Axillary Lymph Node Dissection

Patient information

What is an axillary lymph node dissection?

An axillary lymph node dissection involves the removal of all the lymph nodes and possible tumour-containing tissue from the armpit region.

Lymph nodes and the lymphatic system

The body's lymphatic system is a network of lymph nodes and lymphatic vessels running throughout your body that help to filter fluid out of the tissues. The lymphatic system plays a key role in your body's immune response to infection and tumours.

Melanoma cells can sometimes travel through lymphatic vessels to the lymph nodes or via the blood stream to other areas of your body. Lymph nodes filter the fluid (called lymph) running through your lymphatic vessels, enabling the body's immune system to respond to threats like infection or tumours.

Lymph nodes are commonly found grouped together, particularly in the neck, armpit (axilla) and groin. Nearly all parts of the body drain lymph fluid to a specific lymph node or nodes.

In most people with melanoma, there is no spread to other parts of the body. However, in a small percentage of cases, usually after the original melanoma is removed or in rare cases when the primary melanoma has not been found, melanoma can be detected as a lump in the lymph nodes by the patient or at a regular medical follow up examination or X-ray examination.

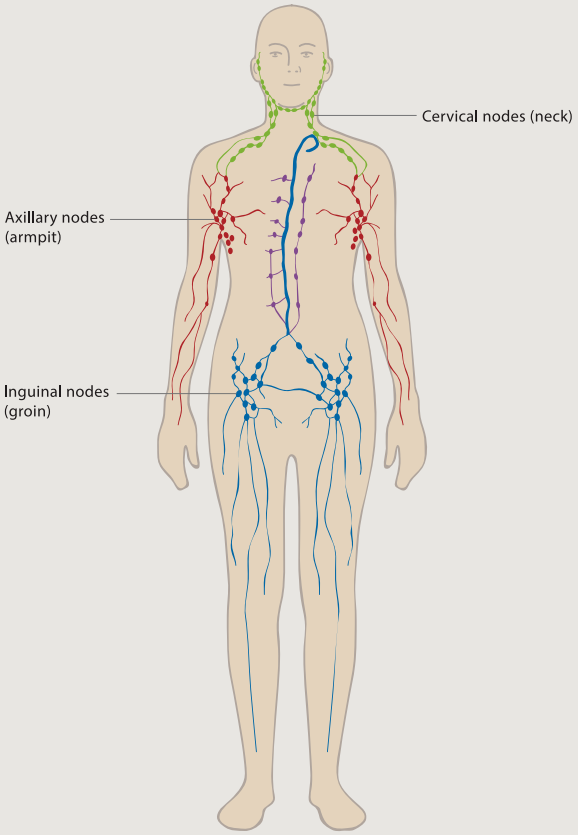

Diagram of the lymphatic system (reproduced with permission of Cancer Australia).

Melanoma Institute Australia

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In this situation, the standard treatment has been to remove all the lymph nodes in that area as often there is more than one lymph node involved. This operation is called a lymphadenectomy or therapeutic lymph node dissection (TLND). After recovering from this surgery, drug therapy (either immune therapy or targeted therapy) is often given. In some instances, patients will be referred to a medical oncologist and be given drug therapy before the surgery. This is known as neoadjuvant systemic therapy.

Therapeutic lymph node dissection

A TLND is a major operation that aims to control the progression of the melanoma in the lymph node region. After this type of surgery there are sometimes 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 axilla (or armpit).

Axillary 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 risking inhalation of this into the lungs when an anaesthetic is administered: 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 post-operative 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 diabetic tablets (as you will be fasting) and tablets that thin the blood, for example aspirin, ibuprofen, cartia, warfarin, clopidigrel, Xarelto (rivaroxaban), Eliquis (apixaban) and Prodaxa (dabigatran). Your surgeon and anaesthetist should be made aware that you take these medications and will instruct you on what to do leading up to the operation. A relatively new class of diabetic drugs that is very important to make your doctor aware of is the sodium–glucose cotransporter-2 (SGLT2) inhibitors such as Forxiga, Xigduo, Jardiance, Jardimet, Glyxambi and Steglatro.

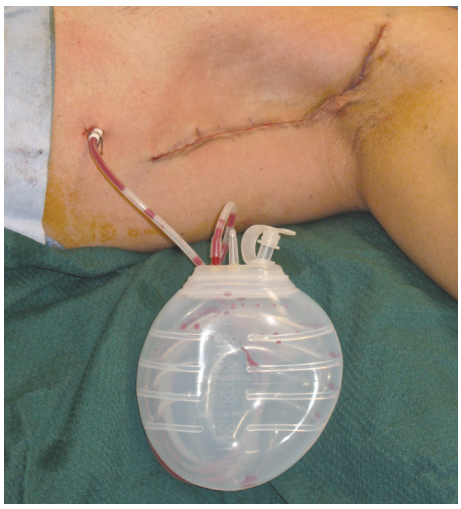
Many complementary medicine treatments can affect blood clotting so please inform your surgeon if you are taking any of these.

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 skin to reduce the risk of blood clots causing deep vein thrombosis (DVT) or pulmonary embolism.

During the 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.

An axillary 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.



Typical incision just after operation with a drain and its reservoir in place.

The procedure involves making an incision in the axillary skin. The blood vessels, muscles and nerves of the axilla can then be exposed, allowing a complete and relatively safe operation. There are several important structures that run through the axilla (arteries, veins and nerves) and the operation is planned and performed to remove all the lymph nodes and associated tissue without causing damage to the important structures.
A minor muscle (pectoralis minor) and small underarm skin nerves (intercostobrachial nerves) are usually removed as part of the operation. This results in numbness in the armpit and down the inside of the arm which is often permanent (but is usually not of particular concern to patients).

Any large wound produces fluid (like that in a blister) so a surgical drain is 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 and up to several weeks after the operation. The wound is then closed using stitches and/or staples and a dressing is applied. The procedure generally takes 60 to 90 minutes.

After the operation a pathologist assesses the tissue removed from the axilla. The detailed pathological examination of this tissue takes about seven working days. Information from this analysis is important regarding your ongoing care and may determine the need for drug therapy, radiotherapy and other treatments.

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

There are benefits of being out of bed and moving around soon after an operation. These include improved breathing and a reduced risk of blood clots (deep vein thrombosis and pulmonary embolus). For this reason, the nursing staff will encourage you to mobilise as early as comfort allows.

A sling may be provided to rest the arm and act as a reminder to limit shoulder movements. You can eat and drink as soon as you feel like it after the operation. 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 its care and arrange follow-up prior to leaving hospital. At the time of discharge a prescription for analgesia and possibly antibiotics will be provided. If there are stitches and/or staples in the wound, these will need to be removed after 10–14 days.

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 of your arm. For most people this takes a couple of weeks, sometimes longer. It may be useful to check with your insurance company regarding their policy concerning “impairment to drivers”.

Possible side effects

Most people cope with the operation very well and have few problems. The most common problems relate to prolonged lymph drainage, fluid collection in the axilla, 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, possible side effects are as follows:

Early side effects

Common:

- Numbness around the wound and inner upper arm, minor wound infection, small haematoma (blood collection) or seroma (lymph fluid collection).
- Shoulder 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).
- Damage to nerves supplying muscles or damage to blood vessels.

Late side effects

Common:

- Scar at site of incision.
- Numbness around wound and inner upper arm.
- Seroma (fluid collection) in wound.

Uncommon:

- Large seroma (fluid collection) requiring repeated drainage or new drain insertion.
- Lymphoedema (swelling of the arm).
- Neuralgic (nerve-related) pain in the arm or axilla.

Lymphoedema

Lymphoedema is limb swelling due to retained lymphatic fluid. It occurs in about 10% of patients that have this operation. If it does happen, there is obvious fluid retention in the limb that may create problems using the limb. It isn't usually painful unless there is infection present, though it may be uncomfortable.

Lymphoedema mostly happens within 12 months of melanoma surgery but may occur years later. It may be precipitated by trauma to the arm, especially if there is penetrating injury to the skin and infection occurs.

If lymphoedema does occur, active and ongoing therapy, sometimes with compression bandaging, garments and manual lymphatic drainage techniques, is required. This would require referral to a specialist lymphatic therapist. Often a lymphatic therapist is seen before surgery to make a baseline assessment so early lymphoedema changes can be detected after the operation.

Further reading

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

Recovery

Most people recover well from axillary dissection and are able to return to their usual work and recreational activities after a short period of time. The scar under the arm becomes less noticeable with time. Regular checks for progress on healing and possible melanoma recurrence will be performed.

The surgery has taken place because of the excellent chance it will stop the melanoma progressing in the axilla and reduce the risk of spread from the axilla 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.

You may have had radiology scans (usually whole-body PET/CT scan and MRI brain) prior to surgery and you are likely to have these scans repeated at intervals for some years. Most patients with lymph node disease see a medical oncologist to discuss drug treatment. This might be before or after surgery. Clinical trials evaluating the best treatment strategies are ongoing and you might be invited to participate in a clinical trial.

It is important to discuss any issues raised by reading this information brochure with your surgeon.

Typical scar after two years.

Exercises Following Axillary 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.

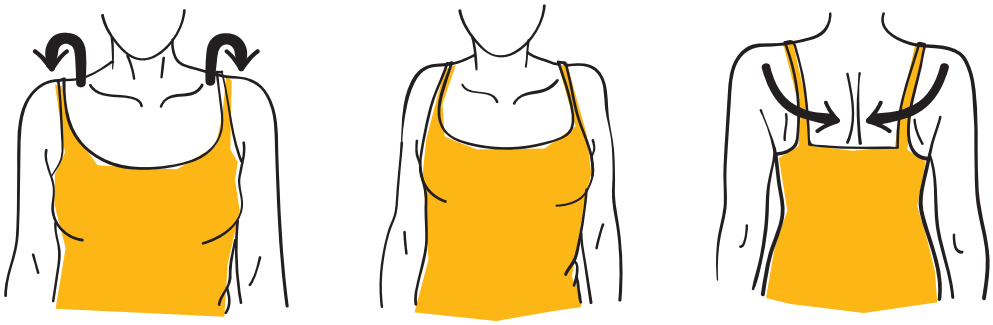
These exercises are designed so that you can perform them at home. The frequency and duration of the exercises are individualised for you by your physiotherapist, and this decision will be made based on the extent of your surgery, possible complications and your fitness level. All movements should be 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 while you are in hospital

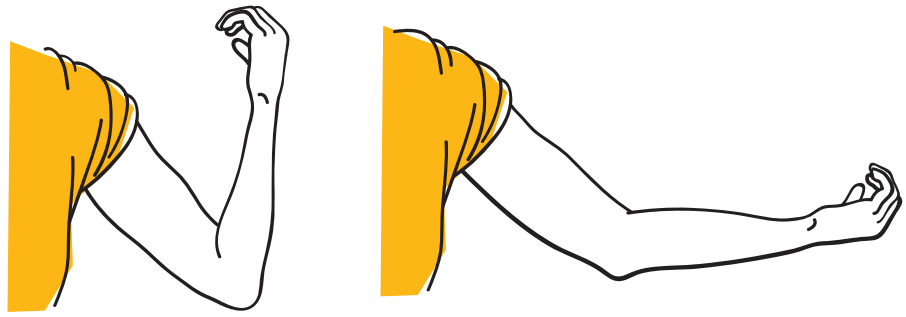
You will have some drains exiting from the side of your chest near the armpit after your surgery. You may find these drains restrict your arm movement initially, especially above your shoulder level. Please take care to move within your limits of discomfort. Elbow and hand movements are unrestricted. Exercises can be performed for 10-20 repetitions, 3-4 times per day.

1. Shoulder circles

Slowly lift shoulders up, back and down in a circle, gently opening chest.



2. Elbow bend and straighten



3. Fist open and close

If you are unsure about your exercises, please ask to speak to a physiotherapist or your treating health professional.

Exercises when you are home

You may still have the drains in place when you go home from hospital. Take care to slowly increase the frequency and intensity of exercise until the drains are removed. Exercises can be performed for 10-20 repetitions 3-4 times per day.

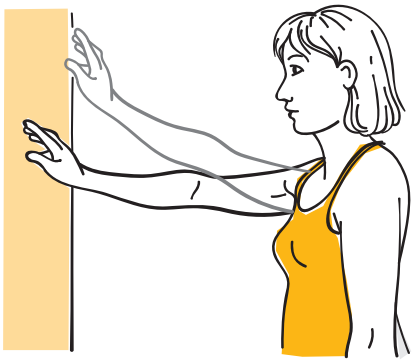
4. Arm lift

Lying on your back with your knees bent, hold onto a long stick or clasp your hands together.

Use your unaffected arm to assist your affected arm to lift up in an arc to shoulder height or beyond. The movement range will depend on the limits posed by your drain and your level of comfort. Once the drains are removed, aim to take your arms all the way back to the pillow. You should feel a stretch under the armpit.

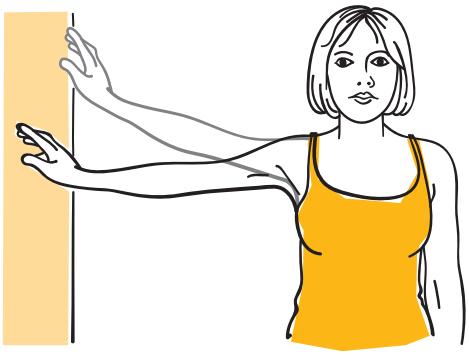
5. Walk fingers up the wall (facing wall)

Walk your fingers slowly up the wall. Aim for full range of movement once the drains are removed, otherwise, take your fingers as high as your drains permit. Relax your shoulders, then slowly walk your fingers down. You should feel a stretch under the armpit. Do not arch your lower back.



6. Walk fingers up the wall (to side)

Walk your fingers slowly up the wall. Aim for full range of movement once the drains are removed, otherwise, take your fingers as high as your drains permit. Relax your shoulders, then slowly walk your fingers down. You should feel a stretch under the armpit. Do not arch your lower back.

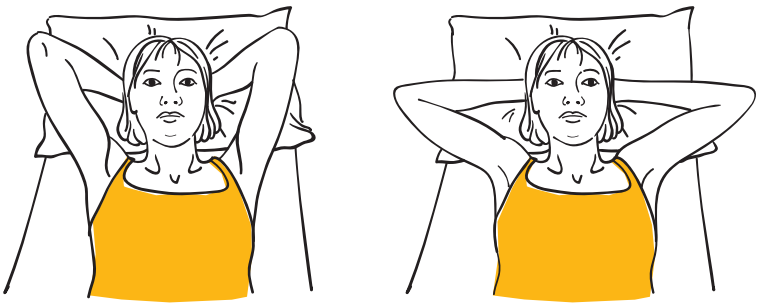


Advanced exercises (after drains have been removed)

The exercises should be slowly progressed to an advanced level once your drains have been removed. It is expected that you will regain normal shoulder movement within 4–6 weeks after removal of drains. You may still feel stiff in your movement so these exercises may need to be continued. Please note these exercises are to be used as a guide only. Aim for 3×10 seconds of gentle stretch, 3 times per day.

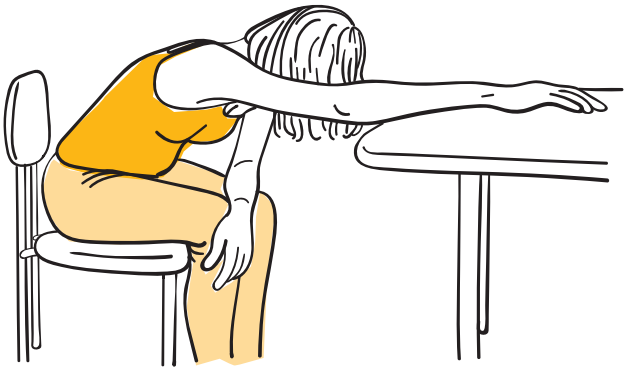
7. Shoulder rotation

Lie on back with knees bent (as in Exercise 4). Place hands behind head and gently allow your elbows to drop towards the bed, stretching your chest and armpits.



8. Armpit stretches

Similar to those exercises in 5 and 6 but seated in front of a desk, lean forward and walk your fingers forward towards the end of your range. You can also vary the angle of pull in the armpit by changing your hand position on the desk.



Strengthening exercises may also be appropriate once full range has been achieved. 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).

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