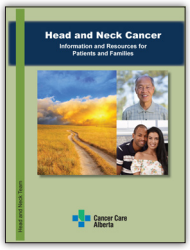
Surgery for Head and Neck Cancer

Information and Resources for Patients and Families

Head and Neck Team

Cancer Care Alberta

Welcome to this Head and Neck Cancer Surgery book.



This book will help you prepare for and go through **head and neck cancer surgery**. It has information about how to prepare for surgery and how to manage concerns both in hospital and at home. **It is meant to be used with the Head and Neck Cancer: Information for Patients and Families** book, which we just call the "general Head and Neck Cancer book" throughout this resource. You will need to use both books as you move through your treatment(s).

It is important to think about your return to home after surgery or other treatment and make sure you have supports in place. If you have any concerns about your home situation, let your healthcare team know as soon as possible so they can help you find solutions.

You don't have to read the whole booklet at once!

Read the sections you want to know more about, only when you need them.

This book will help you, and your family and friends understand basic information about head and neck surgery.

Read about:

- types of surgery used for head and neck cancer
- how to manage the possible side effects with the help of your cancer care team
- what exercises will help after surgery and how to do them

Bring this book to all of your appointments

Write your questions down in the book. If there's any information you do not understand, ask your healthcare team to review it with you.

Scan for a digital copy and click directly on website links:

SCAN ME

For more information:

This book, along with other Alberta cancer care resources are available at your cancer centre or online at:

www.cancercarealberta.ca

Find community support resources with **Alberta 211**
www.ab.211.ca 211

Your healthcare team is here to help you and answer your questions.
For urgent concerns, call your surgeon's office.

Health Link is also available 24 hours a day for health information, advice or concerns. 811

You can use the free AHS **My Care Conversations** app to prepare for your next appointment and to audio record conversations with your healthcare team. You can listen to your recordings at home and share with family or trusted friends. Download it from the App Store or Google Play.

What You Will Find Inside

My Surgical Plan - Diagnosis and Contacts

My Diagnosis

Type of Cancer _____

Approach: ☐ Transoral ☐ Open (page 2)

(You may have to complete the approach after surgery, as sometimes decisions are made during surgery)

Type of Surgery:

- ☐ Tumour Excision
- ☐ Glossectomy
- ☐ Tonsillectomy
- ☐ Maxillectomy
- ☐ Mandibulectomy
- ☐ Laryngectomy

Circle or mark the areas or body parts that will be affected for you on pages 7-10

Reconstruction (flap approach): (page 5)

- ☐ Local or regional flap
- ☐ Free flap (tissue taken from other parts of body)

Type of Flap:

- ☐ Radial Forearm Flap (page 38)
- ☐ Fibula Flap (page 39)
- ☐ Anterolateral Thigh Flap (page 40)
- ☐ Latissimus Dorsi Flap (page 41)
- ☐ Pectoralus Major Flap (page 41)
- ☐ Scapula Flap (page 42)
- ☐ Medial Sural Artery Flap (page 43)

Neck Dissection: (page 3) ☐ Yes ☐ No **Tracheostomy:** (page 21) ☐ Yes ☐ No

Other Possible Procedures:

- ☐ Hearing test (audiogram) Date: _____
- ☐ Biopsy Date: _____
- ☐ Imaging (CT / PET / Panorex) Date: _____
- ☐ Dental Appointment Date: _____

Surgical Contacts (for additional contact space, use the general Head and Neck book)

Surgeon: _____

Office Number: _____

Urgent Contact Number (given by your surgeon):

Nurse(s): _____

Pre-Admission Clinic Phone: _____

Date: _____

Hospital phone number: _____

Respiratory Therapist: _____

My Surgical Plan - Preparing for Before and After Surgery

Preparing for Surgery and Procedures

Day Before:

☐ **On the day before** your surgery, call _____ to find out when to be at the hospital. **Note:** If your surgery is on a Monday or the Tuesday of a long weekend, call us the Friday before.

☐ Someone from the hospital will call you. **Note:** If your surgery is on a Monday or the Tuesday of a long weekend, someone will call you on the Friday before.

Day Of:

☐ I need to be at the hospital at _____ (time).
☐ I need to go to _____ (location).

Preparing:

Eating and Drinking Before Surgery – I have a handout ☐ Yes ☐ No

Help at Home I have help for 6 weeks at home after surgery
☐ Yes ☐ No (if no, talk to your healthcare team to plan ahead).

Other _____

_____

After Surgery

Drain: ☐ Yes ☐ No Splint: ☐ Yes ☐ No

☐ I know when I can shower: _____

☐ I know when I can drive again: _____

☐ I know when I can go back to work: _____

☐ I know what exercises I should do ☐ Yes ☐ No

Person Picking Me Up: _____ Phone: _____

Follow-up Appointment:_____

Referrals: Home Care ☐ Yes ☐ No

_____

Other: _____

_____

A. Surgery for Head and Neck Cancer

Surgery can be an important part of treatment for head and neck cancer. As head and neck cancer is complex, a group of healthcare providers from different specialties (surgeons, radiation oncologists, medical oncologists, pathologists, nurse practitioners, and others) often come together to discuss cases and make recommendations on the best course of treatment for you.

When you meet with a surgeon, they may use a camera to look inside your nose, mouth and throat as part of their initial assessment. Your surgeon may take a small sample of cells from the lump or tumour. This is called a **biopsy**. The biopsy tissue is tested to see what kind of cells it is made of. If it is cancer and surgery is recommended for you, your surgeon will try to remove the tumour with a little bit of healthy tissue around it. During surgery, your surgeon may remove lymph nodes in your neck to see if the cancer has spread.

You may have surgery along with another form of treatment, such as radiation treatment or chemotherapy.

If your tumour is large, your surgeon may need to use tissue from another area of the body to rebuild the region (this is called **reconstruction**). They may use tissue that is close to the area of surgery or take some from different parts of your body. This is done to help you with important functions such as speaking and swallowing.

The kind of surgery you have, and the care you will need is specific to you, your health, and the type of surgery and cancer you have. Your surgeon will talk to you about your surgery and recovery. The next few sections (A1-A4) give you more detail on the different types of head and neck cancer surgery.

A1 Cancer Resection (removal)

When a cancer is treated surgically, the goal is to remove the entire cancer (or tumour). This usually involves removing the tumour with a small amount of healthy tissue. Depending on where your cancer is, this can include removing sections of the mouth, throat, sinuses, swallowing tube, or voice box. During the surgery, they may also remove any **lymph nodes** in the neck that the cancer may have spread to.

Our goal is to remove the cancer while taking as little healthy tissue as possible. Your quality of life is important. However, most often one or more structures need to be removed. Sometimes this means taking out part or all of your:

- ☐ tongue
- ☐ tonsil(s)
- ☐ inside of the cheek (buccal mucosa), gums, area behind your wisdom teeth, floor of the mouth, roof of the mouth (hard or soft palate), salivary glands
- ☐ jaw (mandible) - may include some teeth.

If your surgery creates a large defect in any of these areas, your surgeon will likely perform a **reconstruction** (see Section A2). This may involve moving tissue (skin, muscle, bone) into the area from:

- ☐ close by (**local or regional flap**) or
- ☐ from other parts of your arms, legs, or back (called a **free flap**)

Approach

We will talk with you about your options. Our approach depends on:

- the stage and grade of your cancer
- how far it has spread and
- how we can best remove it.

Your surgeon will have a plan, but they may need to make other surgical decisions during your surgery.

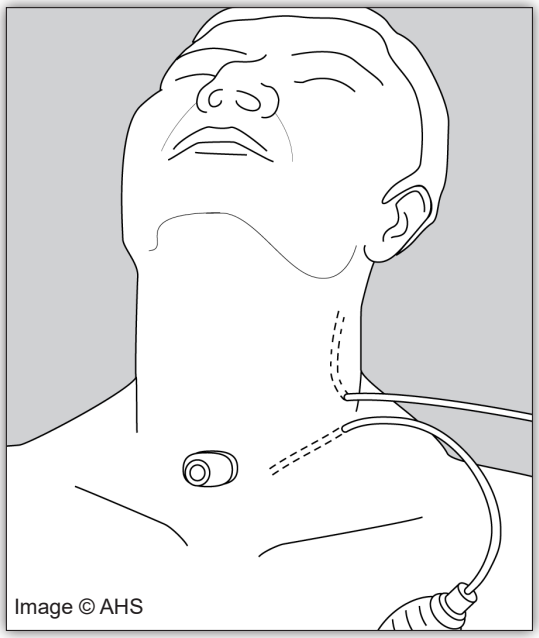


Image © AHS

There are 2 main approaches to surgery:

- ☐ **Transoral** - This is where the cancer and other tissue or structures are taken out through your mouth. Equipment such as a robotic arm or endoscope (tube with a camera to view inside) are used.
- ☐ **Open** - This is where an incision (cut) is made so the surgeon can see the area and remove the cancer and other tissue using a scalpel, laser or other tools.

Occasionally the approach to surgery will include **both** a transoral and open approach.

Common Procedures

Check off what you will have on My Plan (page A).

- **Tumour Excision** – Removing the tumour and surrounding tissue.
- **Glossectomy** – Removing part or all of the tongue.
- **Tonsillectomy** – Removing the tonsil(s).
- **Maxillectomy** – Removing part of the upper jaw.
- **Mandibulectomy** – Removing part of the lower jaw.
- **Laryngectomy** – Removing part or all of the voice box. Before your laryngectomy, a Speech Language Pathologist (SLP) will do a teaching session with you.
- **Tracheostomy** – A small opening through the front of your neck, into your trachea where a short tube is placed to help you breathe.
- **Neck Dissection** – Removing some of the lymph nodes in the neck and the surrounding tissue (see next page). This may include some or all of the structures below:
  - ✧ sternocleidomastoid muscle
  - ✧ internal jugular vein
  - ✧ submandibular salivary gland
  - ✧ spinal accessory nerve

Neck dissection

A neck dissection is surgery that removes lymph nodes and other tissue in your neck. Not everyone will need to have a neck dissection. If you have a very early stage cancer, you will not likely need a neck dissection. Your surgeon will recommend this surgery based on your test results.

Recommendations for a neck dissection often depend on:

- where the tumour is located
- how big or deep the tumour is
- if the cancer has spread to the lymph nodes

Do I have cancer in my lymph nodes?

It may not be possible to answer this until after your surgery since the lab needs to look at the lymph nodes using a microscope. Your healthcare provider will have already felt your neck to see if there are any lumps and you will have a special scan (CT, MRI or PET) to look more closely at the swollen nodes. These can:

- feel big or swollen if there is an infection in the area, so if you can feel a lump in your neck it does not necessarily mean your cancer has spread.
- feel normal and look normal on a scan if they only have small amounts of cancer cells

When will I have a neck dissection?

If you need one, you will have a neck dissection at the time of your surgery to remove the cancer. Your surgeon will make an incision in your neck. The cut usually follows a natural fold that is already in your neck skin (see the blue line in the picture on the right). Once the lymph nodes are removed, you will have:

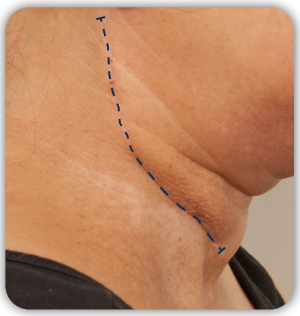


Image © AHS

- stitches or staples that may need to be removed 10-14 days after your surgery. Some stitches dissolve and do not need to be removed.
- 1 or more drains under the skin to collect any blood and fluid. They are usually removed within 1 week of surgery. If you are discharged home from hospital with drains still in place, a healthcare provider will show you how to take care of the drain(s).

For drain information go to page 2

What are possible complications?

Most of the problems with a neck dissection are the result of damage to one of two nerves:

- **Spinal accessory nerve** – While the aim of treatment is to completely remove the cancer, surgery involving the neck may cause some nerve damage. One important nerve that may be damaged during neck surgery is called the **spinal accessory nerve**. This nerve runs from the top to the bottom of the neck.

  The spinal accessory nerve provides the “power supply” to the large muscle at the back of your neck and shoulder, called the trapezius muscle. Damage to this nerve (from bruising or stretching) during the neck dissection will cause the trapezius muscle to stop working.

  The trapezius muscle supports and moves the shoulder blade to allow you to lift your arm

above your head. If the nerve is damaged, you may notice is that it is difficult to lift your arm. In some cases, it may take between 6 and 12 months for the nerve to recover and for the muscle to work properly again.

Sometimes, the lymph nodes cannot be completely removed without cutting this nerve. This is **very rare** but would result in permanent shoulder problems. A rehabilitation therapist will work with you during your hospital stay and teach you how to safely move your arm to protect your shoulder. If you experience pain and have difficulty moving your shoulder once you are home, **you should not lift more than 5 pounds** (2.2 kilograms). It is important to support your arm on an arm rest or table whenever possible to decrease the risk of a shoulder injury to your surgical side.

- **Facial nerve** – The facial nerve has 5 main branches and one of them makes your lower lip move. This branch can be bruised when lymph nodes close to it are removed. If this happens, the lower lip won't move properly and you may end up with weakness which will give you a crooked smile. Your smile may improve over time, but it can take many months, sometimes up to 2 years.

A2 Reconstruction

Reconstruction surgery can involve filling the space that was created from the cancer removal, or rebuilding the jaw bone or tongue. Often the initial reconstruction takes place at the same time as the cancer resection. Once your doctor decides you are cancer-free and have healed from your surgery, you may have options available to you for more reconstruction. Not everyone will need to have reconstructive surgery. It depends on where their cancer was and how much tissue was removed.

During reconstructive surgery, we take tissue from one part of the body (**donor site**) to rebuild part of the head and neck that was changed during the surgery. The tissue used to fill the area is called **the flap**. A flap can be used to replace large parts of the inside of the mouth, face or neck.

The flap will be connected to the blood vessels (arteries and veins) in the area it is placed in. This allows the flap to heal, grow and change with the part of the body it has been moved to. Your surgery team will use a microscope and small stitches to connect the flap vessels to the vessels in the head and neck region. The blood supply is carefully monitored for the first 5 days after surgery with a special system called a **doppler.** After this initial period, the nurses will visually check the flap while you are in hospital. Once you go home, the blood supply of the flap will be working well and will no longer need special monitoring.

When bone is being used to reconstruct an area, screws and plates will be used. They are made of titanium so you will be able to have MRIs and go through airport security and metal detectors without any issues. If

What is a flap?

- A flap is a piece of tissue that, along with its blood supply, is moved from one part of your body to another. It is done to provide a cover over the area where the tumour was removed.
- There are many different types of flaps. They can involve the skin, fat, ligaments, tendons, muscle, nerve, and/or bone.
- The flap may be taken from the arm, back, chest, leg, or abdomen.

teeth need to be replaced, titanium screws called dental implants will be placed to anchor the replacement teeth. The dental implants may be placed at the time of the cancer surgery or at a later date.

Talk with your surgeon about your options.

Types of flaps

There are different methods used to transfer the flap from one area to another. Your doctor will talk to you more about the flap you will have. Find detailed information about the different types of flaps in Section F.

- ☐ **Local or Regional (Rotational) Flap** - a flap is lifted from the donor site and attached to an area close by. One end of the flap stays attached at the donor site. The attached end has blood vessels and nerves.
- ☐ **Free Flap** - this flap is completely separated from the donor site (along with the blood vessels and sometimes the nerves). The flap is then moved to another part of the body and the blood vessels and nerves are reconnected there.

How is the procedure done?

- The reconstruction is done right after the tumour is taken out, while you are still asleep in the operating room. Depending on the type of flap, the surgery can take from a few hours to all day to do.
- A piece of tissue is taken from the **flap donor site** (area the flap is taken from) and moved to the **flap recipient site** (area the flap is to be placed) (see page 26).
- The donor site wound is closed with stitches or staples. If there is not enough skin to do this, a **skin graft** will be done. A skin graft is when a thin shaving of skin is taken from another part of your body (often the thigh) and used to cover the donor site wound (see page 27).

Check off which flaps are possible for you on My Plan (**page A**) and read about them in **Section F** (pages in brackets below):

- ✧ **Radial Forearm Flap** (page 38)
- ✧ **Fibula Flap** (page 39)
- ✧ **Anterolateral Thigh Flap** (page 40)
- ✧ **Latissimus Dorsi Flap** (page 41)
- ✧ **Pectoralus Major Flap** (page 41)
- ✧ **Scapula Flap** (page 42)
- ✧ **Medial Sural Artery Perforator Flap** (page 43)
- ✧ **Other:**

A3 Surgery side effects or complications

Side effects from surgery depend on:

- The type of surgery you had
- Where your surgery was
- Your age
- Your overall health

For side effects, go to page 31

Complications of Surgery

All surgeries have some risks. Not everyone will experience complications, but it is important to know about them. Complications of surgery can include:

- Infection in the lungs (such as pneumonia).
- Infections in the area you had your surgery (the wound or surgical site).
- Loss of a portion of, or all of the "flap" (**wound breakdown** from the tissue not healing well). This could mean you may have to have another surgery.
- Sometimes nerves in the head and neck are damaged when the cancer is removed and can cause weakness. This may affect your face, neck or shoulder muscles. Ask to see a physiotherapist if you experience any weakness.
- Pain and swelling in the head and neck region after surgery, as well as any donor site are common and may last for 2 to 3 months. This is how your body tries to heal. Ask to see a rehabilitation therapist who is trained in lymphedema management if this swelling continues for more than 3 months or is bothering you. They can teach you ways to fix it or manage it better.
- For Neck Dissection complications, see page 3.
- For Flap complications, see page 38.

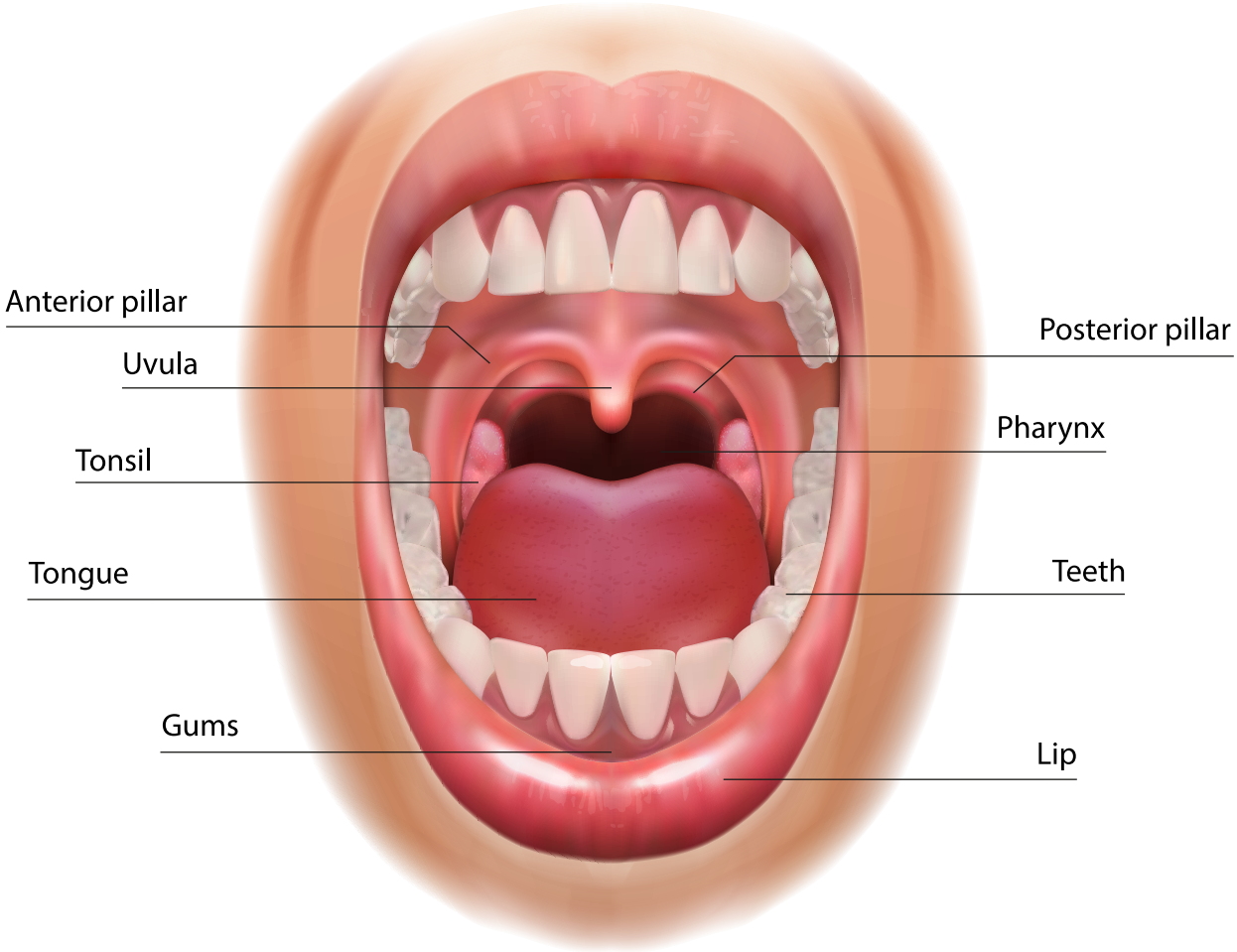
Your surgeon and healthcare team will talk to you about possible side effects from surgery, and what you can do about them.

A4 Structures of the Head and Neck

Use the pictures on the following pages to circle the structures affected by cancer or what will be removed with surgery. Ask your surgeon to help you. (**Note**: these are the same pictures as in the **general Head and Neck Cancer** book. Only 1 book needs to be completed).

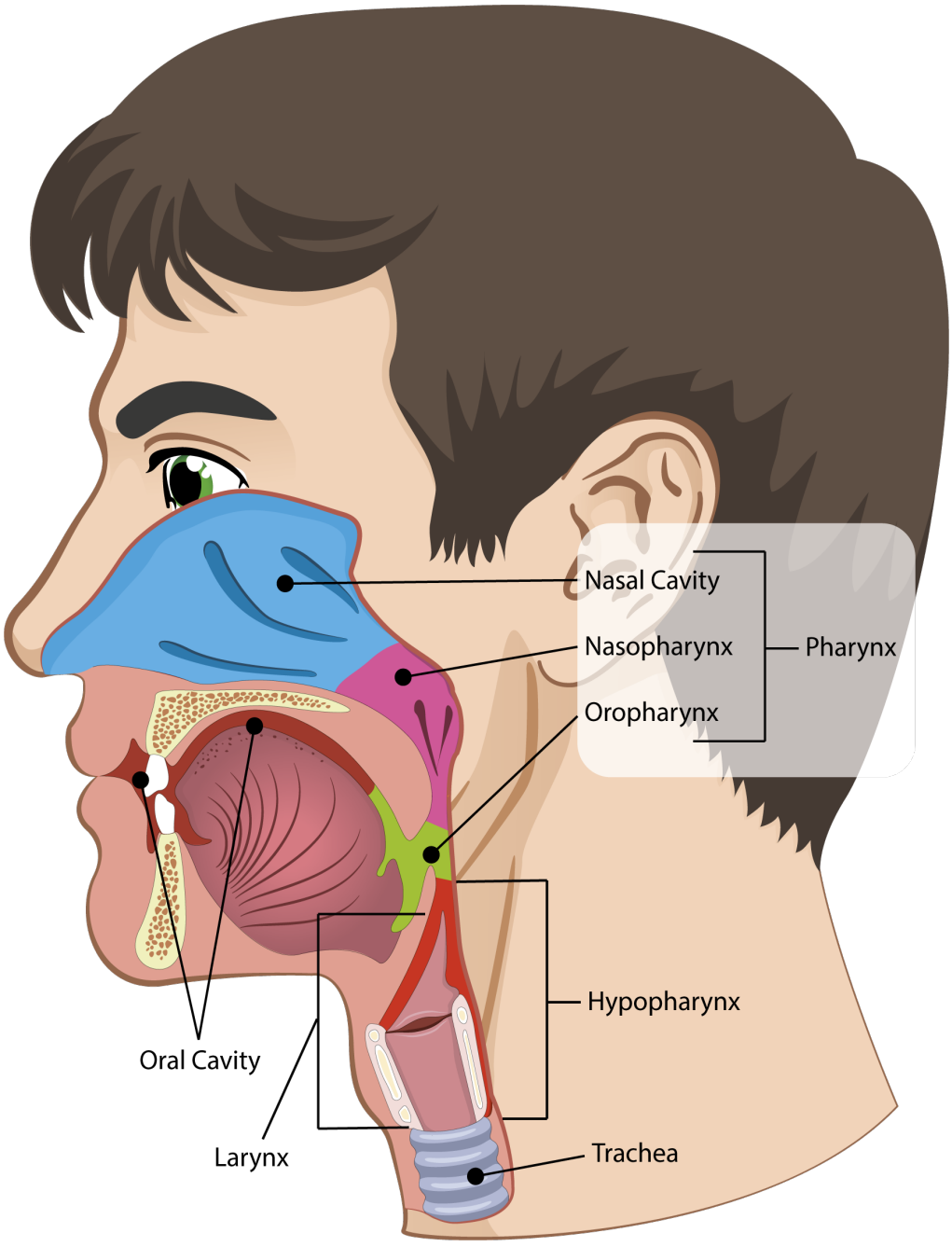
Use this picture to mark the location of:

☐ Oral Cavity Cancer



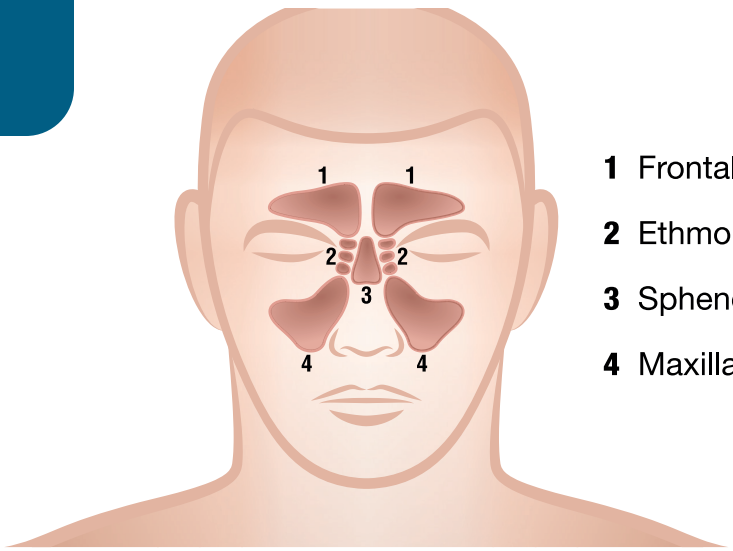
Use this picture to mark the location of:

- ☐ Nasal Cavity Cancer
- ☐ Oral Cavity Cancer
- ☐ Oropharyngeal Cancer
- ☐ Hypopharyngeal Cancer
- ☐ Largyngeal Cancer
- ☐ Nasopharyngeal Cancer



Use this picture to mark the location of:

☐ Paranasal Sinus Cancer

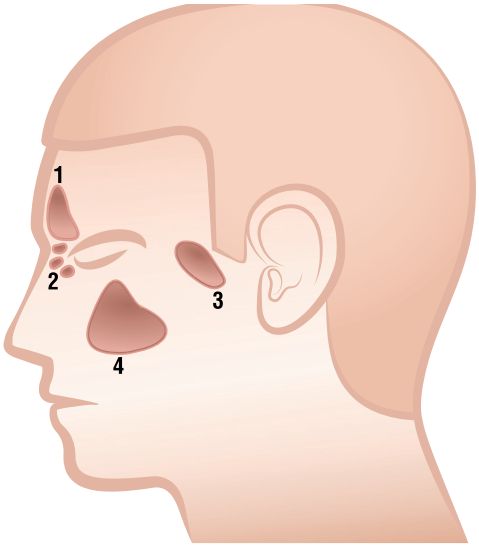


1 Frontal sinuses

2 Ethmoidal sinuses

3 Sphenoidal sinuses

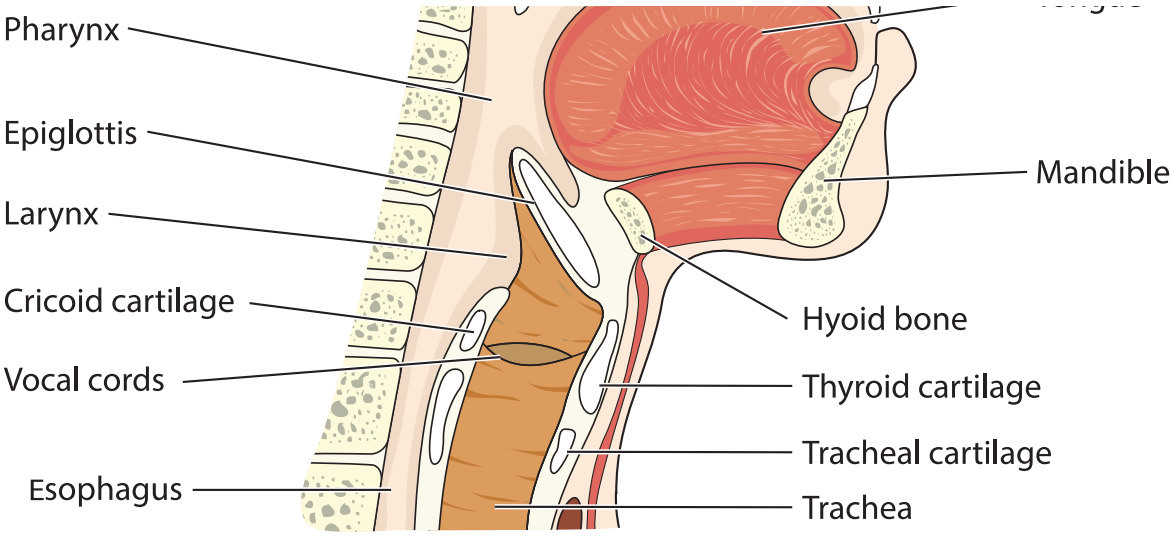
4 Maxillary sinuses



Use this picture to mark the location of:

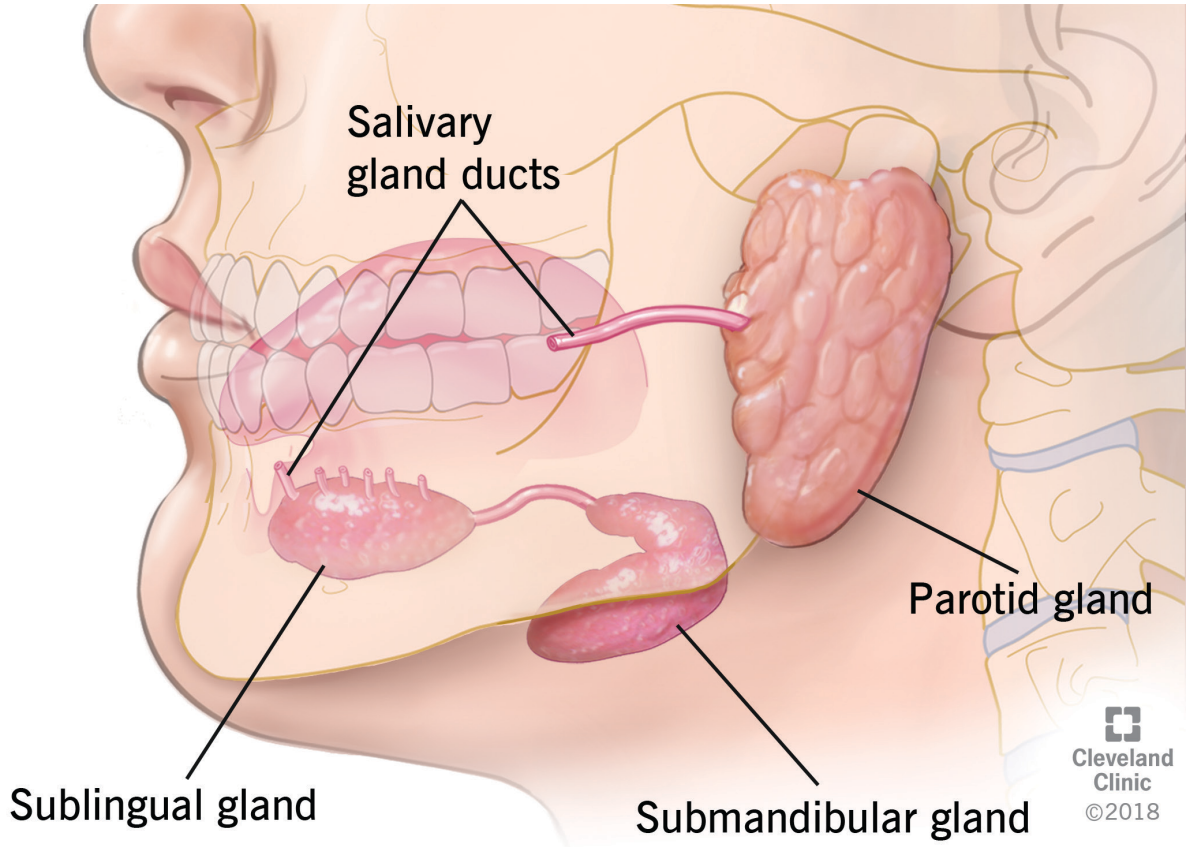
☐ Hypopharyngeal Cancer

☐ Laryngeal Cancer



Use this picture to mark the location of any salivary glands affected.

- ☐ Parotid
- ☐ Sublingual
- ☐ Submandibular



https://my.clevelandclinic.org/health/diseases/17965-salivary-gland-cancer

B. Before, During and After Surgery in Hospital

B1 Getting Ready for Surgery

This book is given out to all patients in Alberta. The information below is a guideline. **Please follow any specific instructions for your surgery given to you by your local site.**

Learning about surgery

It's important to review how you should prepare and recover from surgery before you go in for surgery. Do this by reading:

- ☐ this book
- ☐ information on surgery at myhealth.alberta.ca/yoursurgeryjourney

Knowing what to expect will help you prepare for your surgery journey. It's important to know:

- you have an active part in preparing for your surgery and recovery.
- you and your family are part of the healthcare team.
- the best time to plan for your recovery is **before** your surgery.

Pre-Admission Clinic (PAC)

The staff at the Pre-Admission Clinic (PAC) will call you. You may need to go in person for a consult. Either over the phone or in person, the PAC healthcare team will:

- ask questions about your health and medical history to make sure you can safely have surgery.
- explain how you can prepare for your surgery and what to expect in the hospital.
- arrange the tests that your doctors have ordered. These tests could include blood tests, ECG (a test for your heart), and chest x-ray.
- ask you what medicines, vitamins, supplements, and herbal products you take. Tell you what medicine(s) to stop taking and when to stop taking them before your surgery.

Make sure you write down which medicine you can take and what medications you should hold for surgery or stop completely. Write your notes in this book on page 14.

Tests before surgery

Your medical team may order some tests before your surgery date. These may include:

- Blood work
- Chest x-ray, ECG, or other imaging
- Other special tests or consults if needed (such as breathing tests or hearing tests)

Can I bank my own blood in case I need a transfusion?

No. We cannot bank or store your blood.

We only give blood transfusions in life-threatening situations.

If a yellow or blue band is put on your wrist, **do not take it off.** If you take it off, you will need to have another blood sample, which may delay your surgery.

Surgery date and time

It takes time after your clinic visit (where you gave your agreement/consent for the surgery), to get a surgery date. Write this on **My Plan** (page B).

- You will find out the time of your surgery the business day before (business days are Mondays–Fridays, not including holidays).
- Be sure to find out the best place to park and where to go in the hospital before you go.

Good to know: usually only **1 person** can stay with you until you go to surgery. Visitor policies can change in different situations.

What you should do to get ready

Plan for help and support

Make sure you have someone to drive you to and from the hospital. You will also need help at home for 4-6 weeks after surgery.

Prepare food

Prepare and freeze meals ahead of time so that you only need to re-heat the food once you're home.

Stop smoking at least 2 weeks before

If you can, it is best to stop at least 4 weeks before your surgery. It prevents problems with your lungs after surgery and helps you heal faster, especially if you have a flap.

Talk to your doctor about ways to stop smoking.

Exercise

Try to be in the best shape possible before surgery. If you don't exercise or exercise regularly, start slowly.

Short walks help to build strength. Do the neck and jaw exercises **before your surgery** (see the **general Head and Neck Cancer** book, **Section D3).** Doing these exercises will give you an idea of what you are able to do.

Stop drinking alcohol at least 7 days before

If you can, it is best to stop all alcohol at least 4 weeks before surgery.

Talk to your doctor if you need help cutting down or stopping.

Plan your benefits, work or insurance forms

Find out what's covered with your benefit plan and plan ahead for any work or insurance forms. Let your nurse and doctor know if you need forms completed.

Talk about your pain medication

If you already take prescription pain medication, tell your nurse and/or anesthesiologist.

Keep taking your prescription pain medication as usual up to the morning of surgery, unless the PAC medical team gave you different instructions.

After surgery, the pain medication or dose may have to be changed as your body heals and recovers from surgery.

Stop using recreational drugs

Stop using recreational drugs (such as cannabis or cocaine) before surgery. These drugs can have serious side effects when mixed with the medication used during surgery or the pain medication used after surgery.

Your surgeon, nurse, and/or anesthesiologist need to know if you use recreational drugs—they aren't there to judge.

Get immunizations in advance (including flu shots)

No immunizations within 14 days of your surgery.

Shave 1 day before

If you have a beard, you may shave the morning **of the day before surgery.**

Do not shave on the day of surgery.

Medication instructions

To help you remember, **write the instructions you should follow here.**

Diabetes Management: If you are diabetic, get instructions from your doctor or from the doctors at your PAC appointment for your insulin or diabetic pills (metformin).

14 Days Before

10 Days Before

7 Days Before

2 Days Before

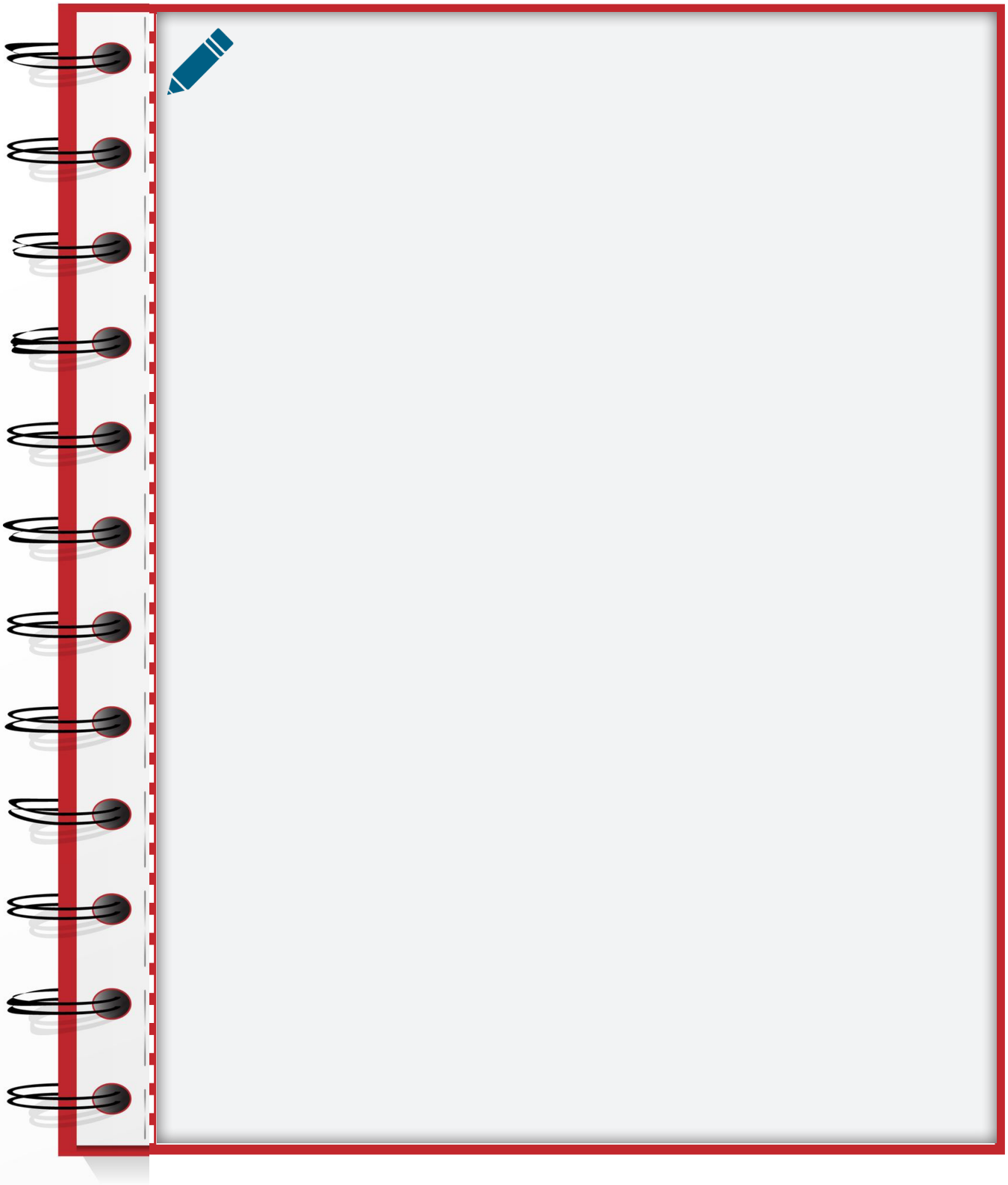
1 Day Before

Day of Surgery

Can I take my regular medication?

Your surgeon, or the Pre-Admission Clinic nurses or doctors will tell you what medication you can take on the day of surgery.

Other Notes



B2 Preparing the Day and Night Before Surgery

Eating and drinking

24 hours before surgery: no smoking or drinking alcohol

Follow the directions you were given.

Follow the instructions on your handout to make sure that your surgery is not **cancelled.** This is to prevent food or fluid going into your lungs (aspiration) during your surgery.

Aspiration can be life-threatening!

What is a clear fluid?

- Jello®; strained broth/ consommé soup; clear fruit juices with no pulp (such as apple juice).
- Black tea or coffee (no milk or cream but sugar or sweeteners are okay).
- Pop, sports drinks such as Gatorade®, or water.
- It does **not** include milk, cream, butter, cream soups or orange juice.

Confirming your time

You should have already been told how to confirm your hospital appointment time. Make sure you know:

- The date of your surgery.
- What time you need to be at the hospital.
- Where to go when you get to the hospital.
- The best place to park.

If you have to cancel your surgery, call your surgeon's office right away. Make sure you have your surgeon's office phone number ahead of time. Write it on **My Plan** (page A).

If you can't reach your surgeon, call the hospital. Make sure you have the hospital's phone number ahead of time.

Follow the pre-surgery instructions you've been given or your surgery may have to be cancelled.

Night before or morning of

Before you go to bed or the morning of your surgery:

- take a shower or bath
- do not shave
- do not wear make-up
- do not wear contact lenses
- do not use any creams, lotions, or anything with a scent
- wear clean pajamas or clothes after showering
- take off all jewellery and take out all piercings

It is okay to leave nail polish, gel or acrylic nails on.

B3 Day of Surgery

Follow the notes you made medication instructions on page 14-15**.**

Most patients stay in hospital for 10 days after surgery. How long you stay in hospital will depend on the type of surgery and your recovery.

What do I bring?

What to bring on the day of your surgery (your Operating Room day):

- ☐ Alberta Health card and Blue Cross or other insurance card
- ☐ Photo identification (please make sure the information is correct)
- ☐ **This book**, along with any handouts you were given about your condition or surgery
- ☐ **Any medication that the PAC nurses told you to bring**
- ☐ CPAP / BiPAP machine (if you use it, as it may be sent to the recovery room during your surgery)
- ☐ Proof of medical coverage (out-of-province residents only)
- ☐ Personal care items

Personal care items to bring:

- ○ Items your surgeon has requested
- ○ Walking aids such as a walker or cane (if you use one)
- ○ Comfortable clothing (suggest button or zip up shirts that do not need to be pulled over your head)
- ○ Comfortable slippers you can walk in
- ○ Ear plugs (to help with hospital noise)
- ○ Hearing aids, eyeglasses, dentures and denture case
- ○ Book, magazine or something else to keep you busy
- ○ A coil notebook and pen to write messages and communicate with. Some people like a small white board or Boogie Board®. **The notebook will save you writing the same thing over again if you need to give the message to different people**.

Do Not Bring:

- ■ anything of value (jewellery, credit cards)
- ■ more than $20 cash
- ■ a tablet or computer
- ■ electrical appliances such as hair dryers or curling irons

Rules about using cell phones in the hospital are different on each unit. Ask your nurse before using your phone.

Bring these items in 1 small bag that has your name on it. Please leave these items with your support person who can give these to you after surgery.

The hospital is not responsible for lost items.

At the hospital

When you arrive at the hospital, a nurse will:

- Go through a list of questions with you.
- Ask you to change into a hospital gown.

You may be given some medicine for pain and nausea with a sip of water before surgery.

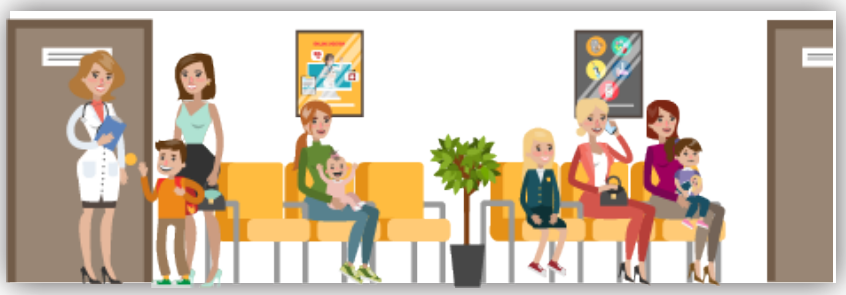
Holding area

You'll be brought to an area outside of the operating room (holding area) where you'll meet your surgical team: your anesthesiologist (the doctor who will give you medicine to keep you asleep during your surgery), surgeon, and nurses.

While you're in the area outside of the operating room, a nurse will ask you questions from the **Safe Surgery Checklist** such as your name, surgery, birth date, allergies, and what surgery you're having. You may be asked this more than once, which is normal. We do this to keep you safe.

Waiting area

Visitors may be restricted depending on the situation. If your support person is not able to wait for you in the waiting area, staff will call them to let them know when your surgery is finished and they can return.



Operating room

An operating room nurse will double check your surgical information and take you into the operating room. The Safe Surgery Checklist will be repeated.

The anesthesiologist will give you medicine (general anesthetic) to make you comfortable and keep you asleep during your surgery.

Your surgery will take between 2 to 18 hours, depending on what is being done.

Procedures before and during surgery

Staying warm. We want to make sure you are warm before and during surgery. We will give you a special warming gown.

Intravenous (IV). An IV is started in your hand or arm by the nurse before you go to the operating room, or by the anesthesiologist in the operating room. It's used to give the anesthetic (sleeping medicine) and other medication you may need such as antibiotics. The IV is usually taken out once you are able to drink well after surgery.

Medication. You may be given medication before you go to the operating room or in the operating room before the surgery begins. You may need to continue taking this medication after surgery:

- IV antibiotics to protect against infection
- medications to prevent nausea and pain
- a small dose of a blood thinner (anti-coagulant) to prevent blood clots during and after surgery

Air-Filled Stockings (Sequential Compression Device). You will wear compression stockings on your legs during and after your operation to promote blood flow in your legs and help to prevent blood clots. A machine inflates and deflates the stockings. They are taken off once you are walking around.

Bloodwork. You may need to have more bloodwork drawn. If needed, a person from the lab will come to you.

Blood Transfusion. Not many people need a blood transfusion. Your surgeon will talk with you about this and get your consent before surgery.

Bladder or Urinary Catheter. A small tube (catheter) may be put into your bladder. It drains urine from your bladder so your bladder stays empty. The catheter is taken out soon after surgery. If you have trouble urinating after, you may need a catheter for a while longer.

Oxygen. You may be given extra oxygen after surgery through a mask or nasal prongs.

B4 After Surgery (in Hospital)

Depending on the type of surgery you have, when it is finished, we will move you to the Recovery Room or Intensive Care Unit (ICU). If you go to the ICU, you will be given medication to help you relax and rest. You may be on a machine that helps you breathe. You may not remember your ICU stay.

What to expect

You will probably feel sleepy and your throat may feel sore from the tube that was placed in it while you were asleep. This is normal. You may also have:

- an IV to give you fluid and medicine. You may be given medicines to help with your pain and nausea. As soon as you can, we will ask you to start drinking fluids.
- a dressing (bandage) on your face, donor site and graft site (if you have a flap graft). It's important not to touch your dressing to allow for proper healing.
- 1 or more drains near the area where the incision was made. Drains take extra fluid away from below your incision.
- swollen and bruised lips, face and neck. This will go away slowly.
- the head of your bed raised. This position helps you breathe more easily and reduces swelling.
- nasal prongs or an oxygen mask to help you breathe.
- a feeding tube that goes in your nose and down into your stomach. This is how you will get nutrition while your incisions heal and you cannot eat (see page 25).
- a catheter (a small tube) draining your bladder.
- compression stockings (cloth or vinyl). These help to promote blood flow in your legs and help to prevent blood clots. If you have air-filled stockings called a **Sequential Compression Device (SCD)**, a machine inflates and deflates the stockings. They are taken off once you are walking around.
- stiffness, numbness, tingling, or pain in your neck, shoulder, and arm on the operative side. You may also have numbness of your ear on the affected side. The numbness can last for some time and may be permanent.

You may feel anxious if you are not able to speak. The nurses know to come right away when you press your call bell.

Bring a notebook, white board or Boogie Board® with you to help you communicate.

Your nurse will regularly check your:

- Heart rate, breathing, blood pressure, and blood oxygen level
- Surgical site (the flap and donor site) to make sure these areas are healthy
- Dressing (bandage)
- Drains
- Pain and nausea levels

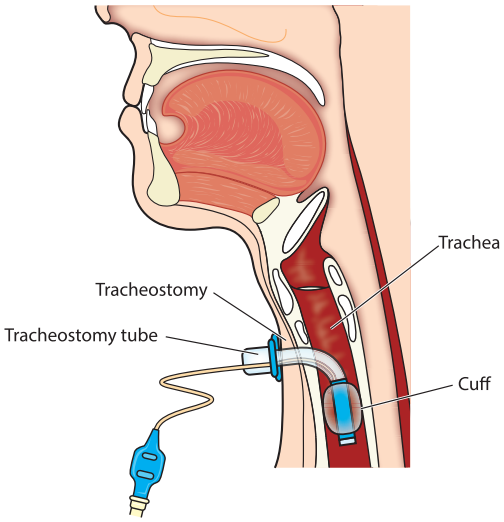
Tracheostomy

You **may** have a tracheostomy. If there is a concern that swelling in your mouth may block off your airway, your surgeon will make a small opening through the front of your neck, into your trachea. This is called a **tracheostomy,** or **trach** (pronounced “trake”). A short tube is placed into this tracheostomy (**tracheostomy tube**), with part staying in your trachea and part resting outside. When you breathe, air comes in and out through the tube.

If you have a tracheostomy, you will be taught how to care for it.

Device

- The tracheostomy tube is made of 2 parts. The inner part of the tube will be taken out and cleaned often by your nurse and respiratory therapist to keep it clear. The outer part will be in the tracheostomy opening, held in place by ties around your neck or by stitches.



Timelines

- Most patients who are having major head and neck surgery will have a tracheostomy and some patients will go home with it in place. If this is the case, your healthcare team will show you how to care for it and will arrange for home respiratory therapy to help you.
- For the first 5 days of having the tracheostomy, speaking will not be possible. Writing messages on a board is the best way of communicating with your healthcare team.
- As you heal and the swelling goes down, the tracheostomy tube will be changed to a smaller size.
- When your doctor is certain the swelling in your mouth is decreased enough to allow enough air to get to your lungs, the tracheostomy will be removed. Usually, this is within 1 week.
- If you have a tracheostomy after surgery, plan to go home 10 days after your operation.

Breathing

- You may feel uncomfortable or anxious breathing through the tracheostomy tube at first. The nurses will check you often.
- You will have a humidified oxygen mask placed over the tracheostomy to help keep the mucus secretions thin and easier to cough up.
- If you can’t clear the mucus by coughing, your nurse or respiratory therapist will remove the mucous by suctioning (using a thin tube inserted into the tracheostomy tube).
- The tracheostomy tube can be capped so you can try breathing through your nose and mouth. You may also be able to speak when the tube is capped. If you are able to breathe easily with the cap on for long periods of time, the tube may be taken out. Once the tracheostomy tube is taken out, the opening will be stitched closed or covered with a dressing, or both until it is fully healed.

Speaking with a tracheostomy tube

Some people require short-term or permanent tracheostomy tubes to help them breathe. If you have not had your vocal cords removed, voice sounds can be made by using a finger or a special speech valve to block the tracheostomy tube when speaking.

Image © AHS

Deep breathing and coughing

It's important to do your deep breathing and coughing exercises if you have had an anesthetic and to prevent lung infections.

- After surgery it is common to have more than the usual amount of phlegm or mucous in your throat and lungs
- A respiratory therapist may visit you to check your breathing and lungs.
- A physiotherapist may visit to teach you deep breathing and coughing exercises.
- Moving and doing leg exercises will help you build strength, increase blood flow, prevent clots from forming and keep your lungs clear. Do the leg exercises on page 2 .

Follow these steps **1 time every hour you are awake:**

- Breathe in deeply through your nose.
- Hold your breath for 5 to 10 seconds, and then breathe out slowly through your mouth. You will be able to breathe more deeply with each breath.
- Repeat again.
- Repeat again. This time, hold your breath for 5 to 10 seconds. Cough 2 or 3 times in a row as you get rid of this breath.
- Make sure you take normal breaths when you're not doing these exercises.

Mouth care

It is very important that your mouth is kept clean to prevent infection. Swelling may make it hard for you to open your mouth.

Mouth care is usually done using several things: sponges on a stick ("toothettes"), mouthwash, and sometimes prescription medications.

In the first few days after surgery, your nurse(s) will help you to gently clean or rinse your mouth regularly. They will teach you how to do the mouth care properly so that you are able to manage this yourself before you leave the hospital. The nurses may ask you to show them how you clean your mouth because it is so important.

Products to clean your mouth and teeth:

- **Toothettes.** Once discharged from the hospital, you can buy toothettes from the outpatient pharmacy or at your local homecare and surgical supply store.

- **Toothbrush.** As your mouth heals, you will move from using only the toothettes to using a very soft toothbrush.
- **Mouthwash.** If you are using mouthwash, it is important that it be gentle. This means it should have **no alcohol or sugar added**. You may want to dilute the product if you are still finding it too strong.

Look inside your mouth everyday and watch for changes in the gums, tongue, incision lines, as well as on the insides of the mouth (cheek area).

Suctioning

Most adults can produce up to 2 litres of saliva per day. Sometimes, patients are not able to swallow their saliva because of the surgery and swelling. If this is the case, you will spit into a container or your nurse may use a device to suction out the saliva. Your nurse may teach you how to use the suction.

You will be encouraged to swallow your saliva if it is safe for you to do that. The swallowing action helps to reduce swelling quicker after surgery, and can help improve eating and speech later in your recovery.

Yeast Infection (Thrush)

Sometimes, even if you practice good mouth care, you may develop an infection. A yeast or thrush (fungal) infection can affect the whole mouth, including the tongue and roof of the mouth.

The usual treatment for thrush is a prescription mouthwash called Nystatin®.

Call your healthcare team if:

- there is a yellow/white coating on the top of the tongue or mouth that does not brush away
- the inside of your mouth is bright red and sore, making it difficult to eat
- a bad smell is coming from your mouth

Follow these instructions, unless you were given different instructions by your doctor or nurse:

1. Brush teeth with toothbrush and/or toothettes.
2. Be sure to try to brush your tongue.
3. Use toothettes to clean all around the mouth, especially in pockets of cheek and lips.
4. Rinse mouth with water or mouthwash thoroughly.
5. Apply medication to affected area/mouth, using the dropper or toothette method:

Dropper	**Toothette** (if you can't swish or control the liquid in your mouth)
• "drop" prescribed Nystatin® medication into mouth	• Drop the proper dose of Nystatin® in a small, clean cup
• Swish liquid throughout mouth for **at least 2 minutes**, then spit/swallow medication as is ordered by your doctor	• Use toothette to "paint" the medication throughout mouth (if you wear dentures you will need to paint them also)
• Do not eat or drink for 30 minutes	• Do not rinse, eat or drink for 30 minutes

Managing pain and nausea

Managing pain and nausea is important. It helps you recover sooner because you will:

- Breathe and move better
- Find it easier to eat and drink
- Sleep better

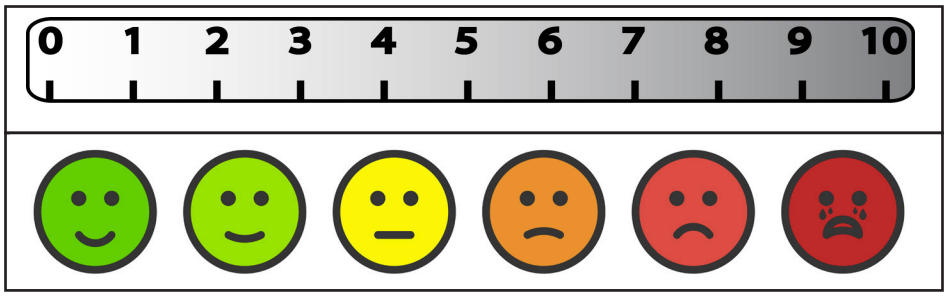
Pain after surgery is normal. You may have pain, numbness, or tingling in your face, neck, shoulders or incision area. The type of pain you have and how long it lasts is different for everyone. A feeling of stabbing pain may happen and it is normal. You may feel nausea or sick to your stomach after surgery. This is a common side effect of anesthetic, some pain medications, and some cancer treatment medications.

We will give you pain and nausea medicine by IV, injection, or pill as needed while you're in the hospital. At first, you may have a pump that lets you give yourself pain medicine. This pump is know as a PCA (patient-controlled analgesia) pump. Later on, your pain medicine will be given by feeding tube or by mouth.

Your nurse will ask you to rate your pain and nausea from 0 (no pain or nausea) to 10 (the worst possible pain or nausea). They will adjust the amount of medicine as needed.

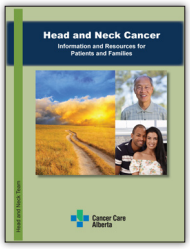
Tell your nurse or doctor when you:

- have pain or if the pain is getting worse
- have nausea — we want to control your nausea and stop you from vomiting if possible
- feel the medication is not helping you manage your pain or nausea. You are the only one who knows how bad it is



Eating and drinking

You will not be allowed to eat or drink right away. This will help the surgical areas inside your mouth, throat, or both, to heal. If you wore dentures before surgery, you will not be able to wear them after surgery. Your dentures may not fit properly and may need to be changed or re-made. Some patients may need dental implants to help them eat. Speak with your surgical team if you have questions about dentures.



You may have a feeding tube right after surgery. Usually, the feeding tube is taken out before you go home. Your nutrition is an important part of healing. So, if you are unable to get enough nutrition by mouth, you may need to go home with the feeding tube. If that happens, a nurse and dietitian will teach you and your family how to use and care for it. Read more on Diet and Nutrition in **the general Head and Neck Cancer book, Section D18.**

If you have a feeding tube, liquid feedings through the tube will start once your digestive system is ready (usually within 24 hours after surgery). If you have any heartburn or a feeling of fullness, tell your nurse.

How long the feeding tube stays in is different for everyone.

Other things to know:

Your doctor may order special x-rays to check your healing and how well you can swallow. These x-rays will help decide when you are ready to swallow again and begin taking fluids by mouth.

Depending on the areas that were removed, speaking and swallowing may be permanently affected. This means that you may notice changes in how you speak and swallow after surgery. If you have problems, a dietitian and a speech therapist can suggest ways to help you.

A feeding tube may placed directly into your stomach for longer-term tube feedings.

Showering in hospital

- You may shower 24 to 48 hours after your surgery unless you were told not to. Having a shower is **usually** okay while you still have staples, stitches, Steri-Strips™, sticky dressings, or a drain. Your nurse will give you instructions.
- When you shower, you may wash your hair.
- Use warm, not hot water, so you don't get a burn. (The area around the incision(s) may be numb so you may not be able to feel if the water is too hot).
- Position yourself so that you can rinse your incisions well, but without having the stream of water hit them directly (the force of the water could cause your incisions to open). Gently pat the areas dry.

- Keep your incisions clean and dry between showers. Keep the flap and donor site(s) clean and dry. Your doctor will tell you if the stitches will be taken out. Many stitches are dissolvable and do not need to be removed.

Drains

A drain is a small plastic tube placed under the skin. It is stitched in place and connected to a drainage container (clear plastic suction bulb). The drain removes extra blood and fluid from the area around the surgery.

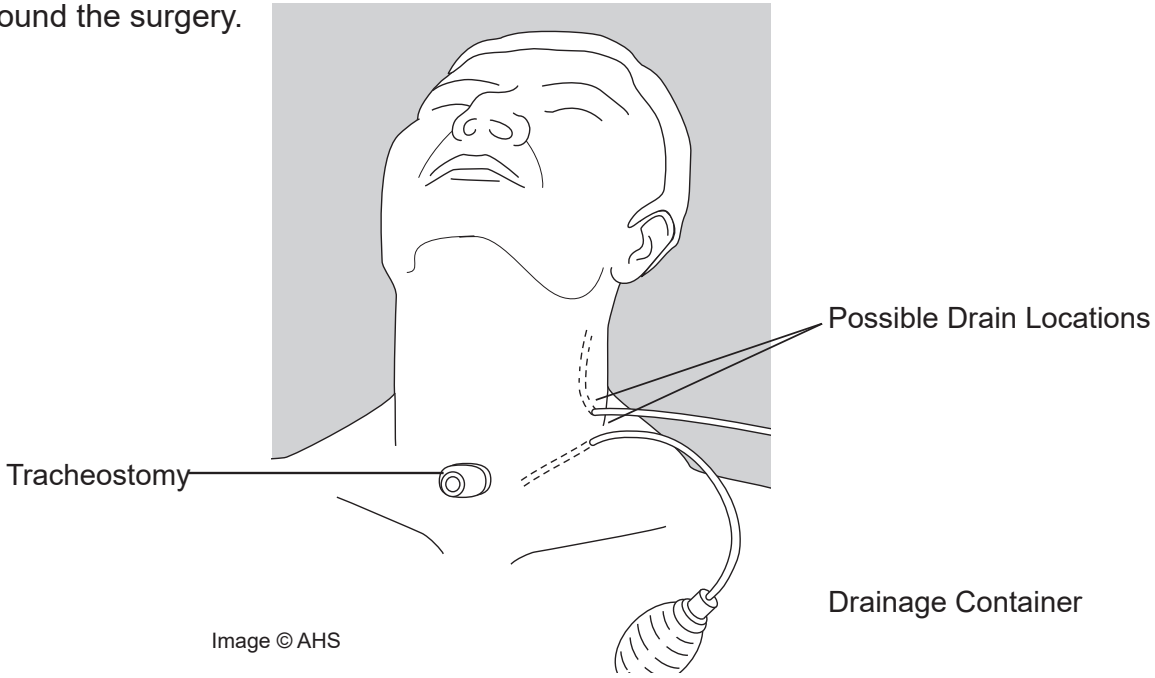


Image © AHS

Suction Drains (Jackson-Pratt Drain/Blake)

These are closed-suction drains. They are often used after surgery to collect body fluids from surgical sites. If you need to go home with this drain, a nurse will teach you how to care for it.

Penrose

A Penrose is a soft, flexible rubber tube. It is used as a surgical drain to prevent the buildup of fluid in a surgical site. Your doctor will remove this drain when it is ready to come out.

Dressings and incisions

The size of your incision (surgical cut) and where it is will depend on where your cancer was and the type of surgery you had.

The incisions on your face are closed with stitches. The incisions on your neck may be closed with stitches or staples and are usually left open to the air. Dissolving stitches are used most often and don't need to be removed. Some of these stitches will remain in place when you are discharged home and will be removed when you see your surgeon.

Another name for a "stitch" is "suture."

Another name for "dressing" is "bandage."

Your nurse may need to put antibiotic ointment on the incisions on your face and neck several times each day. This helps prevent infection and reduces scarring.

Flap recipient site (on your face or neck)

1 The flap recipient site is the area where the cancer was removed. The tissue taken from the **donor site (2)** is called a **flap**, and is used to rebuild the recipient area. Once the flap is placed, it may look large and bulky at first. It should get smaller over time.

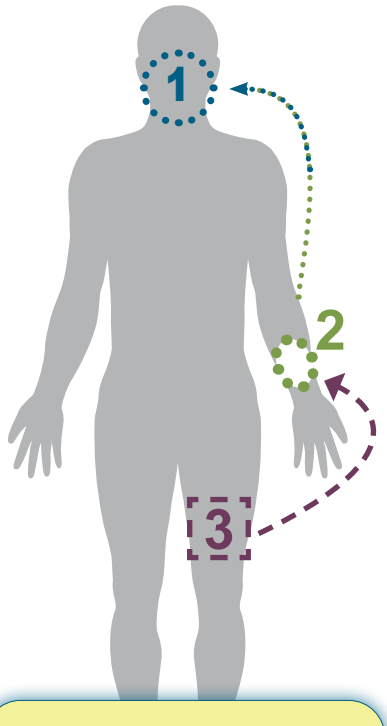
Your nurse will check the site every hour or more for the first 2 days. This is to make sure that the flap has good blood flow. After the first 2 days, your nurse will check it while you are in hospital.

Flap Donor Site (and possible **skin graft recipient site**)

2 The flap donor site is the part of the body where the flap is taken from. The flap may include skin, tissue, blood vessels, and sometimes bone. In the picture, a forearm is being used as the example (for different types of flaps see Section F).

When possible, the edges of the wound at the donor site are closed up with stitches or staples. The site is then covered with a bandage, paper tapes (Steri-Strips™), gauze bandage, splint, or vacuum-assisted dressing (a machine that gently pulls fluid from the wound). The surgeon will tell you when your dressings can be removed.

If there is not enough tissue from the surrounding area to cover the flap donor site, you may need a **skin graft**. This is when skin is taken from another area of the body. The **skin graft donor site (3)** is used to cover the **flap donor site (2)**.



In this picture, tissue is taken from the forearm (**donor site - 2**) and used to reconstruct the face and neck (**flap recipient site - 1**). Then, skin is taken from the thigh (**skin graft donor site - 3**) to cover the forearm.

Skin Graft Donor Site

3 Not everyone needs a skin graft. A graft is done only if the wound at the **flap donor site (2)** cannot be closed with the skin in the area. If this happens, a thin layer of skin is taken from another area and used to cover the **flap donor site (2)**. The **skin graft donor site (3)** heals just like a scrape. This area may be covered with a clear or sticky dressing which will stay on for 2 to 7 days. It will take about 10-14 days to heal.

If you have a skin graft on your forearm, you may get a splint or compression therapy (bandages) to wear to protect your graft.

If you are given a splint:

- wear the splint except when you change your dressings or exercise for the first few weeks.
- you can use the hand with the splint for light activities like dressing and eating.
- **do not carry anything more than 5 pounds** (lbs) with the affected arm.
- take your splint off 2 to 3 times a day to do your wrist and hand range of motion exercises. You will get more exercises once your hand and arm have healed.
- ask your doctor or rehabilitation therapist when you can stop wearing the splint and carry more weight.

Getting moving and doing leg exercises

Be active as soon as possible. Moving and doing leg exercises will help you build strength, increase blood flow, prevent blood clots from forming and keep your lungs clear. Your nurse will help you get up to walk soon after surgery.

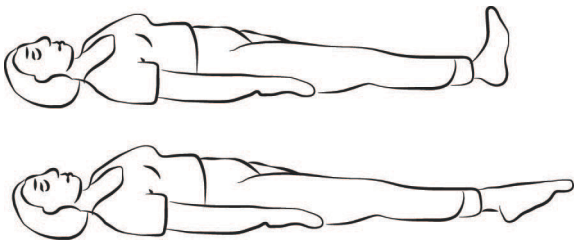
Symptoms of a blood clot may include any of the following: swelling, redness, warmth to skin, pain to 1 or both legs, or shortness of breath. Let the medical team know right away if you have any of these symptoms.

DO NOT massage your leg if you are having these symptoms. You could cause the clot to break off.

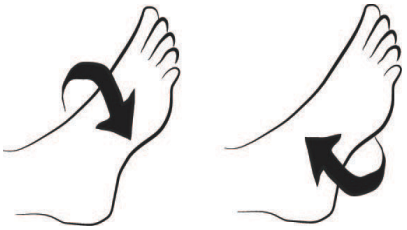
- Move and stretch your legs
- Wiggle your toes
- Change position in bed
- Get up to sit in a chair
- Do basic leg exercises
- Walk
- Increase your activity level gradually after surgery (no strenuous exercise).
- **Keep track of how much time you are spending out of bed each day**

Leg Exercises

Do these exercises **5 times each hour you are awake**. These can be done lying in bed or sitting in a chair.



Flex your feet up and down for 1 minute. Relax. Repeat.



Make circles with your feet. Repeat in the other direction.

Compression Stockings

You may wear special compression sleeves on your legs while you are in bed, to help prevent blood clots. The sleeves are connected to a machine that inflates and deflates often to promote good circulation in your legs until you are walking regularly.

Activity

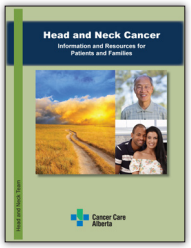
After surgery you will feel very tired and may need to take rest breaks often.

Your nurses will help you change positions in bed often to help your circulation and keep you comfortable. When you lift your head, **it helps if you place your hands behind your head to support your neck and prevent any pulling on your incisions.** If you can't do this, your nurse will help you.

One day after surgery your nurse or physiotherapist will help you to sit at the side of your bed or in a chair, and also stand and go for a walk. Your activity will be increased until you are walking several times a day. Your healthcare team will encourage you to spend time in a chair.

Moving your neck and using your arm

Keep good posture throughout the day while you are sitting, standing, walking and during activity with your arm. **Stand tall and keep your shoulder blades pulled down and together. Keep your chin tucked down (do not push your chin out front).** This reduces strain on your neck. After surgery, try to use your arm on the side of your surgery as you normally would (such as when eating, drinking, brushing your teeth and hair, or answering the phone). It's important to move it regularly and use it for light activity.



See the posture and stretching exercises in the **general Head and Neck Cancer** book, **Section D3.**

B5 Getting Ready to Go Home

Going home (discharge) checklist

Before you're sent home, your healthcare team will:

- ☐ Review your discharge instructions with you.
- ☐ Give you the date for your follow-up appointment **or** tell you when to call your surgeon's office to make your follow-up appointment. Write this on **My Plan** (page A).
- ☐ Give you prescriptions for medicines to take at home and instructions on when you can take your regular medicines.
- ☐ Teach you how to care for your tracheostomy tube, feeding tube or both and give you an instruction booklet (not everyone will have these tubes).
- ☐ Ask if you need any adaptive aids or safety equipment in the bedroom or bathroom before going home to help manage fatigue or physical changes.
- ☐ Make a referral for any services you might need (home care, respiratory therapy, speech and swallowing, or rehabilitation).
- ☐ Ask if you have help at home for the first few days since you may feel very tired and uncomfortable.
- ☐ Ask if you have help for things like housework, shopping, laundry, and yard work in the next 4-6 weeks.
- ☐ Ask how you are coping and what emotional supports you have in place.

Talk to your healthcare team if you feel something on this list hasn't been done.

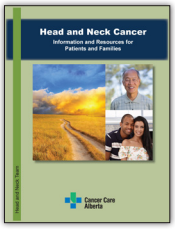
Ask your doctor:

- ✧ when you can drive again
- ✧ when you can go back to work

Write this on **My Plan** (page B).

C. At Home After Surgery

C1 Your Surgery Site(s)



It's normal to be worried about seeing your incision (surgical cut) for the first time. You can reach out to your healthcare team, family, or friends to talk about the changes you see. Read more about body image and emotional health in the **general Head and Neck Cancer** book, **Section D4**.

Daily checks

It's important to check your incision(s) every day, especially during the first 2 to 3 weeks after surgery. It's normal for the surgical area to be a little swollen and bruised at first, but that will go away in a few weeks.

There may be firmness under the incision. You will notice this "healing ridge" for many months. This is scar tissue and it will soften over time. It can be improved with scar massage (Section E1 in this book). You can start when the incision is fully closed, usually after 3-4 weeks, unless your surgeon or treatment team has told you not to.

Steri-strip™ care

If your incision has Steri-strips™ on it, leave them on. As the incision starts to heal:

- the Steri-strips™ will start to curl up at the edges. You may trim the curled edges off carefully with scissors. Clean the scissors with soap and water first.
- Leave the rest of the Steri-strips™ on until they come off on their own or your surgeon tells you to remove them.
- When you are allowed to remove them, gently peel each end toward the middle until it comes off. They are easier to remove in the shower or right after you shower.

Follow-up appointment

Your follow-up care is an important part of your recovery. It will be unique to you and will depend on your diagnosis, surgery, and health. Ask your nursing team about follow-up appointments before you are discharged.

Once you have been given your follow-up appointment dates and times, be sure to write them on My Plan (page B). If it has been 2-3 weeks since your surgery and you do not have a follow-up appointment booked yet, call your surgeon's office.

Your surgeon will review the pathology report with you at your follow-up appointment. You may need more treatment after your surgery. This will depend on the stage and type of cancer you have. Your healthcare team may recommend radiation treatment or systemic treatment (such as chemotherapy).

Depending on where you live, you may be able to get some follow-up care and other supports closer to home. Talk to your healthcare team to find out your options.

C2 Managing Side Effects and Concerns at Home

Side effects from surgery, radiation treatment, and chemotherapy can all be different. Some side effects, like **cancer-related fatigue**, can result from all of your treatments.

There are 2 kinds of side effects:

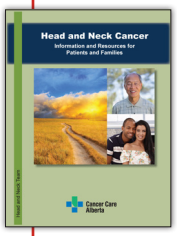
- **Short term** side effects develop while you are on treatment. These side effects should improve and some will go away completely.
- **Late side** effects develop weeks, months, or years after treatment. These side effects last longer and can be permanent. There are things you can do to help improve these side effects.

Things That Can Help

You may have to try more than one thing to see what works for you. The most important thing for you to do is talk to your healthcare team about your side effects, and how they are impacting your life. They can refer you to specialists who will work with you to improve your symptoms.

See **Section C, Managing Side Effects** in the **general Head and Neck Cancer book** for ways to manage these side effects:

- dehydration, p. 24
- cancer related fatigue p. 25
- shoulder weakness p. 25
- skin care after radiation treatment p. 25
- jaw and neck stiffness p. 28
- dry mouth and phlegm p. 26
- swallowing problems p. 30
- speech, voice and resonance changes p. 31
- tooth decay p.27
- mouth sores p.27
- taste changes p.28
- swelling or lymphedema p.29



Pain or discomfort

You'll probably feel some pain after your surgery. **This is normal.**

You will be given instructions on how to manage pain at home and may be given a prescription for pain medication. Take this as directed. If the medicine is upsetting your stomach or is not working for you, call your surgeon's office.

You may wish to try a milder pain medicine such as acetaminophen (Tylenol®) or ibuprofen (Advil®), or both. Follow the directions on the package or ask your doctor or pharmacist. If these are not enough to control your pain, try the prescription medication.

What's common after surgery?

- Bruising on the skin.
- A bit of redness right around your drain site.
- A closed incision with a bit of drainage.
- A stitch that you can see or feel at the end(s) of your incision.

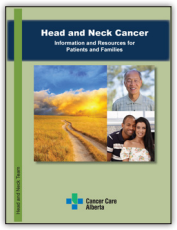
See Section G, p , **Urgent Concerns and When to Get Help** for information on when you should call.

If you're concerned about pain that doesn't stop or anything else you feel, talk to your doctor or nurse.

If your pain is not improving after a few weeks at home, a referral to other professionals such as physiotherapy or occupational therapists or the pain team can help.

Tip! Keeping your head a bit elevated while you sleep can help with swelling and comfort. Sleeping with a foam wedge pillow or 2 to 3 pillows under your head and shoulders may help reduce swelling and discomfort. Sleeping in a recliner may also help.

Swelling (lymphedema)



Swelling (also known as lymphedema) of the face and neck is common during and after surgery or radiation treatment. You might notice swelling from surgery right away. See the **general Head and Neck Cancer book, Section C5**.

Caring for your incisions

	• Check your incisions every day for redness, swelling, or drainage.
	• If you have to put antibiotic ointment on your incisions, always wash your hands before and after touching your incisions.
	• Having a shower is **usually** okay while you still have staples, stitches, Steri-Strips™, sticky dressings or a drain. Follow the instructions you were given. • When you are allowed to shower, you may also wash your hair. • Use warm, not hot water, so you don't get a burn. (The area around the incision(s) may be numb so you may not be able to feel if the water is too hot). • Position yourself so that you can rinse your incisions well, but without having the stream of water hit them directly (the force of the water could cause your incisions to open). Gently pat the areas dry. • Keep your incisions clean and dry between showers. Keep the flap and donor site(s) clean and dry. Your surgeon will tell you if the stitches will be taken out. Many stitches are dissolvable and do not need to be removed.
	• **Do not swim, bathe, or go into hot tubs until your doctor says you can.** The hot water may irritate the skin graft. There is also risk of burns to the flap because it may have decreased sensation.
	• When the flap and donor site(s) are healed, gently clean the areas in the shower every day, using a mild, unscented soap. Do not scrub or rub the areas roughly with a towel; gently pat dry.

Continued next page

	• As the areas heal, you may find they become itchy. Do not rub or scratch these areas. You can be given medications and creams to help relieve the itching. • Do not bump, rub, or scratch the flap or skin graft sites. Avoid pressure on these areas from things such as tight shoes, tight clothing, and/or crossing your legs.
	• Keep clothing loose around flap and donor site(s).
	• Do not shave your face or use hair removal products on your surgery side, until your skin has **completely** healed. • You may have less feeling in the area, so you need to **be careful** when shaving so you don't cut yourself. Cuts can lead to infections. • Food and fluid from the incisions can get caught in the hair. It's important to keep the face clean and dry.
	• Stay away from extremes of heat or cold for several months. Cold temperatures can affect blood flow to the flap. Do not use hot water bottles, heating pads, cold pads, or ice packs as they can cause burns or damage to the tissue.
	**It is important not to use products on your incision until it is healed.** These products may irritate healing tissue. • **Do not** put anything on the flap or skin graft (such as creams, lotions, herbal products, and vitamin E products), or use bath products unless your doctor says you can. • If you are allowed to use lotions or creams, put on a thin layer and gently massage it into the skin until it disappears. Do not put on a thick layer as it can clog the pores, causing a blister or a rash. Remove old creams or lotions in the shower before putting more on.
	• Your new skin on your skin graft and incisions will sunburn easily. Use sunscreen with a SPF of 30 or higher when you are outside. Too much exposure to the sun can also cause your graft area to turn a darker colour than the rest of your skin.
	• If you have a skin graft, you may have to wear a pressure garment or tensor bandage. This will help decrease swelling and may improve scar appearance. Your rehabilitation therapist can give you more advice on compression and managing your graft site.
	• Drinking fluids and adding high calorie, high protein foods every day is important to help heal your surgical site and give you energy. For more information on nutrition, read **Section D2** in the **general Head and Neck Cancer book** or talk with your dietitian.

The "Do Nots" after surgery (for 4-6 weeks)

- No pulling, turning or lifting anything over **10 pounds (lbs)** or **4.5 kilograms (kg)**. It increases blood pressure and could strain your neck and shoulder muscles.
- No vacuuming
- No driving while on pain medications or if you are unable to shoulder check properly
- No vigorous exercise or sports
- No yard work
- No swimming or hot tubs (do not put your incision under the water)
- No activities that could damage the flap or donor site(s)

Your limit is 5 pounds (lbs) if you have:

- **shoulder pain,**
- **spinal accessory nerve damage,**
- **or had surgery on your arm.**

Your surgeon or rehabilitation therapist will tell you when it's okay to increase this limit.

How much is 10 pounds (lbs)?

At home:

- Average 3-month old baby
- A full laundry basket
- Small dog or medium-sized cat
- Large, filled garbage bag
- Medium-sized bowling ball
- Small microwave oven
- Most vacuum cleaners

At the grocery store:

- Large watermelon
- Large bag of sugar or flour
- A sack of potatoes
- Two, 4-litre jugs of milk
- Three, 2-litre bottles of pop
- A holiday ham or turkey

Tip!

Sit on a couch to hold a baby or pet.

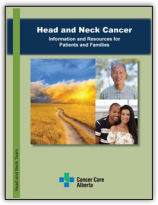
Ask for help to lift items or buy smaller containers while you are recovering.

If you are not sure if something weighs 10 or more pounds (4.5 kg), do not pick it up.

Activity and exercise

It is important to get activity every day after surgery. Walking is the best activity to increase your strength. Short walks everyday for at least 10-15 minutes (work up to 3 times a day). Walking helps with your healing and progress. If it is icy outside, consider walking in a mall or a fitness facility.

Read more about activity and exercise in the **general Head and Neck Cancer book, Section D1**.



D. Prostheses (Anaplastology)

During or after your cancer treatment, your doctor may recommend that you speak with an Anaplastologist. This is a clinician who specializes in making custom facial prosthetics. If this is something you need, you will have an appointment to find out the options available to you and get information to make an informed decision.

What is a Facial Prosthesis? Transitional (temporary) prosthesis

A prosthesis is an artificial body part that replaces a missing body feature. A facial prosthesis is most commonly an eye, ear or nose. Facial prostheses are made of silicone, which is a medical-grade rubber that has the appearance of skin in texture and colour. The prosthesis is removable, allowing your doctors to monitor the health of your skin and provides access for you to keep your skin and the prosthesis clean. All prostheses must be removed when sleeping and cleaned after wear.

How Does a Prosthesis Attach to My Body?

There are 3 ways a prosthesis can be held in place, and sometimes it may be attached using a combination of these methods.

1) Adhesive (known as Adhesive-retained)

Adhesive is applied to the back of the prosthesis and is attached to your body, much like a bandage.

2) Magnets or Clips (known as Implant-retained)

This method requires the surgical placement of 2-5 small screw-sized implants into your bone in the region of the missing body part. The final prosthesis is then attached by magnets or clips to your body.

3) Your Anatomy or Eye Glasses (known as Anatomically-retained or eyeglass-retained)

Sometimes a prosthesis can attach to your body simply by fitting into a gap or being attached to your glasses.

Hygiene and Maintenance

You must remove your prosthesis when sleeping. Removing your prosthesis allows your skin underneath to breathe, and it gives you an opportunity to clean the prosthesis and your skin. Maintaining healthy skin and a clean prosthesis are very important to the success of your treatment.

Your anaplastologist will talk with you about your options and give you more information on cost, care and maintenance.

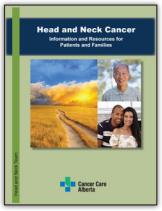
Did you know?

Alberta Health covers the cost of your treatment at the **Institute for Reconstructive Sciences in Medicine (iRSM)**? It is an internationally recognized clinic and research institute focusing on the reconstruction of head and neck of patients who have undergone cancer surgery. Find more at

E. Exercises and Scar Massage

E1 Stretching Exercises

Stretching your jaw, neck, and shoulders



During the first few weeks after leaving the hospital (about 0-8 weeks), stretching your jaw and neck is important to prevent problems with moving, turning your head and eating. Do the exercises in **Section D3** of the **general Head and Neck Cancer** book, along with the shoulder stretches below. These shoulder exercises will help prevent stiffness and help keep a balance between your strong front (chest) muscles and the weaker muscles at the back of your neck and shoulder.

Stretching your shoulders

A Rehabilitation Oncology Physiotherapist will review the exercises below with you (around 6-8 weeks after your surgery). You can start these shoulder exercises depending on how well you are healing. If you had a back flap, you may need to wait longer before starting these exercises. You may want to put a small, thin pillow or folded towel under your head and neck for comfort.

Active Shoulder Flexion

- Lay down on your back on a firm surface, with your legs bent to protect your lower back.
- If needed, hold onto a wand (cane, ski pole, broomstick), with palms facing down and bring your arms over your head.
- Hold at the top for 10-30 seconds.
- Relax. Slowly bring your arms back to your sides.
- Repeat 5 times.

⚠ Move as far as you can go without pain or pinching

Winging

- Lay down on your back on a firm surface, with your legs bent to protect your lower back.
- With your hands by your ears, bring your elbows together.
- Hold elbows together for 5 seconds.
- Drop your elbows down toward the floor and hold for 10-20 seconds.
- Repeat 5-10 times.

⚠ Move as far as you can go without pain or pinching

Shoulder Girdle Mobilization

- Lay down on your back with your knees bent at 90 degrees and your feet flat.
- Rest your arms at your sides.
- Keeping your arms by your sides, shrug your shoulders towards your ears and slowly lower back to starting position.
- Repeat 5-10 times.

E2 Scar Massage

Massaging your scars is important. It keeps the tissue around the incision loose so it doesn't "stick" to the tissue underneath. It is safe to massage your scars (head, neck, graft, and donor) unless your doctor or other healthcare provider has told you not to.

Wait until after your skin has healed (usually around 3-4 weeks after surgery) before you start massaging your scar. Your skin will be healed when the edges of the scar are well closed with no gaps and have no drainage.

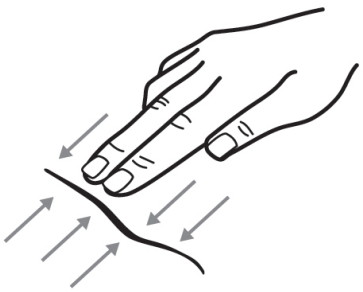
If you're having radiation treatments, you may be told to stop doing scar massage during your treatments, because it may be uncomfortable and your skin is fragile during radiation. You can start again when your skin has healed from your radiation treatments.

→ Massage your scars 2 to 3 times a day for 5 minutes each time.
→ Massage every day for 6 months to 1 year after surgery.

You may feel some pulling. Loosening the scar may be more comfortable to do while the skin is warm (such as after a shower). Make sure your skin is dry and do **not** use cream so your fingers do not slide while you're trying to do the massage.

Towards the scar

1. Place the flat part of your fingers on one side of the scar. Move the skin and the tissue under it towards the scar, but not over it. Hold for a few seconds. Make sure that you press enough to feel the scar "move" under your fingertips. Move the skin and tissue underneath. Hold for a few seconds.
2. Move your fingers along to the next section of scar and repeat until you've massaged all along the scar from both directions.



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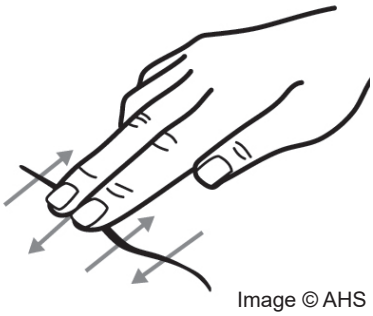


Image © AHS

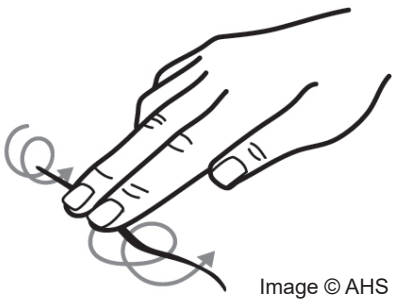
Back and forth

1. Put the flat part of your fingers on the scar. Move the skin and tissue under the scar back and forth, holding for a few seconds. Make sure you press enough to feel the scar "move" under your fingertips.
2. Move your fingers along to the next section of scar and repeat until you've massaged all along the scar.

Circles

1. Put the flat part of your fingers on the scar. Move the skin and tissue under the scar in a small circle, holding for a few seconds. Make sure you press enough to feel the scar "move" under your fingertips.

   Move your fingers along to the next section of the scar, and repeat until you've massaged all along the scar.



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F. Types of Flaps

For an explanation of flaps, donor sites and grafts see page 27.

What are possible complications (problems) that can happen after flap surgery?

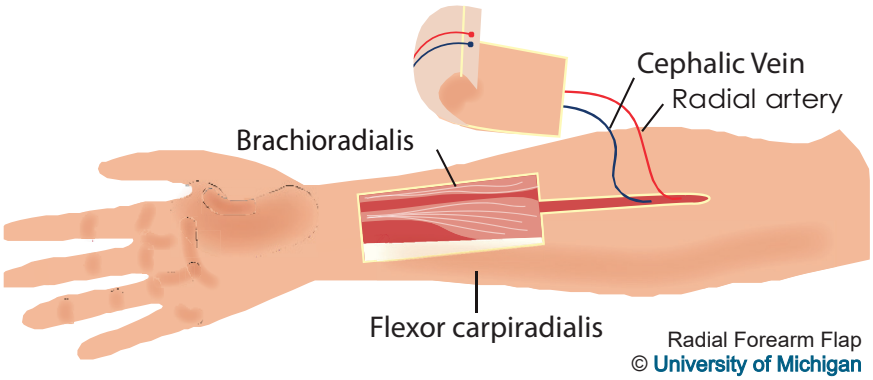
- **Bleeding and infection.** All surgeries have risk such as bleeding or infection. The risks are low but you should be aware of what they are.
- **Blood Clots.** When attaching a flap, your surgeon will connect the two blood vessels (an artery and a vein) in the flap to the matching vessels in the head or neck area. In a small number of cases, one of the blood vessels supplying or draining the flap can develop a blood clot. This means that the flap that was put into place in the face or neck isn't getting fresh blood or if the drainage vein clots, then the flap becomes congested (turning dark in colour) with old blood.

  To help prevent clots the flap will be carefully monitored and you may get ASA or Aspirin® (acetylsalicylic acid) or other blood thinners. This complication usually happens within the first few days after surgery and you may need to return to the operating room to have the clot removed. Removing the clot is not always successful. If this happens, the flap is called a failed flap and you may need a different surgery.
- **Hair growth in the mouth.** If the flap comes from a body part that grows hair, it will continue to grow hair in your mouth. Speak with your surgical team about managing hair growth in the mouth.

F1 Radial Forearm Flap

What does the surgery involve?

Tissue is taken from the inside surface of your forearm near the wrist along with two blood vessels, one of which supplies blood to the flap (artery) and one of which drains blood from it (vein). The blood vessels are joined to blood vessels in your neck and keep the flap alive while it heals.



Radial Forearm Flap

What will my arm be like after surgery?

Your arm will either have a dressing and a special splint, or a vacuum-assisted dressing. The dressing will be replaced about 5-7 days after surgery. The dressing will need to be changed regularly for approximately a month. There will be stitches near your elbow that may need to be removed 10-14 days after surgery. Wear your splint as directed by your surgeon or rehabilitation therapist.
You will need to take it off to shower and put it back on when done.

Image

Continued next page

What should I watch for after surgery?

Here are some changes to watch for in your arm:

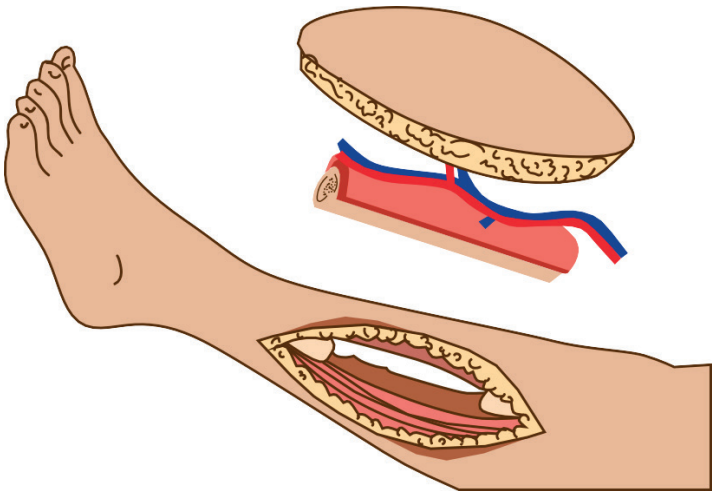
- **Sensation and circulation.** The nerve that gives feeling to the skin on the base and side of the thumb is sometimes bruised when the flap is removed. This can cause a tingly sensation or numbness that may last for several months after surgery. Sometimes it will feel more cold in the winter months than it did before. Occasionally, these changes can be permanent.
- **Strength.** You may also notice that your hand does not feel as strong as it was before surgery.
- **Range of motion.** You might feel tightness and stiffness around the graft or flap site. Sometimes scar tissue can limit your movement. A rehabilitation therapist can show you exercises to help with your range of motion.

F2 Fibula Flap

What does the surgery involve?

Your surgeon will remove most of one of the bones from the lower part of your leg. The fibula bone runs on the outside of the leg from the knee joint to the ankle joint. It is a small thin bone that can be removed entirely and does not affect your ability to support your weight.

The fibula bone is removed (flap) along with two blood vessels. They help supply (artery) and drain (vein) the blood from the flap. The bone is transferred to the head and neck and secured into position with small plates and screws. The blood vessels in the flap are then joined to blood vessels in your neck, keeping the flap alive while it heals.



Fibula Flap

How will the leg wound be covered?

You will have a dressing covering the wound. Occasionally, a piece of skin will be taken with the fibula bone. If the piece of skin is large, it will need to be replaced with a skin graft. If a skin graft is used, the dressing over the top of it will be removed about 5-7 days after surgery. The dressing will need to be changed regularly for about 1 month.

What will my leg be like afterwards?

In the short-term, the area of your leg where the bone has been removed will likely be sore. We will arrange regular pain medication for you during your hospital stay and at time of discharge. In the long-term, removing the fibula bone will not normally result in problems with walking.

You may be given an air cast boot to wear on your leg. This is to protect the leg wound and prevent damage. You will need to wear this for any weight bearing activities like walking, but can

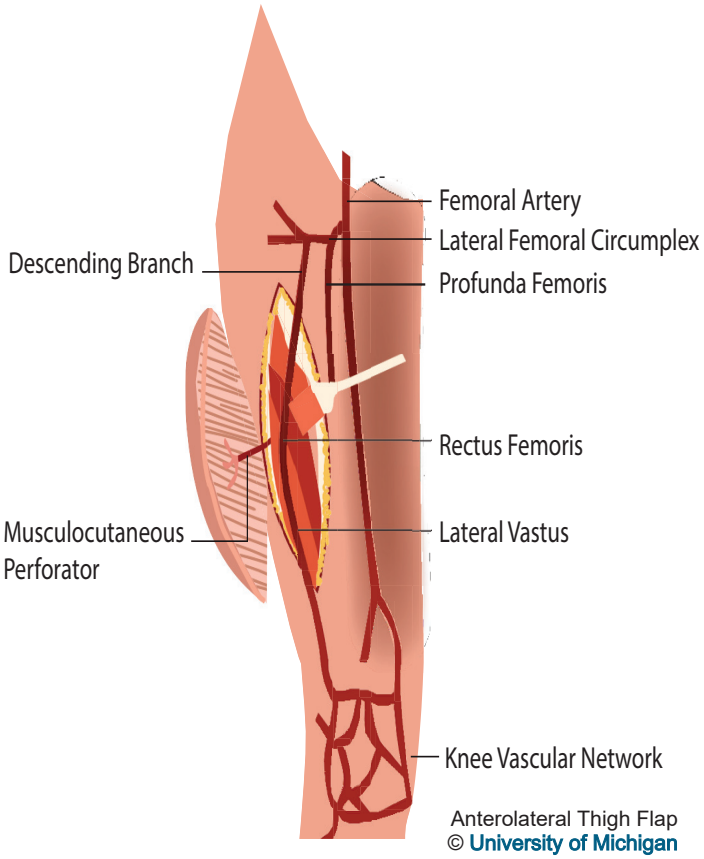
have the boot off if you are in a chair or bed. It's important to keep your leg elevated at or above the level of your hip when you are sitting or lying down. This will help decrease the swelling, which is often the cause of the pain. You will need to wear the boot for 4-6 weeks.

You will work with physical therapy (PT) while you are in the hospital. Once you are home, ask to see the Rehabilitation Oncology team if you have any problems moving your ankle or toes, balance, walking, or if you have swelling concerns.

F3 Anterolateral Thigh Flap (ALT)

What does the surgery involve?

Skin is taken from the front of the thigh and is used to fill a hole which is left when cancer has been removed. Your surgeon will take a piece of skin and fat from the upper surface of your thigh (donor site). The skin and fat layer is removed (the flap) along with two blood vessels. They help supply (artery) and drain (vein) the blood from the flap.



Anterolateral Thigh Flap
© University of Michigan

Once the flap of skin is removed, it is stitched into the hole. Blood vessels in the flap are then joined to the blood vessels in your neck, keeping the flap alive while it heals. You may have a vacuum-assisted dressing to help with healing.

The donor site on your thigh is then closed with stitches or staples. A drain will be placed in your thigh to remove any excess fluid or blood.

What will my leg be like afterward?

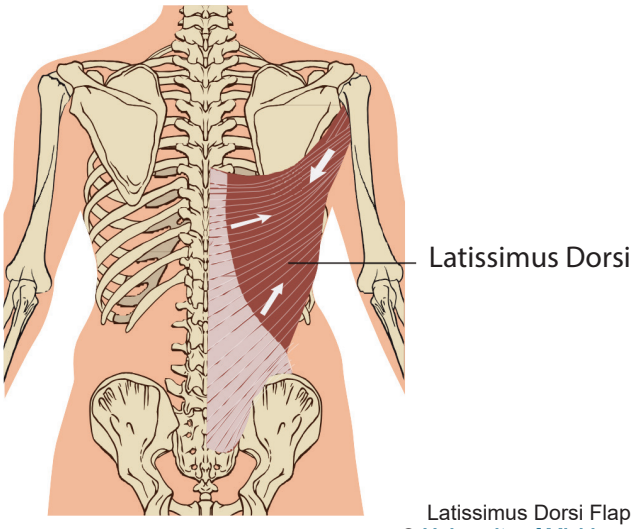
There may be a bandage/dressing over the top of the stitches. An antibiotic ointment or Vaseline® will be used twice daily to help with healing. The stitches will be removed in about 7-10 days.

The middle of the incision will be very tight compared with the rest of the incision. If the incision is too tight and will cause too much strain on your leg, your surgeon may patch this area with a skin graft from your same thigh. A rehabilitation therapist will teach you how to position and move your leg after surgery so you don't strain it while it heals. You will be able to walk on your leg right after surgery.

F4 Latissimus Dorsi Flap (Lat Dorsi)

What does the surgery involve?

A large muscle from your upper back is lifted and moved into place. Due to the size of the muscle, the area that is used may seem bulky at first, but will shrink down.



Latissimus Dorsi Flap

What happens to the area of the back where the muscle is removed?

It will be closed up with either stitches or staples. We will put in a drain to remove extra blood and fluid from under the skin.

Nurses and rehabilitation physiotherapists will teach you how to protect your incision and surgical area. You may have to limit the amount of lifting, pulling and strain on this arm and shoulder while you heal.

When it's time, the drain in your back will be removed. You may get what is called a **seroma.** If this happens, which may need a procedure to allow more drainage.

F5 Pectoralis Major Flap (Pec Flap)

What is a Pec Flap?

The pectoralis major (also known as the "pec major"), is a thick muscle, shaped like a fan, at the upper front of the chest wall. It makes up most of the chest muscle in people assigned male at birth and is under the breast tissue in people assigned female at birth. The flap from this muscle keeps its own blood supply and can be used to replace large areas.

Pectoralis Major Flap

What does surgery involve?

Your surgeon will take skin, muscle, and blood vessels from the pec major and turn this pec flap toward your neck. They will move the flap under the skin (tunnelled) and up into place. The donor site (chest) and will be closed mainly with stitches or staples. In order to remove excess fluid or blood from the donor site, a JP drain will be placed and monitored. When it's time, the drain in your chest will be removed.

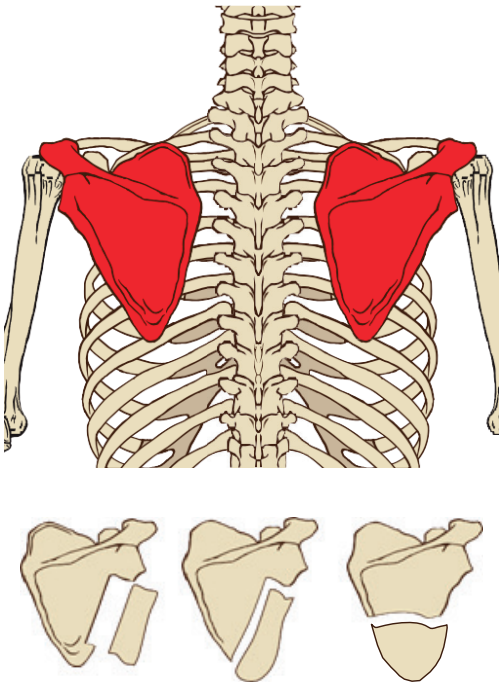
What will my chest be like afterwards?

Right after surgery, you may have some pain when moving your arm on the donor side. This may require pain medication. You will have a scar on your chest that will fade with time. You may have shoulder weakness on this side following surgery, which may be temporary or permanent.

F6 Scapula Flap

What is a Scapula Free Flap?

A scapula free flap is one way of filling a bony hole that is in either the upper or lower jaw. Your surgeon will remove skin and a piece of bone from your shoulder blade (scapula bone) and transfer it to your head and neck. It will be secured into position with small titanium plates and screws. The blood vessels supplying (artery) and draining (vein) the flap are then joined to blood vessels in your neck. These blood vessels will keep the flap alive while it heals.



Scapula Flap

What happens to the area in the shoulder blade where the bone was removed?

The skin of this donor site will be closed with stitches or staples. The hole in the scapula bone will heal on its own. It could take several months to heal completely, but over time you should be as strong as you were before surgery.

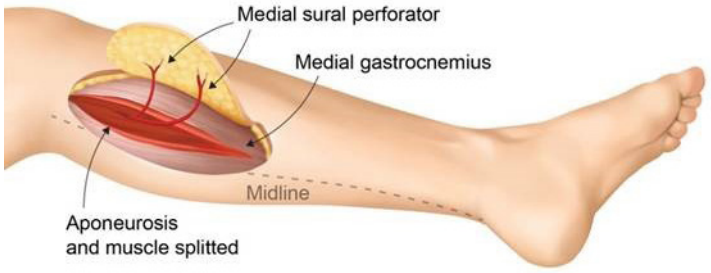
What can I expect after surgery?

The area of your shoulder where the bone was removed will likely be sore. The doctor will prescribe pain medication. There may also be a JP drain to collect any blood. When it's time, the drain in your back will be removed.

A rehabilitation therapist will teach you how to position your shoulder and arm to prevent strain on your scapula while you heal. You might have limited shoulder movement at first. This is most often from swelling in the area. Your rehabilitation therapist may fit you with a shoulder brace to help support the area and will show you gentle exercises to help reduce stiffness.

F7 Medial Sural Artery Perforator Flap (MSAP)

The MSAP flap is one way of filling in a gap in the soft tissue when a thin piece is needed. It is usually used for surgeries involving the tongue, cheek, and other skin defects. The artery supplying blood to the tissue is called the medial sural artery, which is where the name comes from.



MSAP Flap

What does the surgery involve?

Your surgeon will take some skin and fat from your calf in the leg. The piece of tissue is removed along with 2 blood vessels. Once the piece of tissue is removed from your leg, it is transferred to the head and neck and stitched in place. The blood vessels supplying (artery) and draining (vein) the flap are then joined to blood vessels in your neck. These blood vessels will keep the flap alive while it heals.

What happens to the leg where the tissue was removed?

The part of the leg where the flap is removed is either closed, covered with a skin graft, or left to heal on its own. The donor site usually heals well, with no change in muscle strength.

What can I expect after the operation?

The area of your leg where the tissue was removed will likely be sore. It will likely be more sore when the leg is hanging down.

Will my walking be affected?

Since no muscle is removed from the leg, your walking will not be affected as much. You may have some pain or discomfort while healing, which may cause you to limp. Over time, you should return to full function. Slowly, you will start walking longer distances and will be walking normally in a short period of time.

G. ! Urgent Concerns & When to Get Help

If you are having chest pain, chest tightness or difficulty breathing at any time, call 911.

If you have any of the following urgent concerns, call the number your surgeon gave you at any time or go to Emergency if you cannot reach your surgeon right away.

Urgent Concerns:

- Changes to your skin incision:
  - increasing redness, swelling, yellow or green discharge, or a bad smell.
  - bleeding (bright red) and the bleeding does not stop after you put pressure using a clean cloth or gauze. **! If the bleeding is in your mouth or throat go to Emergency right away or call 911.**
  - you have a large or complete separation of your incision (your incision has come open).
- Chills or a fever (temperature above 38.5°C/101.3 °F).
- Severe difficulty eating and drinking.
- Trouble passing urine.
- No bowel movement in 3 days.
- Nausea that is not getting better with your medication or throwing up longer than 24 hours.
- You have pain, swelling, or redness in your leg that is greater on one side compared to the other.
- If you have a drain:
  - ongoing bright red bloody discharge from your drain.
  - drainage from your drain that smells bad or is creamy in colour.

Non-urgent Concerns

These concerns are **not** urgent. Call your surgeon **during business hours** to set up an appointment if you notice:

- More redness or swelling around your incision(s) or drain site.
- Any new drainage from your incision(s).
- Your incision has opened a little bit (less than 1cm).
- You are having trouble eating or drinking (you are losing weight).
- You have new lumps or bumps in your neck.

Parts of this resource were adapted from the Head & Neck Oncology Patient Guide: Department of Oral & Maxillofacial Surgery, University of Michigan.
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The information is to be updated every 3 years, or as new clinical evidence emerges. If there are any concerns or updates with this information, please email cancerpatienteducation@ahs.ca.

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