BEYOND FIVE
The Face of Head & Neck Cancer

LARYNGOPHARYNGECTOMY

This information aims to help you understand the operation, what is involved and some common complications that may occur. It may help answer some of your questions and help you think of other questions that you may want to ask your cancer care team; it is not intended to replace advice or discussion between you and your cancer care team.

AN OVERVIEW TO LARYNGOPHARYNGECTOMY

- The pharynx is the tube that connects the nose and mouth to the top of the windpipe and oesophagus. It is better known as the throat.
- The larynx is the word that doctors use to describe the voicebox. The area of the throat next to the voicebox is called the hypopharynx.
- A laryngopharyngectomy is the removal of all of the larynx and pharynx. Sometimes only part of the pharynx is removed. It is different to a laryngectomy, where only the voicebox (or part of it) is removed.
- Reconstructive surgery is also required as part of the operation so that you can breathe and swallow after the operation. Since the voice box has been removed, you will breath through a hole in the throat, called a tracheostoma.

WHY IS A LARYNGOPHARYNGECTOMY NEEDED

- A laryngopharyngectomy is recommended for some large cancers that are in or near the voice box. It is often used for hypopharyngeal cancers and laryngeal cancers that have come back after radiotherapy or are not suitable for radiotherapy.
- The cancer together with an area of normal-appearing tissue is removed, to reduce the chance of any cancer cells being left behind.
- The tissue removed will be examined in detail by a specialist pathologist, under a microscope to look for cancer cells. Through this examination, the cancer can be accurately staged. Further information about staging of cancer is available on the Beyond Five website.

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HOW TO PREPARE FOR THE OPERATION

Before the operation:

- You will need to fast (have nothing to eat or drink) for six hours the before your operation (unless advised differently by your surgeon or anaesthetist) because the larynpharyngectomy is performed under a general anaesthetic (you will be asleep and will not remember what happens during the operation).
- Your surgeon will explain the details of your operation. Be sure to bring up any questions or concerns, and share your needs and wishes with your cancer care team (see box).

Possible questions that you may want to ask your cancer care team

- Will I be able to swallow after surgery?
- How long until I can expect to swallow?
- What type of food will I be able to eat?
- If I can't swallow, how will I be fed?
- How will I be able to communicate afterwards?
- Will I be able to speak again?
- How will I be able to speak?

Additional questions are listed at the end of this factsheet

- You should speak to your doctor about how to manage aspects of your lifestyle, such as smoking, drinking alcohol and chronic conditions (e.g. diabetes and obesity) that may increase the risk of complications.
    - If you take blood thinning medication for a heart condition or blood clots (such as warfarin, Plavix, aspirin or Pradaxa), make sure your surgeon is aware. Some of these medications need to be stopped more than a week before the operation. Sometimes a short-acting blood thinner (such as Clexane) is used before and after the surgery.
- Talk to your surgeon and cancer care team about any likely side effects you can expect following the operation.
- A laryngopharyngectomy will permanently and significantly alter your speech and swallowing function. It is important to talk to a speech pathologist about what to expect after operation and how you might be helped to speak and swallow afterwards.
- A dietitian may also be useful to discuss issues about eating.
- Your speech pathologist may arrange for you to meet another patient who had this operation (either online or in person). It can help to hear how they have coped and adjusted; it may also be encouraging to hear how others have managed to recover well. Your cancer care team can assist with making these contacts.

- Spend some time planning how to communicate with people including the nursing staff straight after the operation as you may not be able to talk. It may be useful to have a tablet/portable device or pen and paper to write down what you want to say.

Visit the Beyond Five for further information on the health professionals who may be part of your cancer care team

WHAT TO EXPECT DURING THE OPERATION

During a laryngopharyngectomy:

- A cut is made in the centre of the neck, extending far across each side of the neck.
- The larynx and pharynx are removed. Your surgeon may send the tissue to confirm that the cancer cells have been removed.
- Lymph nodes in your neck may also be removed to remove any glands affected by the cancer. This is called a neck dissection. Further information on neck dissection is available on the Beyond Five website.
- Part of the thyroid gland is also often removed.

Reconstruction:

- Because part or all of the pharynx has been removed, there will no longer be a connection between the mouth and oesophagus (tube to the stomach). This means reconstruction will be required during the operation.
- A reconstructive surgeon will rebuild the pharynx using a flap of tissue from another area of the body, to reconnect the mouth to the oesophagus again. When part of the pharynx is removed, the flap is sutured to the remaining pharynx. If the entire pharynx is removed, the flap of tissue will need to be made into a tube and carefully sealed with sutures. Further information on reconstructive surgery is available on the Beyond Five website. Some common flaps used are:
    - **Pectoralis major flap:** using the skin and muscle from the chest. This is often used when only part of the pharynx is removed.
    - **Jejunal flap**: using the small bowel. This is already a tube and is often used when the entire pharynx is removed.
    - **Anterolateral thigh and radial foream flaps**: using skin from the outer part of the thigh or forearm. This can be used for both partial and total laryngopharyngectomy.

- The surgeon will then take the top of the windpipe and move it to a hole made in the front of your neck, called a tracheostoma. There will no longer be a connection between the mouth and windpipe. Instead, there will be a hole in the neck to allow for breathing. This is a permanent change.
- There will be a feeding tube inserted through the nose, or directly into the stomach to help transport nutrition into the body for the first week or two after surgery, or sometimes longer. Further information about feeding tubes is available on the Beyond Five website.

WHAT TO EXPECT AFTER THE OPERATION

- After the operation, you will be closely monitored in either a ward bed or the intensive care unit in the hospital.
- You will have some surgical drains coming from the area of the operation to allow blood or lymphatic fluid to escape and prevent swelling. These will be removed before you go home.
- Your anaesthetist and surgical team will give you medicine to help control any pain and nausea after the operation.
- You may have a drip in your arm to give you fluid until you are able to drink and a feeding tube to keep your body healthy and promote healing until you are able to eat and drink by mouth.
- The operation takes several hours, so a catheter is usually placed in the bladder to monitor how your kidneys are working.
- After your larynx and pharynx are removed, you will breathe through the breathing hole in your neck (stoma), and will no longer be able to speak normally. A tracheostomy tube is usually placed in the hole to start with. This tube will need to be suctioned and cleaned by the nurse looking after you. You may want to download information about tracheostomy, which is available on the Beyond Five website.
- Drinking and eating will be through a reconstructed tube that connects your mouth to your foodpipe. It is common to wait about one week before starting to eat. This will give time for the tube to create a strong seal so food does not leak out.

- A speech pathologist will help you with voice rehabilitation that may involve speaking by:

  - swallowing air and expelling it (oesophageal speech)
  - using an artificial larynx with an electronic device (electrolarynx)
  - using a valve in the hole in your throat so that air from the lungs can reach the food pipe (tracheo-oesophageal speech).

- Once the feeding tube is removed, you may have difficulty with your swallowing function. A speech pathologist may be involved in your recovery to help with this. Some patients may go home with a feeding tube in the stomach.
- Most patients stay in hospital for around 2–3 weeks to recover, but will vary depending on how you recover.

POSSIBLE RISKS OF LARYNPHARYNGECTOMY

All operations carry some risks such as blood clots, wound infections, bleeding, chest infection, adverse reactions to anaesthetic, and other complications. These risks will be explained by your cancer specialist and anaesthetist.

Your doctor will explain details of the operation, general risks and side effects of the operation, they may recommend:

- stopping blood thinners (e.g. aspirin) before surgery to reduce the risk of bleeding
- a blood thinner (called heparin) may be injected before and after surgery to reduce the risk of blood clots
- antibiotics to reduce to risk of wound infection
- early mobilisation to reduce the risk of blood clots and chest infection
- special stockings to reduce the risk of blood clots.

Possible risks of laryngopharyngectomy include:

- **Leakage of saliva (fistula):** If the tube used to reconstruct the pharynx leaks, saliva and food will collect under the skin and cause an infection. This can be a very serious complication and might require opening the wound to allow it to drain or return to the operating room to fix the seal.
- **Infection:** The throat has lots of bacteria. These bacteria can cause an infection in the neck wound after the surgery. Antibiotics are given during surgery and for a day or so after, but infections can still happen. This might require opening part of the wound to allow any pus to drain out.
- **Flap failure:** If reconstructive surgery with a flap is needed, then microsurgery is done to join blood vessels together that keep the flap alive. If the blood supply blocks, you will be taken back to the operating room to fix the problem. Sometimes the problem cannot be fixed and a new flap is needed.
- **Leakage of lymphatic fluid (chyle leak):** Lymphatic fluid leaks from lymph channels (near where lymph nodes were removed) and may cause swelling under the skin. This can be treated using a special diet.
- **Low blood calcium:** The parathyroid glands (responsible for controlling the body's calcium levels) are located near the larynx and may be damaged or removed during the laryngopharyngectomy. This may cause blood calcium levels to fall below normal, leading to muscles spasms and can be treated with calcium tablets.

SIDE EFFECTS AND THEIR MANAGEMENT

As with all operations, there is a chance that larynpharyngectomy may lead to a number of side effects. You may not experience all of the side effects. Speak with your doctor if you have any questions or concerns about treatment side effects. Side effects common for larynpharyngectomy may include:

- **Nausea:** General anaesthetic may cause nausea. This will settle down soon after surgery and can be treated with medications.
- **Changes or loss of voice:** Because the voice is created by the larynx, losing the larynx will mean that you can no longer speak normally. Your healthcare team, together with a speech therapist will work with you to develop other ways of speaking and communicating. There are a number of different ways to speak after the larynx has been removed and a speech pathologist will assist with your voice rehabilitation. After the operation, it may be useful to have a tablet/portable device or pen and paper to write down what you want to say.

- **Difficulty swallowing:** Many patients find it difficult to eat for weeks following surgery. For this reason, a speech pathologist and dietitian will usually be involved in your care.

Some people may also experience:

- **Hypothyroidism:** If all or some of the thyroid gland is removed during the laryngopharyngectomy and not enough thyroid hormone is made, some people may feel tired and sluggish. This is very common if you have already had radiotherapy. Blood tests are used to measure the levels of thyroid hormones about two months after surgery. You may need to remind your surgeon or family doctor to check this. Thyroid hormone can be replaced by a once-daily pill.

BEFORE GOING HOME

- Your recovery will depend on the type of operation and your general fitness before the operation. Sometimes people may stay in rehabilitation or a skilled nursing facility before going home.
- Any particular instructions for wound care or medications will be provided to you before you go home. The tracheostoma (hole in neck that you breathe through) needs special attention. It is very important to keep it clean and stop crusts from building up. The nurses will teach you how to do this before you go home. You may want to download further information about tracheostomy and wound care, which is available on the Beyond Five website.
- You will be assessed by the team involved in your care before you go home and follow-up will be arranged with your surgeon and GP.
- After a laryngopharyngectomy, follow-up will be arranged with a speech pathologist and a dietitian.
    - A speech pathologist will assist you to develop other ways to speak without a voicebox.
    - A dietitian will help ensure you get good nutrition while you are recovering and swallowing is difficult.
- Follow-up may also be arranged with any other allied health professionals to assist you with supportive care.
- Your cancer care team can help you make contact with other patients and support groups to hear how they have coped and adjusted.
- Your recovery at home may vary and you should allow time for your body to recover and heal. With major surgery this can be slow and you may feel tired or lack energy. Regular follow up helps to assess your progress.

FOLLOW-UP CARE

- After a laryngopharyngectomy, you will continue to have regular follow-up visits with your specialist doctor and cancer care team.
- Ongoing referrals will also be arranged as required with other health professionals, such as speech pathologists and dietitians to assist with managing difficulties with eating and speaking.
- Any additional reconstruction, cosmetic procedures or treatments that you may need are planned after discharge. This enables time for you to recover from the initial operation, get results of the pathology that examined the tissue removed at the operation, and make the arrangements for any additional treatment or next steps.

For further information about the operation for cancer and what to expect, you can also refer to Understanding Surgery: a guide for people with cancer, their families and friends.

QUESTIONS TO ASK YOUR DOCTOR

- Is surgery the only option? Could I have radiotherapy?
- What will happen if I don't have the larynopharyngectomy
- What are the risks and likely side effects?
- How much of the larynx and pharynx needs to be removed? How will this be reconstructed?
- How long will the operation take?
- How long will I be in hospital?
- Will I need any extra treatment?
- What lifestyle changes (diet, exercise) do you recommend that I make?
- How much will the operation cost? Will my health insurance cover it?
- Will I be able to lead a normal life?
- What follow-up tests will I need after the operation?

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You may want to write additional questions here to ask your doctor or cancer care team

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Last updated: 19 October 2016