

RECONSTRUCTIVE SURGERY: REGIONAL FLAPS

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 RECONSTRUCTIVE SURGERY USING REGIONAL FLAPS

- Surgery for head and neck cancer can lead to some major changes in the appearance of the head and neck, and in functions such as eating, speaking and breathing.

Reconstructive surgery:

- May be needed to rebuild the area, if a large amount of tissue or bone was removed during surgery.
- Will be planned by considering:
 - how best to protect vital organs, such as the food pipe and major blood vessels
 - what is safe
 - how to best to improve appearance following the surgery
 - how best to improve functions such as breathing, chewing and swallowing.

Regional flaps:

- Involve moving a piece of tissue from a part of the body that is near the head and neck, such as the chest. The tissue being moved is called a flap and is used replace the tissue taken away with the cancer.
- Have a blood supply (artery and vein) attached like a stalk to keep the flap alive, this is called a pedicle. The flap of tissue is moved to its new position with its blood supply still connected, rather than being completely detached.
- Can be used to repair large areas, where [local flaps](#) are usually used to replace smaller amounts of tissue. Regional flaps are different to '[free flaps](#)' because a regional flap does not need complex microsurgery to join the blood vessels. A regional flap is limited however, by how far it can be moved.

WHY IS RECONSTRUCTION SURGERY USING REGIONAL FLAPS NEEDED

- Reconstructive surgery is usually performed to replace tissue removed with a cancer.
- Reconstructive surgery can help repair the changes in appearance and in functions such as breathing, chewing and swallowing, caused by your surgery for head and neck cancer.
- Reconstructive surgery may be performed at the same time as the cancer removal, or at a later date. Your doctor will advise on the surgeries planned for you.

Visit the [Beyond Five website](#) for further information about the specific surgery to remove a particular cancer and what to expect.

HOW TO PREPARE FOR THE OPERATION

Before the operation:

- You will need to fast (have nothing to eat or drink) for 6 hours before your operation (unless advised differently by your surgeon or anaesthetist) because reconstructive surgery 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.
- 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 [cancer care team](#) about any likely side effects to expect following the operation, such as speech and swallowing. You may find it useful to talk to a dietitian, speech pathologist or specialist head and neck nurse about these issues.

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

WHAT TO EXPECT DURING THE OPERATION

- **Regional flap surgery involves:**
 - Removing the cancer in the head or neck, unless this was done in an earlier surgery.
 - Preparing the flap from a part of the body close to the head and neck region. The flap may be taken from the head, shoulder, chest or back. Often the flap includes a piece of skin with some other tissue like muscle underneath, for example the pectoralis major muscle from the chest is often used.
 - The flap is left attached to its blood supply on a small stalk containing the artery and vein, and then turned into the wound needing repair.
 - The area where the flap was taken from (donor site) may be closed with sutures or may need a [skin graft](#) to help it heal more quickly.
- If the reconstructive surgery involves areas such as the mouth, jaw bone, neck or throat, a [tracheostomy](#) (or opening) may be made in the windpipe assist with breathing.
- Reconstructive surgery may be done at the same time as the primary operation for the removal of the cancer.

Visit the [Beyond Five website](#) for further information about the particular surgery you are having for your cancer.

WHAT TO EXPECT AFTER THE OPERATION

- After the operation, you will be moved to a bed in a hospital room where you will begin your recovery. If the regional flap was part of a major operation you may be moved to the intensive care unit.
- Your treatment team will carefully look after and check the blood supply of the flap by:
 - checking the **colour and warmth** of the flap
 - pushing on the flap to see if the **blood is flowing in and out** (capillary refill)
 - **scratching the skin to see if the flap bleeds.**
- You will have surgical drains from the site of the operation to allow blood or 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 provide fluid and a feeding tube to help you receive nutrition. The drips and tubes will be removed when they are no longer needed and before you go home.
- Most patients have a regional flap as part of a larger operation and stay in hospital for around 1–2 weeks.

POSSIBLE RISKS OF RECONSTRUCTIVE SURGERY USING REGIONAL FLAPS

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.

Reconstructive surgery is very safe but there are some specific risks you should know about:

- **Flap death:** If the flap does not have a good blood supply, it may not survive (called flap failure). If this happens the dead tissue may need to be removed (debrided) and the wound dressed for several weeks. Often further reconstructive surgery may be needed.
- **Wound separation:** The flap may pull away from the tissue it was stitched to (called wound dehiscence). This makes a hole which may need to be corrected with more surgery.

The risk of flap problems is increased:

- In patients with diabetes, those who smoke and patients with vascular disease
- When wounds get infected
- When the wound is very tight.

SIDE EFFECTS AND THEIR MANAGEMENT

As with all operations, there is a chance that reconstructive surgery using regional flaps 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 reconstructive surgery using regional flaps 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.
- **Infection:** There is a risk of infection with any surgery. Antibiotics will be used to reduce the risk of infection.
- **Pain management:** 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](#).

Some people undergoing regional flap reconstructive surgery **may also experience:**

- **Changes in appearance:** Your appearance may change and it may be hard to accept. Seek support from the cancer care team, and family and friends. Contacting other patients may also assist.
- **Changes in eating and speaking:** Reconstructive surgery using regional flap may affect eating and speaking so it may be useful to have a tablet/portable device or pen and paper to write down what you want to say. The speech pathologist and dietitian will provide any assistance needed to help with your speaking and eating during recovery

There are also side effects for the surgery to remove your cancer, if this is done at the same time as the reconstructive surgery.

Visit the [Beyond Five website](#) for further information about side effects for the particular surgery you are having for your cancer.

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](#).
- Your doctor will advise you about any particular symptoms you should look out for such as swelling that is very noticeable, difficulty breathing or swallowing, fever or discharge from the wound, and what you should do.
- You will be assessed by the team involved in your care before you go home and follow up 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:** There may be some mild swelling after the operation. This is normal and may last for some weeks. However, if this becomes very noticeable and painful, contact the surgeon, your family doctor or the hospital.
- **Discharge from the wound:** If the wound becomes red, hot and starts to discharge you may have an infection and should contact the surgeon or your family doctor, as you may need antibiotics. If your wound discharges a clear fluid this may just be saliva.
- **Fever:** If you develop a fever contact your surgeon or your family doctor.

FOLLOW-UP CARE

- After your operation, you will continue to have regular follow-up visits with your specialist doctor and cancer care team to assess your progress. This might include removing sutures and redressing the wound or graft. Most patients with head and neck cancer will be monitored for five years after surgery, sometimes more.
- Other referrals will be arranged as needed with other health professionals to assist you with any other difficulties.
- 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 to 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 will happen if I decide not to have the surgery?
- Will the reconstructive surgery take place at the same time as the tumour removal?
- Will there be any side effects from where the flap has been taken?
- Are there any things I will find more difficult to do as a result of the flap?
- Will I be able to feel the skin of the flap?
- What will happen if the flap dies? Is there anything I can do to reduce this risk?
- How long will I be in hospital and how long do I need off driving, work and experience?
- Will I have a scar?
- Will I be able to lead a normal life?
- Who are the health professionals I will need to see as part of my follow-up care?
- How much will the surgery cost? Will my health insurance cover it?
- If I wanted to get a second opinion, can you provide all my medical details?

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

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