

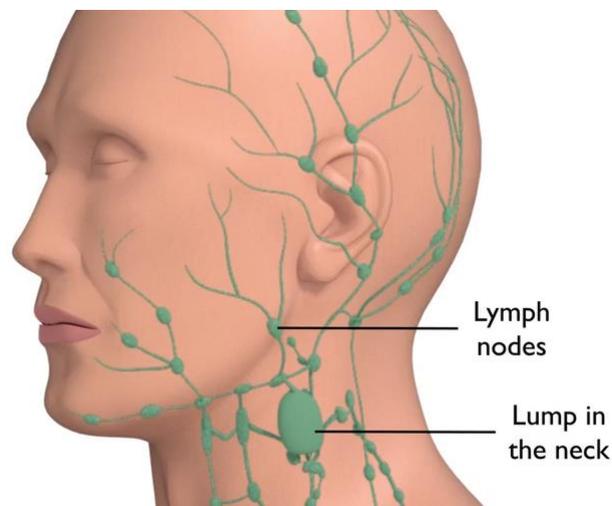
NECK DISSECTION

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 NECK DISSECTION

- Lymph nodes are bean shaped glands in the neck that are part of the immune system's defence against infection. There are hundreds of lymph nodes in the head and neck area and the majority of these run down the sides of the neck and under the jaw (see diagram below)
- Lymph nodes are normally difficult to feel because they are soft and small (less than 1 cm) and may become swollen during infection or due to cancer.
- A neck dissection involves removal of lymph nodes that have become involved in the spread of some cancers.

Lymph nodes in the neck



- There are **different types of neck dissection** operations, depending on the type of cancer and whether the lymph nodes are enlarged due to the cancer.
 - Your surgeon may remove between 20 – 50 lymph nodes. However, more lymph nodes may be removed if these appear larger than normal.
 - Most often lymph nodes are **removed from one side of the neck**, but sometimes they need to be removed from both sides of the neck.
 - Different head and neck cancers may spread to lymph nodes in different parts of the neck. The surgery will focus on the areas where the cancer is likely to spread to. Other structures, such as muscles, nerves and blood vessels, may also be removed.

WHY IS A NECK DISSECTION NEEDED

- Head and neck cancer can spread to the lymph nodes, even if it can't be felt or seen on scans.
- A neck dissection is done when either:
 - The surgeon suspects that the cancer has spread to the lymph nodes. This may be diagnosed with a biopsy, or due to the way the lymph nodes feel on examination or look on scans.
 - There is a high risk that the cancer has spread to the lymph nodes but the lymph nodes look normal on examination and scans. This depends on the size and type of cancer.
- Tissue removed from the neck dissection 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](#).

HOW TO PREPARE FOR THE OPERATION

Before the operation:

- You will need to fast (have nothing to eat or drink) 6 hours before your operation (unless advised differently by your surgeon or anaesthetist) because neck dissection 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**).
- 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 to expect following the operation. You may find it useful to talk to a dietitian, speech pathologist or specialist head and neck nurse about these issues.

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

- How long will the operation take?
- Where and how long will the cut be in my neck?
- How long will the drains stay in?
- Will the operation affect how my neck feels or looks?
- Will the operation affect my speech or swallowing?
- Are there any restrictions after surgery and when can I return to work?
- Will I need radiation therapy after the surgery?

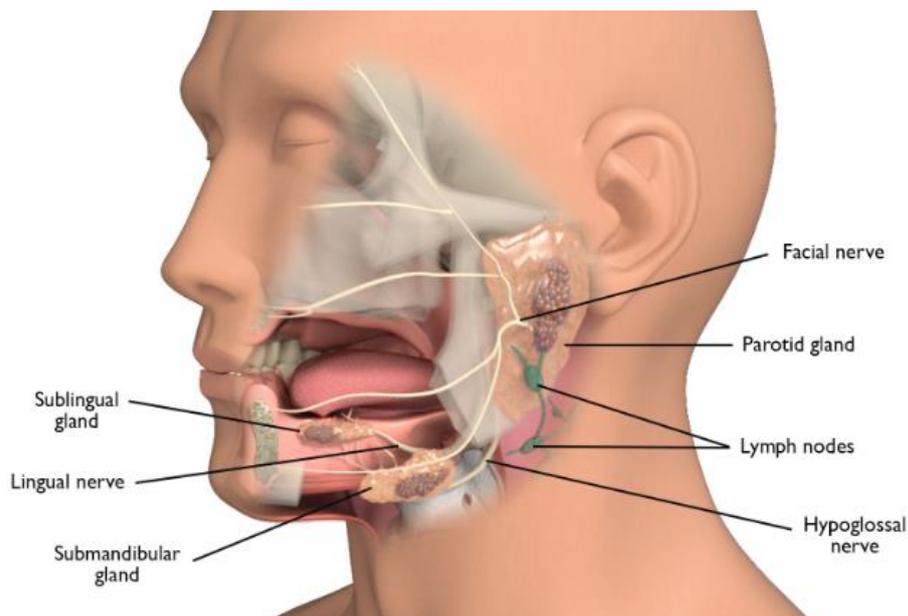
Additional questions are listed at the end of this factsheet.

Visit the [Beyond Five website](#) for further information on health professionals who may be part of your cancer care team

WHAT TO EXPECT DURING THE OPERATION

- The operation usually **takes about 2–3 hours**, depending on how complex the operation is. In some cases, neck dissection may be part of a longer, more major, head and neck cancer operation.
- The surgeon will make a cut (incision) in the neck to access to the lymph nodes. The most common incision follows a skin crease, going from just below the ear to the middle of the neck, below the chin.
- The nerves that give feeling to the skin above and below the incision are usually cut, to allow the skin to be pulled (retracted) out of the way. This means the skin will be numb (feel dead) after the surgery.
- The lymph nodes are removed with the fat and other tissue that surrounds them, as a single piece of tissue. Your surgeon will not know how many lymph nodes are removed, until the pathologist separates them from the fat and counts them.
- It is common to remove the [submandibular salivary gland](#) during a neck dissection (see diagram below).

Submandibular glands and the surrounding areas



- There are many blood vessels, muscles and nerves in the neck that have to be carefully separated from the lymph nodes. Some of these nerves may stop working for a while after the surgery.
- If the cancer has spread outside of the lymph nodes, some of the tissue nearby may need to be removed. This may include:
 - muscle that runs from behind the ear to the breast bone (sternomastoid muscle)
 - vein that takes blood from the brain to the heart (internal jugular vein)
 - nerve that supports the shoulder (accessory nerve)
 - nerve that moves the tongue (hypoglossal nerve)
 - nerve that moves the lower lip (marginal mandibular nerve)
 - nerve that moves the vocal cords (vagus nerve)

WHAT TO EXPECT AFTER THE OPERATION

- After the operation, once you are fully awake, you will be moved to a bed in the hospital or intensive care unit.
- You will have 1 or 2 surgical drains coming from the cut in your neck to allow blood or lymphatic fluid to escape and prevent swelling. These will usually be removed before you go home but it may be possible to go home with the drains if you are ready.
- You will have a drip in your arm to give you fluid until you are able to drink.
- Your anaesthetist and surgical team will give you medicine to help control any pain and nausea after the operation.
- Most patients stay in hospital for 3–5 days; if the neck dissection is part of a more major procedure, you may need to stay in hospital for a longer period.

POSSIBLE RISKS OF NECK DISSECTION

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.

Neck dissection is a very safe operation but there are some specific risks that you should know about:

- **Nerve damage:** There are many nerves that run close to the lymph nodes. It is common for some of these nerves to be bruised during the operation and it may take a few months to recover but occasionally can be permanent. If a nerve is removed during the operation, the weakness will be permanent. Depending on the nerve involved, this may lead to:
 - shoulder weakness, stiffness and discomfort in your shoulder, including difficulty raising your arm above the head
 - uneven smile due to weakness of the lower lip
 - difficulty with speech and swallowing
 - arm or hand muscle weakness
- **Bleeding or bruising:** Some people may experience bleeding or bruising underneath their skin in the area of the operation. If this happens, another operation may be needed to remove the blood and stop the bleeding.
- **Infection:** Bacteria can cause an infection in the neck wound after the surgery. Antibiotics are given during surgery but infections can still happen. This might require opening part of the wound to allow any pus to drain out.
- **Lymphatic fluid leak ('chyle leak'):** The lymph nodes filter lymphatic fluid from the tissue. After the fluid passes through the lymph nodes it returns to the heart through some special tubes called lymphatic ducts. It is normal for some lymphatic fluid to leak into the wound after the surgery. This fluid is clear or yellow in colour and comes out through the drains for several days. However, if the main lymphatic duct (thoracic duct) is not completely sealed large amounts of milky coloured fluid (called chyle) will leak out. This can go on for many weeks.
 - The fluid is milky because it contains fat from the food you eat. This means that nutrients are being drained from the body.
 - A chyle leak can be treated by a special diet that is low in fat or surgery to seal the thoracic duct.

SIDE EFFECTS AND THEIR MANAGEMENT

As with all operations, there is a chance that neck dissection 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 neck dissection may include:

- **Nausea:** General anaesthetic may cause nausea. This will settle down soon after the operation and can be treated with medications.
- **Sore throat:** Your throat may be sore initially because of the breathing tube placed during the operation.
- **Numbness in the neck skin:** The incision made to access your lymph nodes will cut lots of tiny nerve fibres in the skin and cause numbness of the neck skin (for some types of neck dissection numbness may also occur in the ear lobe and upper chest). Much of this recovers with time but for some people it may take many months to years.
- **Pain management:** Neck dissection is usually not very painful but you will have some discomfort. Your anaesthetist will give you pain medicine during the operation to keep you comfortable when you wake up, and you may continue on pain medicines to ensure pain is under control. Ensure you take pain relief medications as prescribed by your doctor and speak to your cancer care team if the pain is not under control, gets worse or if the medication causes any side effects. You may want to download further information about [pain management](#), which is available on the [Beyond Five website](#).
- **Stiffness:** Most patients will feel that their neck is tight, swollen or stiff. This usually gets better over a few months but for some people, it may take longer if radiation therapy is needed after the surgery.

- **Lymphoedema:** The lymph nodes help filter bacteria and drain fluid out of the body. Following the removal of lymph nodes, the tissue around the neck will swell because the fluid cannot drain away normally. This usually gets better over a few months, but for some people it may be permanent:

- if a number of lymph nodes are removed during surgery
- for those requiring radiation therapy to both sides of the neck after the surgery.

Management of lymphoedema aims to reduce the swelling, by massaging the tissue to drain fluid from the affected area. Your doctor may recommend you see a lymphoedema nurse or physiotherapist with special expertise in treating lymphoedema.

- **Seroma:** After the drains are removed some fluid will collect under the skin. Usually this is a small amount and does not require treatment. If there is a noticeable amount of fluid, called a seroma, this can be removed with a needle under a general anaesthetic and will not be painful.
- **Change in appearance:** If the scar is in a skin crease it will usually heal well and be difficult to see. Some scars may be more visible and affect the way you look. If the operation involves removing one of the large neck muscles or other tissue, the neck may look flat. It can be difficult to accept these changes and your doctor may recommend a psychologist to discuss changes in appearance and suggest strategies to help you. You might also find it helpful to speak with people who have been in a similar situation to you.

OTHER TREATMENT(S)

- Additional treatment(s) depend on the nature and extent of the cancer
- Head and neck cancers often require treatment with more than one form of therapy to reduce the risk of the cancer recurring. Many patients need radiation therapy after the operation, and sometimes, may also require chemotherapy.
- Your [cancer care team](#) will be able to discuss the likelihood of needing further treatment before your operation.

BEFORE GOING HOME

- Any particular instructions for [wound care](#) or medications will be provided to you before you go home. You may want to download further information about wound care on the [Beyond Five website](#).
- Your doctor may prescribe pain medications to help relieve pain following the operation. Ensure you take the pain relief medications as prescribed by your doctor and speak to your cancer care team if the pain is not under control, gets worse or if the medication causes any side effects. You may want to download further information about [pain management](#), 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.
- Follow-up may also be arranged with any other allied health professionals that may assist you with supportive care
- Your recovery at home may vary and you should allow time for your body to recover and heal. Regular follow-up helps to assess your progress.

Symptoms to watch for after discharge from hospital

- **Significant swelling around the neck:** You will have some swelling after your surgery. This is normal and may last for some weeks or months in varying degrees. However, contact your surgeon, GP or the hospital, if the swelling becomes very noticeable and affects your swallowing or breathing.
- **Difficulty breathing or swallowing:** You should be able to breath normally after your surgery. If you are having difficulty breathing or swallowing, immediately go to hospital emergency department or contact your surgeon.
- **Discharge from the wound:** If your wound becomes red, hot and starts to discharge, these are signs of an infection. Contact your surgeon's office or your GP, as you may need some antibiotics.
- **Fever:** Contact your surgeon or GP if you develop a fever.

FOLLOW-UP CARE

- After your operation, you will continue to have regular follow-up visits with your specialist doctor and cancer care team. Most patients with head and neck cancer will be monitored for five years after surgery, sometimes more.
- 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

- What type of neck dissection will be done? Can you explain what does this mean?
- What will happen if I don't have the neck dissection?
- What are the risks of neck dissection?
- How long will the operation take?
- How long will I be in hospital?
- What are the possible side effects of neck dissection? How can they be prevented or managed?
- 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

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

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