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# Laryngeal Cancer

*Understanding your diagnosis*



**Let's Make Cancer History**

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## Laryngeal Cancer

### *Understanding your diagnosis*

When you first hear that you have cancer you may feel alone and afraid. You may be overwhelmed by the large amount of information you will have to take in and the decisions you will need to make.

The introductory information in this brochure can help you and your family take the first step in learning about laryngeal cancer. A better understanding may give you a sense of control and help you work with your healthcare team to choose the best care for you.

## What is cancer?

Cancer is a disease that starts in our cells. Our bodies are made up of millions of cells, grouped together to form tissues and organs such as muscles and bones, the lungs and the liver. Genes inside each cell order it to grow, work, reproduce and die. Normally, our cells obey these orders and we remain healthy.

But sometimes the instructions in some cells get mixed up, causing them to behave abnormally. These cells grow and divide uncontrollably. After a while, groups of abnormal cells form lumps, or tumours.

Tumours can be either *benign* (non-cancerous) or *malignant* (cancerous). Benign tumour cells stay in one place in the body and are not usually life-threatening.

Malignant tumour cells are able to invade nearby tissues and spread to other parts of the body. Cancer cells that spread to other parts of the body are called *metastases*.

The first sign that a malignant tumour has spread (metastasized) is often swelling of nearby lymph nodes, but cancer can spread to almost any part of the body. It is important to find and treat malignant tumours as early as possible.

Cancers are named after the part of the body where they start. For example, cancer that starts in the larynx but spreads to the lungs is called laryngeal cancer with lung metastases.

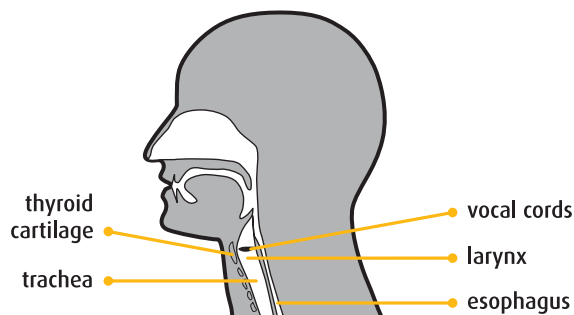
## What is laryngeal cancer?

Laryngeal cancer starts in the cells that line the larynx (which is sometimes called the *voice box*). The larynx is a tube, about 5 cm long, that connects the back of the throat to the trachea (also called the *windpipe*). Two bands of muscle in the middle of the larynx – the vocal cords – make the sound of your voice. The front of the larynx is protected by thyroid cartilage, a layer of tough, flexible tissue (sometimes called the *Adam's apple*).

The larynx plays an important role in breathing, swallowing and talking.

- **Breathing:** As you breathe in, your vocal cords open and air passes from the back of your throat through the larynx down the windpipe to your lungs.
- **Swallowing:** At the top of the larynx is a flap. When you swallow, this flap covers the opening of the larynx to keep food out of your lungs. Instead, the food moves through the esophagus to the stomach.
- **Talking:** The sound of your voice is made in the larynx. When you talk, the vocal cords tighten and move closer together. The air that you breathe out is forced through the vocal cords, making them vibrate. You control the amount of air passing through the cords to speak, sing or shout. Your tongue, lips and teeth shape the sound into words.

Laryngeal cancer can start anywhere in the larynx, but it most often begins in the middle part of the larynx where the vocal cords are found. Cancers that start below the vocal cords are less common.



## Causes of laryngeal cancer

There is no single cause of laryngeal cancer, but some factors increase the risk of developing it. Most people diagnosed with laryngeal cancer are over the age of 50. Men are more likely to be diagnosed with this disease than women. Other factors that appear to increase the risk of laryngeal cancer are:

- smoking, especially if you also drink alcohol
- drinking alcohol, especially if you also smoke
- exposure to sulphuric acid mist
- exposure to asbestos

Other possible risk factors that are being studied include having GERD (gastroesophageal reflux disease), not eating enough vegetables and fruit and having a family history of laryngeal cancer.

Some people develop laryngeal cancer without any of these risk factors.

## Symptoms of laryngeal cancer

Most laryngeal cancers start on or near the vocal cords. Laryngeal cancer is often diagnosed in its early stages because even a very small tumour can stop the vocal cords from vibrating properly and cause your voice to change. Sometimes, the tumour may start in a part of the larynx that is not close to the vocal cords. Then the first sign may be difficulty swallowing or a lump in the throat or neck.

Possible symptoms of laryngeal cancer include:

- changes to the voice, such as hoarseness
- difficulty or pain when swallowing
- a sore throat or feeling that something is stuck in the throat
- a cough that doesn't go away
- an earache
- difficulty breathing or noisy breathing

Other health problems can cause some of the same symptoms. Testing is needed to make a diagnosis.

## Diagnosing laryngeal cancer

After taking your medical history and completing a physical examination, your doctor may suspect you have laryngeal cancer. To confirm the diagnosis, your doctor will arrange special tests. These tests may also be used to “stage” the cancer. You may have one or more of the following tests.

**Laryngoscopy:** Laryngoscopy uses a thin, flexible tube with a light at the end (called a *laryngoscope*) to check your throat and larynx. The doctor inserts the tube through your nose or mouth. During a laryngoscopy, you will probably be given a mild anesthetic (freezing) and you may be given a mild sedative to help you relax. You will have a sore throat afterwards. This is normal and should disappear after a couple of days.

**Biopsy:** If an abnormal area is found during a laryngoscopy, the doctor can take several samples of tissue through the laryngoscope for examination under a microscope. Removing the cells from the body to check them under a microscope is called a *biopsy*. A biopsy is usually necessary to make a definite diagnosis of cancer. If the cells are cancerous, they may be studied further to see how fast they are growing.

You may need a general anesthetic (you will be unconscious) if tissue samples are taken.

**Imaging studies:** Imaging studies allow tissues, organs and bones to be looked at in more detail. Using x-rays, CT scans or MRIs, your healthcare team can get a picture of the size of the tumour and see if it has spread. These tests are usually painless and do not require an anesthetic.

**Further testing:** If the initial tests show that you have laryngeal cancer, your doctor may order blood tests and more imaging studies to find out if the cancer has spread.

## Staging

Once a definite diagnosis of cancer has been made and your healthcare team has the information it needs, the cancer will be given a stage.

The cancer stage describes the tumour size and tells whether it has spread beyond the place where it started to grow.

For laryngeal cancer, there are five stages.

Stage	Description
0	This is a very early stage of laryngeal cancer. Cancer is found only in the cells lining the larynx. Stage 0 is also called carcinoma <i>in situ</i> .
1	The tumour is small and is in only one area of the larynx. The tumour may be a lump or a small area of abnormal cells.
2	The tumour is larger and has spread to more than one area of the larynx. The cancer cells have not spread to lymph nodes or areas outside the larynx.
3	The tumour is larger and stops the vocal cords from working or may cause noisy breathing or the cancer cells have spread to nearby lymph nodes.
4	The cancer cells have spread to nearby tissues of the neck, such as the esophagus, windpipe or thyroid gland. They may also have spread to lymph nodes or other parts of the body.

It is important to know the stage of the cancer. This information helps you and your healthcare team choose the best treatment for you.

## Treatments for laryngeal cancer

Your healthcare team will consider your general health and the type and stage of the cancer to recommend what treatments will be best for you. You will work together with your healthcare team to make the final treatment choices. Talk to them if you have questions or concerns.

Treatments affect everyone in different ways. It's hard to predict which side effects you will have. Your healthcare team will tell you what to expect with each treatment. They will also let you know what side effects you should report right away and which ones you can wait to tell them about at your next appointment. If you notice any side effects or symptoms that you did not expect, talk to a member of your healthcare team as soon as possible.

Patients often worry about the side effects of cancer treatment. However, side effects can often be well managed and even prevented with medicine. Be open with your healthcare team. Tell them your concerns and ask questions. They will help you get the care and information you need.

### Get a dental checkup before starting treatment

Some treatments for laryngeal cancer may make your mouth sensitive and put you at a higher risk of infection. It's important to have a dental exam and get any necessary dental work done before you start treatment.

For laryngeal cancer, you might receive one or more of the following treatments. Most people with laryngeal cancer receive radiation with or without chemotherapy. Surgery is an option for people who cannot have radiation therapy as a primary treatment or if the cancer returns.

**Radiation therapy:** *External beam radiation therapy* is the most common treatment for laryngeal cancer. A machine is used to carefully aim a beam of radiation at the tumour. The radiation damages the cells in the path of the beam – normal cells as well as cancer cells.

Small tumours may be cured by treating them with radiation only. For larger tumours, external radiation is often used together with chemotherapy.

You may have a mask made especially for you before radiation therapy. This custom-made mask is worn for the treatment planning and for all radiation treatments. The mask helps make sure you're in the exact same position for every treatment and helps keep your head and neck from moving during treatment.

### **Radiation therapy works better if you avoid tobacco**

To get the most out of radiation treatment for laryngeal cancer, experts recommend that you:

- Quit smoking, if you're a smoker.
- Avoid second-hand smoke.

Side effects of radiation will be different depending on what part of the head or neck receives the radiation. You may feel more tired than usual or notice changes to the skin (it may be red or tender) where the treatment was given.

Radiation for laryngeal cancer may irritate your mouth and throat, making them dry and sore. This can make it difficult to swallow. If your throat becomes too sore for you to eat or you lose too much weight, you may need a feeding tube until you are able to eat and drink on your own. The feeding tube is placed in your nose or your stomach to give you liquids and nutrients. It's usually temporary.

You may also notice changes to your sense of taste and smell.

These side effects are a result of damage to normal cells. The side effects will usually go away when treatment is over and the normal cells repair themselves. A few side effects, such as a dry mouth, can last a long time.

**Chemotherapy:** For laryngeal cancer, chemotherapy is most commonly used with radiation therapy for large tumours and tumours that have spread to the lymph nodes.

Chemotherapy may be given as pills or by injection. Chemotherapy drugs interfere with the ability of cancer cells to grow and spread, but they also damage healthy cells. Although healthy cells can recover over time, you may experience side effects from your

treatment like nausea, vomiting, loss of appetite, fatigue, hair loss and an increased risk of infection.

**Surgery:** A decision to have surgery depends on the size of the tumour and where it is. During the operation, all or part of the tumour and some healthy tissue around the tumour are removed. Surgery is done under general anesthetic (you will be unconscious) and you will stay in the hospital for several days after the surgery. After surgery, you may have some pain or weakness. These side effects are temporary, and can be controlled.

An operation to remove all or part of the larynx is called a *laryngectomy*. The surgeon may also remove nearby lymph nodes in the neck. Sometimes, the thyroid gland is also removed.

For a *partial laryngectomy*, the surgeon removes the part of the larynx affected by the tumour. Usually one or both of the vocal cords are left in so that you can still speak. Your voice may be different than it was before.

For a *total laryngectomy*, the surgeon removes the entire larynx. A *tracheostomy* is done at the same time to create an opening in the lower part of the neck for you to breathe through. Air enters and leaves the windpipe and the lungs through the hole (called a *stoma*). This opening is permanent. After a total laryngectomy, you will have to learn to speak in a different way.

For the first few days after surgery you will be given liquids through an intravenous (IV) drip into a vein. You may also need a feeding tube in your nose or your abdomen to give you liquids and nutrients until you are able to eat and drink on your own.

It's important to discuss your operation with your surgical team before the surgery so that you know what to expect and how it will affect you. If both your vocal cords are to be removed, a speech pathologist will talk to you before the operation about the different ways you can learn to speak again.

**Laser surgery:** Laser surgery uses an intense, narrow beam of light to remove cancerous tissue with little or no damage to surrounding healthy tissue. It is usually done under general anesthetic. Laser surgery may be used for very small laryngeal tumours. Laser surgery may not be available at all cancer centres or hospitals.

**Clinical treatment trials:** Clinical treatment trials investigate new approaches to treating cancer, such as new drugs, new types of treatments or combinations of existing treatments. They are closely monitored to make sure that they are safe for the participants. Ask your doctor if there is a clinical trial suitable as a treatment option for you. You may benefit and so may future cancer patients.

**Complementary therapies:** Complementary therapies are used *together with* conventional treatments. More research is needed to understand if these therapies are effective and how they work.

Alternative therapies are used *instead of* conventional treatments. Alternative therapies haven't been tested for safety or effectiveness. It is still unknown whether they will harm you or be effective in the treatment of cancer.

If you are thinking about using a complementary or alternative therapy, it is important to find out as much as you can about the therapy and talk to your healthcare team. It's possible that the therapy might interfere with test results or regular treatments.

## After treatment

Follow-up care helps you and your healthcare team monitor your progress and your recovery from treatment. At first, your follow-up care may be managed by one of the specialists from your healthcare team. Later on it may be managed by your family doctor.

The schedule of follow-up visits is different for each person. You might see your doctor more often in the first year after treatment, and less often after that. During your follow-up appointments, your doctor will check your neck and throat. Sometimes, laryngeal cancer treatments can also affect your thyroid gland. A blood test may be done to see if the thyroid is working properly.

After treatment has ended, you should report new symptoms and symptoms that don't go away to your doctor without waiting for your next scheduled appointment.

The end of cancer treatment may bring mixed emotions. You may be glad the treatments are over and look forward to returning to your normal activities. But you could feel anxious as well. If you are worried about your treatment ending, talk to your healthcare team. They are there to help you through this transition period.

After being treated for laryngeal cancer, you may face some difficult challenges, such as learning to swallow, eating well, living with a stoma and learning to speak again. Your healthcare team will help you make these adjustments and help you return to your normal activities as soon as possible.

**Learning to swallow:** Treatment may affect your ability to swallow. If you have problems with swallowing, you may need to learn a new way to do it. A speech pathologist can teach you the method that will work best in your situation.

**Maintaining a healthy diet:** You may find it hard to eat because it's hard to swallow or because your mouth is dry or sore. Your sense of smell and taste may have changed. If your mouth is dry, try thick soups, puddings, milkshakes and soft foods moistened with sauces or gravies. If you have little appetite,

you may find it easier to eat several small meals and snacks throughout the day, rather than eating three large meals. It's important to eat well so that you get enough calories and protein to control weight loss and maintain your strength both during and after your cancer treatments.

Your doctor, dietitian or nutritionist can give you more information about how to maintain a healthy diet.

### **Take care of your mouth after treatment**

Caring for your mouth is very important. Keeping the mouth clean and moist prevents irritation and infection. Your healthcare team will tell you how and when to clean and rinse your mouth and what to use.

**Living with a stoma:** The thought of living with a stoma can be stressful. You may be worried about how you will look or how others will feel about you. It can help to talk about your feelings with your partner, another close family member or friend.

If you have a stoma, your healthcare team will show you how to care for it. Most people with stomas return to their regular daily activities. Your doctor can also refer you to specialists and counsellors who can help you with the emotional side effects of laryngeal cancer treatment.

**Learning to speak after surgery:** Treatment may affect your ability to speak. Within a week or so after a partial laryngectomy, you will be able to talk the same way you did before.

Your voice may be slightly different (hoarser or huskier than before). After a total laryngectomy, you will need to learn to speak in a different way. Before your surgery, a speech pathologist will talk to you about the different ways you can learn to speak. You may find it helpful to meet (or see a video of) someone else who had a similar operation. Tell your healthcare team about your fears and concerns. They are there to help you.

### **Living with cancer**

There are many sources of help available for people with cancer and for their caregivers.

**Your healthcare team:** If you need practical help or emotional support, members of your healthcare team may be able to suggest services in your community or refer you to cancer centre staff or mental health professionals.

**Family and friends:** Those closest to you can be very supportive. Accept offers of help. When someone says "Let me know how I can help," tell them what they can do. Maybe they can run errands, cook a meal or give you a ride to your doctor's office.

**People who have had a similar experience:** Consider visiting a support group or talking with a cancer survivor in person, over the telephone or online. Talking with and learning from others who have had similar experiences can be helpful. Try more than one option to see which one suits you best.

**Yourself:** Try to stay positive. Staying positive is about figuring out how to deal with cancer in the best way that you can – and everyone will do this their own way. It doesn't mean that you must seem happy or cheerful all the time or avoid talking or thinking about the difficulties of having cancer. But it can mean looking after yourself by finding relaxing, enjoyable activities that refresh you mentally, spiritually or physically.

## The Canadian Cancer Society

*Helping you understand cancer*

Now that you have been introduced to the basics of laryngeal cancer, you may want to learn more. Please contact the Canadian Cancer Society for more detailed information on laryngeal cancer. Our services are free and confidential.

If you would like to talk to someone who has had a similar cancer experience, we can help you connect with a trained volunteer – in person, over the phone or in a group setting.

To contact the Canadian Cancer Society:

- Call an information specialist toll-free at **1 888 939-3333** Monday to Friday 9 a.m. to 6 p.m.
- E-mail us at **info@cis.cancer.ca**.
- Visit our website at **cancer.ca**.
- Contact your local Canadian Cancer Society office.



## We'd like to hear from you

E-mail us at [publicationsfeedback@cancer.ca](mailto:publicationsfeedback@cancer.ca) if you have comments or suggestions to help us make this booklet more useful for you and other readers.

## What we do

The Canadian Cancer Society fights cancer by:

- doing everything we can to prevent cancer
- funding research to outsmart cancer
- empowering, informing and supporting Canadians living with cancer
- advocating for public policies to improve the health of Canadians
- rallying Canadians to get involved in the fight against cancer

Contact us for up-to-date information about cancer, our services or to make a donation.



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