cancer.org/cancer/nasal-cavity-and-paranasal-sinus-cancer.html
3. www.cancer.org/cancer/esophagus-cancer.html
4. www.cancer.org/cancer/bone-cancer.html
5. www.cancer.org/healthy/find-cancer-early/cancer-screening-guidelines.html
6. www.cancer.org/healthy/stay-away-from-tobacco.html
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8. www.cancer.org/cancer/cancer-causes/diet-physical-activity.html
9. www.cancer.org/cancer/cancer-causes/diet-physical-activity.html
10. www.cancer.org/cancer/cancer-causes/diet-physical-activity/alcohol-use-and-cancer.html
11. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/second-cancers-in-adults.html

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