

Neck Lymph Node Dissection

Patient information

What is a neck lymph node dissection?

A neck lymph node dissection involves the removal of tumour-containing tissue and lymph nodes at risk of harbouring tumour from the neck region.

Lymph nodes and the lymphatic system

Lymph is fluid that escapes from the blood vessels into the tissues. It travels in a network of lymphatic vessels that eventually return this fluid to the bloodstream.

Lymph nodes are glands or filters found along these lymphatic vessels that help the body mount a response to infection or cancer. Lymph nodes are commonly found clustered together, particularly in the neck, armpit (axilla) and groin. Nearly all parts of the body have lymphatic drainage to a specific lymph node or several nodes. The sentinel node/s are the first lymph nodes that receive lymph from the primary melanoma site on the skin. The pattern of lymph fluid drainage is different for each individual.

If a lymph node is found to contain melanoma (whether it is a sentinel node or a palpable lymph node), the usual recommendation for treatment is a surgical **lymph node dissection** of the whole lymph node area involved.

These are major operations that aim to control the progression of the melanoma in the lymph node region but there are often long-term consequences that may limit function of the limb or area of the surgery.

This brochure is about the operation involving the group of lymph nodes in the neck (or neck dissection).

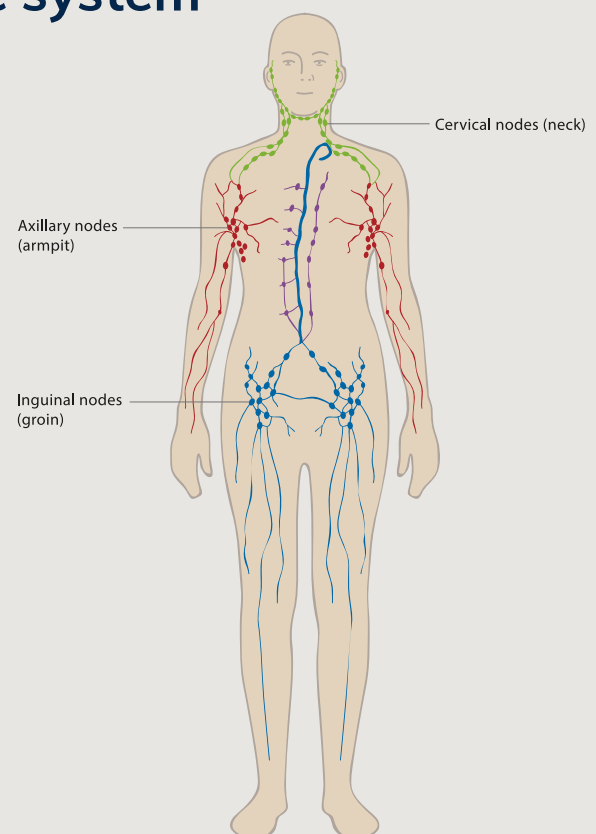


Diagram of the lymphatic system (reproduced with permission of Cancer Australia).

Neck dissection

Before the operation

You will need to attend the hospital a few hours before your operation, having fasted (i.e. no food or fluid) for 6 hours. A full stomach can cause regurgitation of the stomach contents when an anaesthetic is administered, risking inhalation of this into the lungs: an empty stomach is therefore very important.

Preparing for a general anaesthetic

Please let your anaesthetist know if you have had problems with anaesthesia in the past, including nausea and vomiting after an anaesthetic. Modern anaesthetic techniques and drugs can reduce this. If you are very anxious you should let the anaesthetist know.

Most medications should be continued up to and including the day of surgery, taken with a small sip of water. Two very important exceptions are tablets that thin the blood (for example: aspirin, ibuprofen, cartia, warfarin, clopidigrel) and diabetic tablets (you will be fasting). These should not be taken on the day of surgery. Your surgeon and anaesthetist should be made aware that you take these medications and will provide instructions for you, leading up to the operation. Many complementary medicine treatments can affect blood clotting so please inform your surgeon if you are taking any of these.

You will also have special stockings to help prevent blood clots in the legs and usually an injection of a drug (heparin or clexane) into the abdominal/thigh skin to reduce the risk of blood clots causing deep vein thrombosis (DVT) or pulmonary embolism.

During the neck dissection operation

Your surgeon will see you just before going into the operating theatre and will mark the site of the proposed operation. Any final questions can be asked at this time.

A neck dissection is performed under a general anaesthetic so you will not be awake during the procedure. Once you are asleep, local anaesthetic will be injected into the area of surgery to provide additional comfort after the operation.

The procedure starts by making an incision in the neck and possibly extending inconspicuously onto the face just in front of the ear.

The extent of surgery may be influenced by the severity of the melanoma as well as the site of the primary melanoma. In some instances, the parotid gland may also need to be removed. It is now accepted that in most patients it is safe to preserve important structures that help with normal function in the neck area. These include the accessory nerve (which helps to shrug the shoulder), the internal jugular vein (which returns blood back to your heart) and the sternocleidomastoid muscle (which gives shape to the front of the neck).

After the incision is made, the blood vessels, muscles and nerves of the neck can be exposed, allowing removal of the diseased and at-risk lymph nodes and surrounding fatty tissue. Minor skin nerves (for sensation) are usually removed or cut during the operation which results in numbness of the skin on that side of the neck, upper chest around to the upper back and the ear area. The numbness often improves with time but can be permanent. The wound is then closed using stitches and/or staples and a dressing is applied. The procedure generally takes 120 to 180 minutes.

Any large wound produces fluid (like that in a blister) so a surgical drain is usually placed to collect this. The drain is a soft flexible silicone tube that is connected to a suction bottle and will be checked frequently after the operation and changed as required by the nursing staff. This will generally be in place for several days but sometimes longer after the operation.

After the operation, a pathologist assesses the tissue removed from the neck. The detailed pathological examination of this tissue takes about seven working days. Following examination, the pathologist will write up their findings in a report and send this to your doctor. Information from this report is important regarding your ongoing care and may determine the need for radiotherapy and other treatments.

Parotidectomy

The parotid gland is a salivary gland that is situated in front of the ear on the side of the face. Occasionally there is either evidence of melanoma or a significant chance there is melanoma in the lymph nodes in the parotid gland. In this situation, in addition to the neck dissection, a parotidectomy (removal of the superficial or total parotid gland) is also performed. This adds extra time to the surgery and increases the risks of complications.

The main risk is affecting the function of the facial nerve. The facial nerve runs through the middle of the parotid gland and is very fragile. The facial nerve is important for controlling the facial muscles on that side of the face. The facial nerve, when protected by careful surgery, will function normally afterwards or may have temporary dysfunction which will recover over a few weeks. Rarely, if the melanoma involves the facial nerve it may have to be partially or totally divided. This results in lack of movement in some or all of the muscles on that side of the face.

Immediately after the operation in hospital

After surgery you will be taken to a recovery ward that is specially equipped and staffed to monitor patients post-operatively. Pain relief and anti-nausea medication will be provided as necessary. It is important to inform the recovery staff if you are in pain or feel sick so that more medication can be given.

The days after the operation

Nursing staff will encourage you to be out of bed and move around very soon after the operation. The benefit of this includes improved breathing and a reduced risk of blood clots (deep vein thrombosis [DVT] and pulmonary embolus). You can eat and drink as soon as you are able after the operation but the neck is often tender and eating may be slightly uncomfortable. The drain will be checked frequently and the reservoir emptied or replaced as required.

Most patients, depending on their level of fitness and home circumstances, spend one or two nights in hospital and then go home with the drain in place. The nursing staff will train you in drain care and arrange follow-up with community nursing prior to you leaving hospital. At the time of discharge a prescription for pain medication and possibly antibiotics will be provided. If there are stitches and/or staples in the wound, these will be removed usually 10–14 days after the surgery.

Possible side effects

Most people cope with the operation very well and have only minor problems. The most common problems relate to prolonged lymph drainage, fluid collection in the neck or minor wound infections. These problems are usually managed simply, without needing re-admission to hospital.

Your surgeon will have discussed the benefits and the risks of the procedure at your pre-operative consultation and this document is not intended to replace that discussion. However, in broad terms possible side effects are as follows:

Early side effects

Common:

- Numbness around the wound and the neck area, minor wound infection, small haematoma (blood collection) or seroma (lymph fluid collection).
- Shoulder and/or neck stiffness, usually improving over 3–6 weeks. This sometimes requires physiotherapy.

Uncommon:

- Excessive bleeding needing re-operation, major wound infection requiring re-operation.
- Deep vein thrombosis (clots in the veins), pulmonary embolism (clots in the lungs).
- Possible facial nerve palsy. This is most common if a parotidectomy is performed with the neck dissection. Part of the facial nerve can be affected with full neck dissection, especially the part that supplies the movement of the lower corner of the mouth. Most often this nerve will recover over a few months, but it can be permanent.
- Damage to nerves supplying muscles.
- Chyle leak can occur, which means milky fluid comes out in the drain for some days. It usually settles if a low-fat diet is used.

Late side effects

Common:

- Scar at site of incision.
- Numbness around wound and in the neck.
- Seroma (fluid collection) in wound.

Uncommon:

- Large seroma (fluid collection) requiring repeated drainage or new drain insertion.
- Neuralgic (nerve-related) pain in the arm or axilla.
- After a parotidectomy it is possible to get a sweating sensation on the side of the face after eating. This is called post-gustatory sweating (Frey's Syndrome).

Lymphoedema

Lymphoedema is swelling due to retained lymphatic fluid. It is rare after neck dissection but if both sides of the neck have to be operated on the face can swell. It usually resolves. Areas of the neck can get thickened and woody feeling. This is in part lymphoedema in these tissues. Lymphoedema mostly happens within 12 months of melanoma surgery but may occur many years later.

Further reading

Read our Lymphoedema Patient Information brochure on melanoma.org.au to find out more.

Recovery

Tiredness is common for a few days after surgery and you will need to take at least a week or two of leave from even the quietest of jobs. It is important to take life quietly and allow the area of surgery to heal. You may drive and resume normal activities when you feel confident of full control. Because of stiffness in the neck area, it may take quite a few weeks to feel safe. It may be beneficial to check with your insurance company regarding their policy concerning “impairment to drivers”.

Most people recover well from neck dissection and return to their usual work and recreational activities after a reasonable period of time. The scar becomes less noticeable with time.

The surgery has taken place because of the excellent chance it will stop the melanoma progressing in the neck and reduce the risk of spread from the neck to elsewhere in the body. However, it may not stop the melanoma recurring elsewhere in the body and ongoing, regular follow up will be necessary.

It is important to discuss any issues or questions you have about this procedure with your surgeon.

Exercises Following Neck Dissection

Being physically active and exercising regularly is important for your physical health, your emotional wellbeing and your quality of life. Try to be active most days of the week – every day if you can manage. In the beginning, start slowly and listen to your body.

It is important to be mindful of your surgical site and move within the recommendations of your healthcare team. The aim is to reap the benefits of exercise without incurring injury.

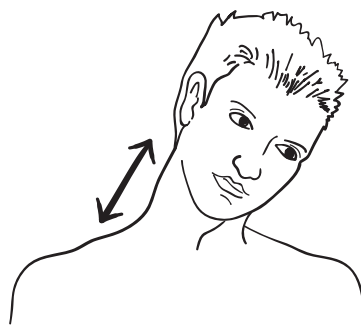
It is natural for your skin and muscles to feel tight after surgery. Gradual introduction to specific exercises will help prevent stiffness and will improve your movement.

These exercises are designed so that you can perform them at home. The frequency and duration of the exercises are individualised for you by your physiotherapist, and this decision will be made based on the extent of your surgery, possible complications and your fitness level. All movements should be performed within your comfort levels. This is to ensure that you do not place unnecessary tension on your new surgical incision site and increase leakage from your wound or drain site. If you experience strong pain, cease the exercises and notify your health care professional at your next appointment.

Early exercises (when drains are still in)

1. Head tilt

Sitting down, look straight ahead and tilt your head towards one side until a mild pull is felt in the opposite side of your neck, gently stretching the affected area. Repeat 5 times, 3 times per day.



2. Deep neck flexor strengthening

Sitting down, look straight ahead and gently draw your head back pretending you are holding a ripe peach under your chin. Do not tip head forwards. Keep neck and back straight. Hold end position for 5 seconds and repeat 5 times, 3 times per day. This exercise can also be performed lying down on your back with head supported.



3. Drawing down bottom lip

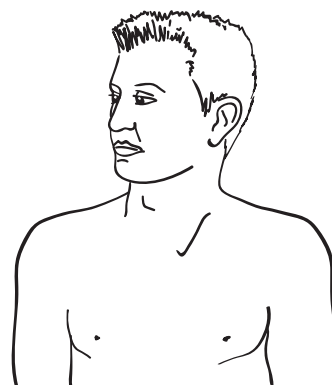
Do this in front of a mirror. Show your bottom teeth. Turn the bottom corners of your mouth down by using the muscles underneath your lower lip. Repeat 5 times, 3 times per day. Do not be concerned if there is asymmetry present. This usually improves with time.



Exercises after drains have been removed

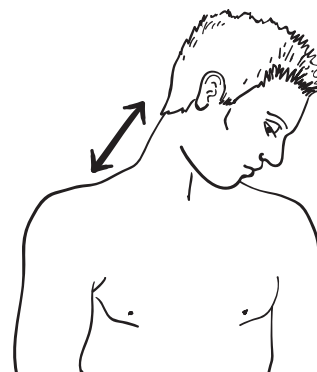
4. Neck rotation

Sitting down, keeping your back straight and facing the front, turn your head to one side as far as you can comfortably go. You can also perform this exercise lying down with your head supported. Repeat for both sides. Repeat 5 times each side, 3 times per day.



5. Neck stretch looking down

Sitting down, keeping your back straight and facing forwards, look down towards your armpit on the opposite side to your surgery. You should feel a gentle stretch in your affected neck area. Hold for 5 seconds. Repeat 3 times, 3 times per day.



6. Neck extension

Sitting down, keeping your back straight and facing the front, support the back of your head with your hands and look up. You should feel a stretch at the front of your neck. Repeat 5 times, 3 times per day.

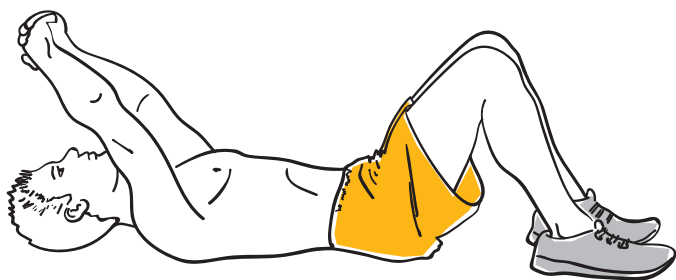


If you are unsure about your exercises, please ask to speak to a physiotherapist or your treating health professional. You may need to discontinue or reduce these exercises if the skin on your neck becomes fragile during radiotherapy.

If you are having trouble with lifting your arm up after your operation, speak with your physiotherapist, who will modify these exercises to suit your needs.

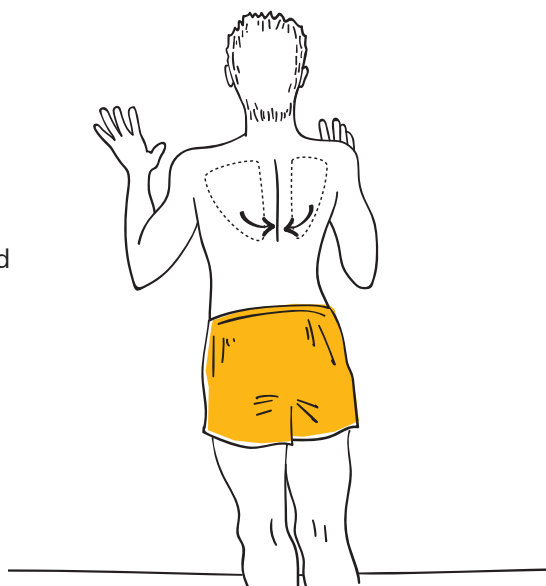
7. Arm lift

Lying on your back and keeping your shoulder blades in contact with the bed, raise your arm up and back towards your head. You can use your other hand to support the arm on your affected side, if necessary. Repeat 5–10 times, 3 times per day.



8. Wall push-ups

Standing up, place your hands up against the wall at around shoulder level. Feet should be shoulder width apart and about half a metre away from the wall. Keeping your back straight, push up against the wall gently drawing shoulder blades downwards and together. Do not arch your back. Repeat 10 times, 3 times per day.



Additional exercises may also be appropriate if there is a specific muscle or nerve problem. Please speak to your physiotherapist or health professional for further progression of exercises.

Please note: The information in this brochure is of a general nature and should not replace the advice of healthcare professionals. All care has been taken to ensure the information presented here is accurate at the time of publishing (August 2025).