PROCEDURE

Neck dissection

Neck dissection is surgery to remove lymph nodes and nearby tissue from the neck.

PURPOSE
Remove lymph nodes containing or at risk of cancer

PROCEDURE TYPE
Therapeutic surgical procedure through an incision

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General anaesthesia

HOW LONG IT TAKES
2-4 hours; longer with other cancer surgery

PREPARATION
Fasting and an individual medication plan

RECOVERY
Overnight to several days; no driving until cleared

MAIN RISKS
Bleeding, infection, nerve injury, lymph-fluid leak

RESULTS
Several days or longer, after pathology review

Overview

A neck dissection is an operation to remove lymph nodes from one or both sides of your neck. Lymph nodes are small parts of the immune system that filter lymph fluid. Cancer cells can travel to these nodes from the mouth, throat, voice box, thyroid, salivary glands, skin, or other areas.

The surgeon removes groups of nodes rather than individual lumps. The operation may be performed alone or at the same time as surgery to remove the original cancer.

The amount of tissue removed is based on where cancer is found and where it is likely to spread. A selective neck dissection removes certain groups of lymph nodes while preserving others. A modified radical neck dissection removes more node groups but preserves at least one major non-lymphatic structure. A radical neck dissection also removes the spinal accessory nerve, internal jugular vein, and sternocleidomastoid muscle on that side. Radical

surgery is used only when this wider removal is necessary.

Why the procedure is performed

A neck dissection may be recommended when tests show cancer in one or more neck lymph nodes. It can also be used when no abnormal nodes are visible but the type, size, or location of a cancer creates a meaningful risk of hidden spread.

The operation has two related purposes. It treats the neck by removing cancerous or at-risk nodes. It also provides tissue for detailed laboratory examination. This can show how many nodes contain cancer and whether cancer has grown through a node's outer covering.

These findings help your healthcare team decide whether you may benefit from further treatment, such as radiotherapy or treatment combining radiotherapy with chemotherapy.

Who should and should not have it

You may be offered a neck dissection if cancer is confirmed or strongly suspected in your neck lymph nodes. It may also be considered as planned preventive treatment for cancers with a significant risk of microscopic lymph-node spread.

It is not automatically the right treatment for every head and neck cancer. Surgery may not offer enough benefit when the risk of lymph-node spread is low, when another treatment can control the neck effectively, or when cancer cannot be removed safely.

The operation may be avoided or delayed if you have an uncontrolled infection, an unstable heart or lung condition, or a bleeding problem that cannot be managed safely. Medicines that affect clotting require an individual plan rather than automatically ruling out surgery.

Previous neck surgery or radiotherapy does not always prevent a neck dissection, but it can make the operation and healing more complex. Your surgeon should explain the expected benefit, the planned extent of surgery, and which nerves, muscles, or blood vessels may need removal before you consent.

How to prepare

Your treating facility's own instructions take priority because fasting times, medication plans, and admission arrangements differ.

You will usually have a preoperative assessment. This may include blood tests, an

electrocardiogram, imaging, and a review of your general health. Tell the team about all prescription medicines, over-the-counter products, supplements, allergies, previous anaesthetic problems, and any chance of pregnancy.

Ask specifically about blood thinners, including anticoagulants and antiplatelet medicines. Do not stop them without an agreed plan. You may also need instructions about diabetes medicines.

You will be told when to stop eating and drinking before general anaesthesia. Arrange transport home and help during your early recovery. Smoking can impair wound healing; your team can offer support if you want to stop or reduce smoking before surgery.

Contact the surgical team before admission if you develop a fever, significant respiratory illness, skin infection near the operation site, or another new health problem.

What happens during the procedure

You will be asleep under general anaesthesia. The anaesthesia team monitors your breathing, heart rate, blood pressure, and oxygen level throughout the operation.

The surgeon makes an incision across the side of your neck, often following a natural skin crease. The exact shape is based on which lymph-node groups must be reached and whether another operation is being performed at the same time.

The surgeon separates and removes the planned lymph-node tissue. Important nerves, muscles, and blood vessels are preserved whenever this can be done without compromising cancer treatment. If cancer involves one of these structures, removing it may be necessary.

One or more drains may be placed beneath the skin. A drain is a thin tube that removes blood and lymph fluid into a small container. The incision is then closed with stitches, clips, or surgical adhesive.

The removed tissue is labelled and sent to a pathology laboratory for examination under a microscope.

Recovery and what to expect afterward

Pain is usually described as soreness, tightness, or pulling around the incision. You will receive pain relief. Numbness around the ear, jaw, or neck is common because small skin nerves are cut during surgery. Some numbness can last.

You may be able to drink and eat soon after you are fully awake. Swallowing can feel

uncomfortable, especially if you had throat or mouth surgery at the same time. Your team may start with softer foods or arrange a swallowing assessment when needed.

Gentle walking is encouraged to reduce stiffness and the risk of blood clots. Avoid strenuous exercise, heavy lifting, and forceful neck movements until your surgical team says they are safe. Shoulder exercises or physiotherapy may help if the spinal accessory nerve was handled or removed.

Do not drive yourself home. Return to driving only when you can turn your head safely, perform an emergency stop, and are no longer taking medicine that impairs alertness. Follow any specific restriction from your surgeon or insurer.

Going back to work may take a few weeks, but the timing is influenced by the operation's extent, your job, and whether you are having other treatment. Desk work is often possible earlier than heavy physical work.

Drains are removed when the output has fallen to an acceptable level. This may happen before discharge or at a follow-up visit.

Risks and possible complications

All surgery carries risks from anaesthesia, bleeding, infection, blood clots, and wound-healing problems. Neck dissection also has risks related to the structures running through the neck.

Possible complications include:

Some nerve problems are temporary because a preserved nerve has been stretched or handled. Others can be permanent, especially if a nerve had to be removed with cancer. Ask which structures are most at risk in your planned operation.

- Shoulder weakness, pain, or reduced movement from accessory nerve injury
- Lower-lip weakness if a facial nerve branch is affected
- Changes in voice, swallowing, tongue movement, or breathing from nerve injury
- A lymph or chyle leak, particularly after surgery low in the left neck
- Fluid collection, persistent swelling, or neck lymphoedema
- Injury to a major blood vessel, with serious bleeding or stroke
- A noticeable scar or changes in neck shape

Results and follow up

The surgeon may explain what was seen during the operation, but the final result comes from pathology. The report usually takes several days and sometimes longer if special tests are needed.

The report describes how many lymph nodes were removed, how many contained cancer, the size of any deposits, and whether cancer extended outside a lymph node. These findings are considered alongside the original tumour and previous treatment.

At routine follow-up, the team checks the incision, removes drains or clips when needed, reviews shoulder and nerve function, and discusses the pathology. You may be referred for physiotherapy, lymphoedema care, speech and swallowing therapy, radiotherapy, or medical cancer treatment.

Long-term follow-up may include examinations and imaging to watch for recurrence and manage lasting effects of treatment.

Alternatives

The alternatives depend on the cancer type, its location, and whether lymph-node spread has already been confirmed.

Careful observation with examinations and imaging avoids immediate surgery. It may be reasonable when the risk of hidden spread is low. The trade-off is that imaging can miss microscopic disease, and later treatment may be more extensive if cancer appears.

Sentinel lymph-node biopsy removes the first node or nodes likely to receive cancer cells. It is a smaller operation used for selected cancers, including some early oral cavity cancers and melanomas. It provides less information about the whole neck, and a positive result may still lead to neck dissection.

Radiotherapy can treat lymph nodes without an incision. It does not provide a complete surgical pathology result and may cause long-term effects such as dry mouth, swallowing difficulty, skin changes, or tissue stiffness.

Systemic treatment , such as chemotherapy, immunotherapy, or targeted therapy, may be used for certain advanced or recurrent cancers. It is not usually a direct substitute for removing operable lymph-node disease.

A needle biopsy can confirm whether a suspicious node contains cancer, but it samples tissue rather than treating the involved lymph nodes.

When to call your healthcare team

For routine concerns, contact your surgical team during normal hours if pain is not improving, the wound becomes more red or tender, drainage develops, a drain stops working, or eating and drinking remain difficult. Also report increasing shoulder weakness or swelling that persists.

Seek urgent medical advice for a fever with worsening wound changes, rapidly increasing neck swelling, repeated vomiting, new voice or swallowing changes, or milky fluid collecting in a drain.

Call emergency services for difficulty breathing, heavy or uncontrolled bleeding, sudden one-sided weakness, severe chest pain, or loss of consciousness. Do not wait for a routine appointment for these symptoms.

Common questions

Will I be asleep?

Yes. A neck dissection is normally performed under general anaesthesia, so you will be unconscious and should not feel the operation.

Can I drive home?

No. You will need someone else to take you home. Do not drive until you can move your neck comfortably, react safely, and are no longer affected by sedating pain medicine.

How painful is it?

Most people have soreness, tightness, and stiffness rather than severe pain. Pain relief and early gentle movement usually help. Tell your team if pain is worsening instead of gradually improving.

When will I know the results?

Your surgeon may discuss the operation soon afterward. The full pathology result usually takes several days or longer and is reviewed at a follow-up appointment.

Will I have a visible scar?

Yes. The incision is usually placed along a neck crease when possible. It may look raised or red at first and often becomes less noticeable with healing.

Will my shoulder be weak?

Temporary weakness or stiffness can occur even when the accessory nerve is preserved. The risk is greater if that nerve must be removed. Exercises and physiotherapy can improve

movement and function.

Sources

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