



PATIENT INFORMATION

Free Flap Head and Neck Surgery

*Please bring this book to the hospital
on the day of your surgery.*

THE OTTAWA HOSPITAL

Name

Disclaimer

This is general information developed by The Ottawa Hospital. It is not intended to replace the advice of a qualified health-care provider. Please consult your health-care provider who will be able to determine the appropriateness of the information for your specific situation.

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Introduction

Welcome to The Ottawa Hospital. You are being admitted for a complex head and neck surgery with free flap reconstruction.

Please read and bring this booklet to the hospital, as team members will refer to these instructions throughout your hospital stay.

This book will tell you how to prepare for surgery, your hospital stay and care at home after your surgery.



The Health-care Team

The following members of the health-care team will help you during your hospital stay.

Otolaryngology (ENT) Surgeon

The Otolaryngology Surgeon and team of surgical residents will discuss your care and answer any questions you might have. The Surgeons will be in charge of your care.

Registered Nurse

The Nurse will be responsible for the management of your care; through on-going assessment, and by ensuring that learning and teaching needs have been met.

Clinical Manager

The Clinical Manager provides leadership, direction and supervision to ensure the clinical unit is running effectively and efficiently.

Clinical Care Leader (CCL)

The CCL assists the manager to ensure the clinical unit is running effectively and efficiently.

Nurse Educator

The Nurse Educator is responsible for designing, implementing, evaluating and revising academic and continuing education for nurses.

Patient Care Assistant (PCA)

The PCA will work with the team to help with your care, for example, by providing baths, assisting you out of bed, to the toilet **as needed**.

Physiotherapist (PT)

The Physiotherapist will help you regain your functional ability after your surgery **as needed**.

Respiratory Therapist (RT)

The Respiratory Therapist will provide assistance with managing your tracheostomy.

Speech Language Pathologist (SLP)

The Speech Language Pathologist plays a primary role in the evaluation and management of swallowing function and speech, following head and neck surgery.

Occupational Therapist (OT)

The Occupational Therapist will help you to become more independent with the activities of daily living **as needed** and determine if you need special equipment or strategies that will help when you go home.

Social Worker

The Social Worker will meet with you and your family for discharge planning services, counseling and community information **as needed**.

Registered Dietitian

The Dietitian will ensure that you receive appropriate nutrition through your feeding tube while you are unable to eat by mouth. Once you begin eating by mouth again, the Dietitian can also provide advice and teaching on how to modify your diet at home to make eating easier while you continue to heal.

Home Care

The Home Care Nurse will meet you a few days before you leave the hospital to make plans for nursing care at home **as needed**.

6th Floor Observation (Rm.6330) and 6 North West (6NW) ENT Units

The 6th Floor Observation Unit is a monitoring area that is part of the larger 6NW ENT Unit. These units include a team of Doctors, Nurses, Physiotherapists, RT's, Social Work, Dietitian and Occupational Therapists.

The 6 North West Unit is a medical – surgical ward for ENT patients who no longer require acute monitoring.

Unit Information:

- **Your** information is personal and confidential; **family cannot** be given information over the telephone.
- Leave all valuables at home, or have a relative retain them for you.
- There is a visitor's/patient lounge located on the 6 North West Unit.
- You will be given information about our units upon arrival.

Clinical Pathway – Free Flap Head and Neck Surgery	
Day of Admission / Surgery Post-Op	
Tests	<ul style="list-style-type: none"> • Bloodwork • Cardiac monitoring • Oxygen saturation monitoring • Arterial blood pressure • Doppler/flap check
Treatments	<ul style="list-style-type: none"> • Cuffed Tracheostomy tube, cuff inflated • Intravenous (IV) • Nasogastric (NG) tube • Wound care/dressings • Jackson Pratt (JP) drain • Urinary catheter
Medications	<ul style="list-style-type: none"> • Patient controlled pain pump • Patient specific medications • Oxygen as needed • Saline mouth care
Activity	<ul style="list-style-type: none"> • Head of bed elevated • Deep breathing and coughing every hour while awake • Ankle pumps every hour while awake
Nutrition	<ul style="list-style-type: none"> • Nothing by mouth • Oral medications administered through feeding tube
Specialist Consults	<ul style="list-style-type: none"> • Respiratory Therapist assessment
Patient Teaching / Discharge Planning	<p>Patient Teaching:</p> <ul style="list-style-type: none"> • Head of bed elevated • Smoking cessation • Mouth care • Deep breathing and coughing • Ankle pumps • Pain management • Donor site limb elevated • Bed rest • Diet

Clinical Pathway – Free Flap Head and Neck Surgery		
Post-Op Day 1		
Tests	<ul style="list-style-type: none"> • Morning bloodwork • Cardiac monitoring 	<ul style="list-style-type: none"> • Oxygen saturation monitoring • Doppler/flap check
Treatments	<ul style="list-style-type: none"> • Cuffed Tracheostomy tube, cuff deflated • IV • NG tube 	<ul style="list-style-type: none"> • Wound care/dressings • JP drain • Urinary catheter
Medications	<ul style="list-style-type: none"> • Patient controlled pain pump • Patient specific medications • Blood thinners 	<ul style="list-style-type: none"> • Oxygen as needed • Chlorhexidine mouth care
Activity	<ul style="list-style-type: none"> • Head of bed elevated • Deep breathing and coughing every hour while awake • Ankle pumps every hour while awake • Weight bearing as tolerated 	<ul style="list-style-type: none"> • Up in chair 1–2 hours twice • Walking with assistance 1–2 times • Shoulder and elbow range of motion exercises • Hand pumps every hour with Forearm Flap Donor limb
Nutrition	<ul style="list-style-type: none"> • Nothing by mouth • Oral medications administered through feeding tube 	<ul style="list-style-type: none"> • Tube feeding
Specialist Consults	<ul style="list-style-type: none"> • Physiotherapy assessment 	<ul style="list-style-type: none"> • Dietitian assessment
Patient Teaching / Discharge Planning	<p>Patient Teaching:</p> <ul style="list-style-type: none"> • Patient has teaching booklet • Cuff deflation • Avoid neck and wrist hyperextension • Hand pumps with Forearm Flap Donor limb • Elbow and shoulder range of motion exercises • Tube feeding 	<p>Reinforce:</p> <ul style="list-style-type: none"> • Smoking cessation • Mouth care • Deep breathing and coughing • Ankle pumps • Pain management • Flap Donor site limb elevated <p>Discharge Planning:</p> <ul style="list-style-type: none"> • Review discharge issues/discharge plan with the patient/family

Clinical Pathway – Free Flap Head and Neck Surgery	
Post-Op Day 2 and 3	
Tests	<ul style="list-style-type: none"> • Morning bloodwork • Cardiac monitoring • Oxygen saturation monitoring • Doppler/flap check
Treatments	<ul style="list-style-type: none"> • Cuffed Tracheostomy tube, cuff deflated • IV • NG tube • Wound care/dressings • JP drain; possible removal when drainage decreased
Medications	<ul style="list-style-type: none"> • Patient controlled pain pump • Patient specific medications • Blood thinners • Oxygen as needed • Chlorhexidine mouth care
Activity	<ul style="list-style-type: none"> • Head of bed elevated • Deep breathing and coughing every hour while awake • Ankle pumps every hour while awake • Weight bearing as tolerated • Up in chair 1–2 hours 3 times • Walking with assistance 3–4 times • Shoulder and elbow range of motion exercises 2–3 times daily • Hand pumps every hour with Forearm Flap Donor limb • If drains removed, neck range of motion exercises 2–3 times daily
Nutrition	<ul style="list-style-type: none"> • Nothing by mouth • Oral medications administered through feeding tube • Tube feeding
Patient Teaching / Discharge Planning	<p>Patient Teaching:</p> <ul style="list-style-type: none"> • Patient has teaching booklet • Swallowing exercises • Neck range of motion exercises if drains is out <p>Discharge Planning:</p> <ul style="list-style-type: none"> • Review discharge issues/discharge plan with the patient/family <p>Reinforce:</p> <ul style="list-style-type: none"> • Avoid neck and wrist hyperextension • Hand pumps with Forearm Flap Donor limb • Elbow and shoulder range of motion exercises • Tube feeding • Smoking cessation • Mouth care • Deep breathing and coughing • Ankle pumps • Pain management

Clinical Pathway – Free Flap Head and Neck Surgery		
Post-Op Day 4		
Tests	<ul style="list-style-type: none"> • Bloodwork as needed • Cardiac monitoring 	<ul style="list-style-type: none"> • Oxygen saturation monitoring • Doppler/flap check
Treatments	<ul style="list-style-type: none"> • Cuffed Tracheostomy tube, cuff deflated • IV • NG tube 	<ul style="list-style-type: none"> • Wound care/dressings • JP drain; removal when drainage decreased
Medications	<ul style="list-style-type: none"> • Pain medication as needed • Patient specific medications • Blood thinners 	<ul style="list-style-type: none"> • Oxygen as needed • Chlorhexidine mouth care
Activity	<ul style="list-style-type: none"> • Head of bed elevated • Deep breathing and coughing every hour while awake • Ankle pumps every hour while awake • Walking with assistance 4 times per day • Up in chair 1–2 hours more than 2 times per day 	<ul style="list-style-type: none"> • Shoulder and elbow range of motion exercises 2–3 times daily • Hand pumps every hour with Forearm Flap Donor limb • If drains removed, neck range of motion exercises 2–3 times daily
Nutrition	<ul style="list-style-type: none"> • Nothing by mouth • Oral medications administered through feeding tube 	<ul style="list-style-type: none"> • Tube feeding
Patient Teaching / Discharge Planning	<p>Patient Teaching:</p> <ul style="list-style-type: none"> • Review discharge teaching instructions as per education booklet 	<p>Discharge Planning:</p> <ul style="list-style-type: none"> • Review discharge issues/discharge plan with the patient/family

Clinical Pathway – Free Flap Head and Neck Surgery			
Post-Op Day 5			
Tests	<ul style="list-style-type: none"> • Cardiac monitoring • Oxygen saturation monitoring • Doppler/flap check 		
Treatments	<ul style="list-style-type: none"> • Cuffed Tracheostomy tube, changed for cuffless • Start tracheostomy corking trial • Saline lock • NG tube • Wound care/dressings 		
Medications	<ul style="list-style-type: none"> • Pain medication as needed • Patient specific medications • Blood thinners • Chlorhexidine mouth care 		
Activity	<ul style="list-style-type: none"> • Head of bed elevated • Deep breathing and coughing every hour while awake • Walking independently more than 4 times per day • Up in chair 1–2 hours more than 3 times per day • Shoulder and elbow range of motion exercises 2–3 times daily • Hand pumps every hour with Forearm Flap Donor limb • If drains removed, neck range of motion exercises 2–3 times daily 		
Nutrition	<ul style="list-style-type: none"> • Nothing by mouth • Oral medications administered through feeding tube • Tube feeding 		
Patient Teaching / Discharge Planning	<table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top; width: 50%;"> <p>Patient Teaching:</p> <ul style="list-style-type: none"> • Review discharge teaching instructions as per education booklet • Additional learning and teaching needs identified if applicable • Downsizing tracheostomy tube • Corking trial </td> <td style="vertical-align: top; width: 50%;"> <p>Discharge Planning:</p> <ul style="list-style-type: none"> • Review discharge issues/discharge plan with the patient/family • Transfer to 6NW </td> </tr> </table>	<p>Patient Teaching:</p> <ul style="list-style-type: none"> • Review discharge teaching instructions as per education booklet • Additional learning and teaching needs identified if applicable • Downsizing tracheostomy tube • Corking trial 	<p>Discharge Planning:</p> <ul style="list-style-type: none"> • Review discharge issues/discharge plan with the patient/family • Transfer to 6NW
<p>Patient Teaching:</p> <ul style="list-style-type: none"> • Review discharge teaching instructions as per education booklet • Additional learning and teaching needs identified if applicable • Downsizing tracheostomy tube • Corking trial 	<p>Discharge Planning:</p> <ul style="list-style-type: none"> • Review discharge issues/discharge plan with the patient/family • Transfer to 6NW 		

Clinical Pathway – Free Flap Head and Neck Surgery	
Post-Op Day 6	
Tests	<ul style="list-style-type: none"> • Doppler/flap check
Treatments	<ul style="list-style-type: none"> • Cuffed Tracheostomy tube, changed for cuffless • Start tracheostomy corking trial • Saline lock • NG tube • Wound care/dressings
Medications	<ul style="list-style-type: none"> • Pain medication as needed • Patient specific medications • Blood thinners • Chlorhexidine mouth care
Activity	<ul style="list-style-type: none"> • Head of bed elevated • Deep breathing and coughing every hour while awake • Weight bearing as tolerated • Walking independently more than 4 times per day • Up in chair 1–2 hours more than 3 times per day • Shoulder and elbow range of motion exercises 2–3 times daily • Hand pumps every hour with Forearm Flap Donor limb • Neck range of motion exercises 2–3 times daily
Nutrition	<ul style="list-style-type: none"> • Nothing by mouth • Oral medications administered through feeding tube • Tube feeding
Patient Teaching / Discharge Planning	<p>Patient Teaching:</p> <ul style="list-style-type: none"> • Review discharge teaching instructions as per education booklet • Review additional learning and teaching needs as required <p>Reinforce:</p> <ul style="list-style-type: none"> • Downsizing tracheostomy tube • Corking trial <p>Discharge Planning:</p> <ul style="list-style-type: none"> • Review discharge issues/discharge plan with the patient/family

Clinical Pathway – Free Flap Head and Neck Surgery			
Post-Op Day 7 Until Discharge			
Tests	<ul style="list-style-type: none"> • Doppler/flap check 		
Treatments	<ul style="list-style-type: none"> • Tracheostomy tube removed when ready • Saline lock • NG tube removed when oral diet tolerated • Wound care/dressings: cast removed • sutures and staples removed 		
Medications	<ul style="list-style-type: none"> • Pain medication as needed • Patient specific medications • Blood thinners • Chlorhexidine mouth care 		
Activity	<ul style="list-style-type: none"> • Head of bed elevated • Deep breathing and coughing every hour while awake • Weight bearing as tolerated • Walking independently more than 4 times per day • Up in chair 1–2 hours more than 3 times per day • Shoulder and elbow range of motion exercises 2–3 times daily • Hand pumps every hour with Forearm Flap Donor limb • Neck range of motion exercises 2–3 times daily 		
Nutrition	<ul style="list-style-type: none"> • Trial of swallowing as tolerated • Progress to oral diet as tolerated • Oral medications administered through feeding tube • Tube feeding 		
Specialist Consults	<ul style="list-style-type: none"> • Speech Language Pathologist assessment and guidance for swallowing trial and progression of oral diet • Home Care assessment (if needed) 		
Patient Teaching / Discharge Planning	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 50%;"> <p>Patient Teaching:</p> <ul style="list-style-type: none"> • Review discharge teaching instructions on pages 22 and 23 with RN • Review additional learning and teaching needs as required • Pressure to tracheostomy site with talking and coughing with tracheostomy removal • Swallowing trial with Speech Language Pathologist </td> <td style="vertical-align: top; width: 50%;"> <p>Discharge Planning:</p> <ul style="list-style-type: none"> • Review discharge issues/discharge plan with the patient/family • Patient meets discharge criteria • Patient prepared for 10 a.m. discharge • Follow-up appointments made • Prescriptions provided • Surgery Discharge Instruction Sheet provided </td> </tr> </table>	<p>Patient Teaching:</p> <ul style="list-style-type: none"> • Review discharge teaching instructions on pages 22 and 23 with RN • Review additional learning and teaching needs as required • Pressure to tracheostomy site with talking and coughing with tracheostomy removal • Swallowing trial with Speech Language Pathologist 	<p>Discharge Planning:</p> <ul style="list-style-type: none"> • Review discharge issues/discharge plan with the patient/family • Patient meets discharge criteria • Patient prepared for 10 a.m. discharge • Follow-up appointments made • Prescriptions provided • Surgery Discharge Instruction Sheet provided
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Preparing For Surgery

Helpful points before coming to hospital:

- Exercise: walk at a brisk pace for 30 to 45 minutes and practice the post-surgery exercises on page 16 daily.
- **Stop Smoking!** Tobacco in any form should be avoided. This includes pipes, cigars, cigarettes, and chewing tobacco. Tobacco smoke has many harmful substances that damage cells. Smoking places you at risk for lung and wound complications after surgery:
 - Cilia (lining of the airway) help expel secretions. Long term exposure to tobacco smoke destroys cilia and, as a result, you will have more difficulty clearing secretions after surgery.
 - Nicotine causes small blood vessels to spasm closed, and any interruption to the blood flow to your new free flap reconstruction could cause the free flap to die. This would mean your reconstruction has failed and another major surgery may be needed.

It is never too late to stop smoking. Smoking cessation programs can help you stop smoking.

Heart Health Education Center: 613-761-4753

This six month program involves behavioural therapy; addictive disorders therapy; pharmacologic therapy (nicotine patch or gum); and relapse prevention.

- Covered by the Ontario Health Card or the Régie d'assurance maladie du Québec
- Offered in English and in French

The Public Health Information Line at 613-724-4179

- Multilingual



The Pre-Admission Unit Visit

Before you are admitted for surgery you will have an appointment at the Pre-Admission Unit (PAU). Please bring all of your regular medications, including your over the counter medication and herbal remedies to this appointment. A nurse and a doctor will see you. The nurse will ask about your medical history and what medications you usually take.

Starting 3 days before your surgery, rinse your mouth with salt water three times each day.



Morning of Your Surgery (Pre-op)

Please follow the pre-op instructions provided by the nurse during your PAU visit.

- If you have been told to take some of your usual medications (such as your blood pressure pills or heart pills) on the morning of surgery, you may take them with a sip of water.
- Bring in your personal care items such as a toothbrush, comb, and shampoo.
- Bring telephone numbers of your spouse/relative who will be helping you, so they can be contacted if needed. Include the home, cell and work numbers.



What is a Free Flap Reconstruction?

Some surgeries for the head and neck, such as those to remove large oral cancers, need large amounts of tissue to be removed in order to completely remove the disease. When we remove a large amount of tissue, we must reconstruct the portion that has been removed so that you can continue to enjoy the same or nearly the same function after the surgery. To do this your surgeon will use tissue from somewhere else in the body to reconstruct the missing tissue in the head and neck. This is called a **“Free Flap” reconstruction**, because we take a **“Flap”** of your healthy tissue (skin and/or muscle and/or bone) from a different region of your body, remove or “Free” it from your body along with the blood vessels that supply it, then use it to fill in the hole, reconstructing the defect where the diseased tissue was removed. This is similar to a transplant, but within your own body.

The most common regions of the body to supply healthy tissue for your free flap are your forearm, lower leg, thigh, or shoulder blade. These regions, called “donor sites”, are specifically chosen because they can still function well after surgery, even with large amounts of tissue removed for use in other areas of your body. However, there will be a scar in the area where the tissue is removed. Your surgeon will discuss with you before surgery which donor site will be most appropriate for your free flap reconstruction surgery.

Sometimes the area of healthy tissue being removed at the donor site is very large, and leaves a hole too big to be closed with stitches alone. In this case, you may need a patch of healthy skin to be taken from another area of the body (usually the thigh) to help fill and cover the donor site hole. This is called a skin graft. The area on your thigh where the skin graft was taken from will scab over, and heal fully in a few weeks after surgery.

In order to connect the free flap blood vessels to those in your neck, a neck dissection will be performed on one or both sides of your neck. This involves lifting the skin of your neck and removing all the fat and lymph nodes underneath that may harbor microscopic cancer cells. At the same time, it allows the surgeon to plug the free flap vessels into existing blood vessels in your neck, so that your free flap can be supplied with fresh blood and nutrients. This “plumbing” of the free flap vessels is essential for free flap survival in its new location, and a successful reconstruction of your mouth.

Every effort is made to not harm any major blood vessels or nerves in the neck during the neck dissection. However, sometimes vessels or nerves must be removed if they contain cancer; and sometimes, even if the nerves are not cut, they can become temporarily stretched or irritated during surgery – especially the nerve to the shoulder. If this happens, you may experience some shoulder weakness after surgery. The Physiotherapist will work with you after surgery to teach you shoulder strengthening exercises.

Because you are having surgery on your mouth and neck, you will naturally experience temporary swelling in these areas after surgery. The swelling can make both breathing and eating difficult until it subsides. We therefore take some preventive measures to ensure your comfort and safety during and after surgery:

- Breathing tube called a tracheostomy is usually placed in your neck at the time of your surgery since your mouth and neck will be very swollen. The tracheostomy can usually be removed approximately 7 days after surgery, once the swelling has begun to come down.
- A feeding tube is also placed at the time of your surgery to allow food and medication to be given to you without having to use your mouth, which will temporarily be too swollen to chew or swallow. This feeding tube can either be a nasogastric tube (a tube that travels through your nose to your stomach), or a gastrostomy tube (a tube that travels directly through your abdominal wall into your stomach). Your surgeon and/or a Speech Language Pathologist will discuss these options with you and provide advice about the temporary feeding method recommended for you, prior to your surgery.



After Surgery (Post-Op)

Following surgery, you will awaken in the Post Anaesthetic Care Unit (PACU). When you are ready, you will be transferred to a bed in the 6th Floor Observation Unit, where you will stay for a minimum of 5 days. When you have recovered enough and you no longer need constant nurse monitoring, you will be transferred to a room on 6NW ENT Unit until you are deemed ready to go home.

Pain Management

The goal is well-controlled pain at rest and with activity. With good pain control at rest, you will be comfortable enough to sleep. With activity, there may be an increase in pain but should not prevent you from deep breathing and coughing, and moving about as well as you like.

You will have a pump containing medication to help control your pain that will be connected to your intravenous (IV). The type of pain medication will be decided by your anaesthesiologist.

You will be given a hand-held controller. Press the button on the controller as soon as the pain starts, or if you know your pain will worsen when you start walking or doing breathing exercises. Do not permit family or friends to push the handset for you.

Your pain will be assessed using a scale of 0 to 10. Zero is no pain and 10 is the worst pain possible. You will be asked to rate your pain level, both while resting and during activity. In addition, you will be asked if the pain prevents you from moving and if you are satisfied with your pain.

These assessments will help determine how effective your treatment is and whether changes in the pump or medication is needed.

Inform your nurse if you have any of the following:

- itching skin
- nausea and/or vomiting
- unrelieved pain
- increased sleepiness

After a few days the pump containing pain medication will be stopped and you will be given pain medication by your feeding tube or injection as needed.

Wound Care

The incision(s) are usually closed with sutures, staples, or steristrips. If there is a dressing on your incision it will be removed when there is no drainage and left open to air.

If your free flap was removed from your forearm or lower leg, you will have a cast over the donor site. This will be removed after 7 days, and the underlying incision will be dressed or left open to the air as needed.

In order to decrease the level of bacteria in your mouth and help the incisions to heal, you will be asked to rinse your mouth multiple times per day, at first with saline only and later with an antiseptic solution. Your nurse will provide the solution and assistance needed, during the day.

Tracheostomy

A breathing tube called a tracheostomy will be placed in your neck at the time of your surgery so that you can continue to breathe comfortably after surgery, since your mouth and neck will be very swollen. **Talking will be limited temporarily**, during this time. You may find it helpful to bring a small white board and dry erase marker, to hospital, to aid in communication.

The tracheostomy can usually be removed around day 7 after surgery, once the swelling has begun to come down. To test your ability to breathe without the tracheostomy, the Respiratory Therapist will block the trach tube with a cork around day 5 (once the tube has been exchanged for a smaller, uncuffed one). This is called a “corking trial”. Once you can wear the cork for 24 hours continuously, the tracheostomy tube will be removed by one of the doctors. The doctor may suture the hole closed to help it heal faster. You can also help the hole to heal closed faster by placing firm pressure over the hole every time you speak or cough to prevent air from escaping through the hole.

Surgical Drain(s)

Surgical drains are used to collect excess discharge that seeps into the area of the surgical site. The surgeon may insert one or more small drainage tubes at the time of surgery. It will be in place for a couple of days before being removed by the nurse.

Intravenous (IV)

You will have an IV to replace your fluids and to administer IV medications until you are able to receive fluids and medications through your feeding tube. Take care not to pull on the IV tubing. When walking, push the IV pole using your hand that does not have the IV.

Once you are receiving enough fluids through your feeding tube, the nurse will stop the IV fluids. IV access will be maintained with a saline lock until your discharge.

Oxygen and Humidified Air

Oxygen is an important part of the air we breathe. Sometimes the body may require extra oxygen. During your hospital stay, you may receive extra oxygen. This is given through a mask placed over your tracheostomy. The amount of oxygen in your blood is tested by placing a small clip on your finger. This test is called pulse oximetry and is used to check that your body is getting the right amount of oxygen. When you no longer need extra oxygen it will be removed.

Normally your nose and mouth warm and humidify the air passing to your lungs; because the air will only flow through your tracheostomy tube it can be very drying. This can cause the mucous to become thick and sticky, making it more difficult to breathe and cough. The nurse and respiratory therapist will work with you to provide cool or warm humidified air to your tracheostomy tube to make sure you can continue to breathe and cough comfortably.

Deep Breathing and Coughing Exercises

After surgery, we tend to take smaller breaths. This can be due to pain, anesthetic medications given during surgery, or due to you not being as active as before your surgery.

Deep breathing exercises work best when you are sitting up in a chair or on the side of the bed.

- Take a deep breath in through your nose. Hold for three seconds.
- Breathe out through your mouth slowly.
- Repeat this exercise ten times each hour while you are awake and until your activity level increases.

Coughing exercises help to loosen any secretions that may be in your lungs and should be done after your first five deep breaths.

To produce an effective cough:

- Take a deep breath in and cough.

Walking

Walking is an important part of your recovery. At first you **may** need help from your Physiotherapist or Nurse. Frequent short walks during your hospital stay will help fill your lungs with air and regain your strength. You should continue these walks at home while slowly increasing the distance walked.

- This exercise program should be done slowly and continued at home for at least two weeks.
- Do not lift more than ten pounds for three weeks.

Exercises

Your Physiotherapist will teach you how to carefully perform the following range of motion exercises after your surgery to help regain your strength and mobility. All the exercises must be completed within a pain free range of motion. These exercises are to be completed **3 times per day, for 8 weeks following your discharge. Remember to AVOID hyperextension of the wrist (if you have a Forearm Flap Donor site) and the neck.**

Gentle Neck Range of Motion Post-Surgery:

- Your physiotherapist will guide you post-op day 1.
- Continue exercises as instructed for 8 weeks following your discharge.



Neck Flexion:

- Bend your head forward until you feel a stretch behind your neck.
- Hold for 5 seconds
- Repeat 5 times



Neck Extension:

- Bend your head backward until you feel a gentle stretch at the front of your neck.
- Hold for 5 seconds
- Repeat 5 times



Neck Rotation:

- Turn your head to one side until you feel a stretch.
- Hold for 5 seconds
- Repeat 5 times



Neck Lateral Flexion:

- Tilt your head toward one shoulder until you feel a stretch on the opposite side.
- Hold for 5 seconds
- Repeat 5 times

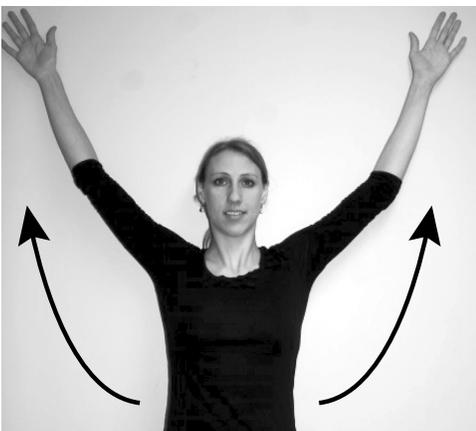
Shoulder and Elbow Range of Motion:

- 2 to 3 times per day starting post-op day 1.
- Continue exercises as instructed for 8 weeks following your discharge.



Shoulder Shrug:

- Lift your shoulders toward your ears
- Hold for 5 seconds, then lower shoulders back down.
- Repeat 5 times



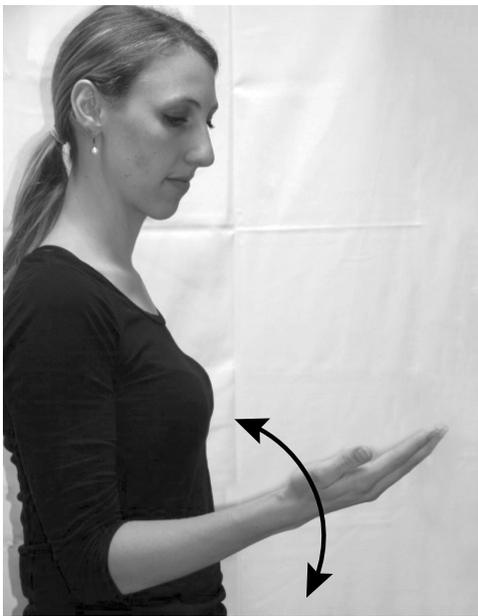
Shoulder Abduction:

- Lift your arms up sideways and over your head. Let your thumbs lead the way.
- Hold for 5 seconds
- Repeat 10 times



Shoulder Flexion:

- Lift your arms in front of you and over your head. Let your thumbs lead the way.
- Hold for 5 seconds
- Repeat 5 times



Elbow Flexion and Extension:

- Bend your elbow, then straighten **completely**.
- Hold for 5 seconds
- Repeat 5 times

For Patients With Forearm Flap Donor site:

- Hand pumps every hour starting post-op day 1.
- Continue exercises as instructed for 8 weeks following your discharge.

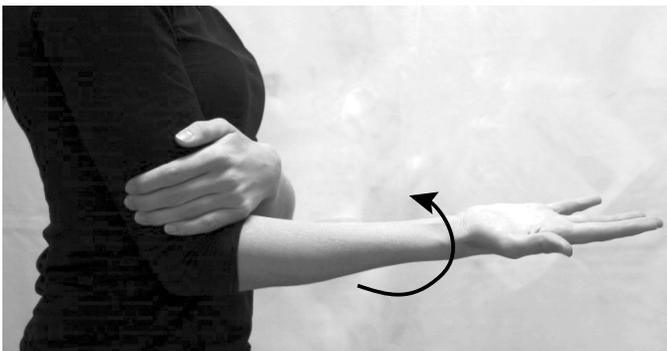


Hand Pumps:

- Make a fist, then open your hand fully.
- Repeat 10 times **every hour**.

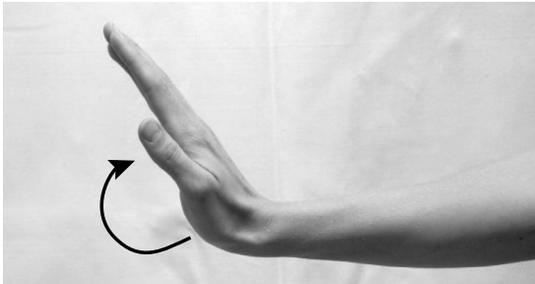
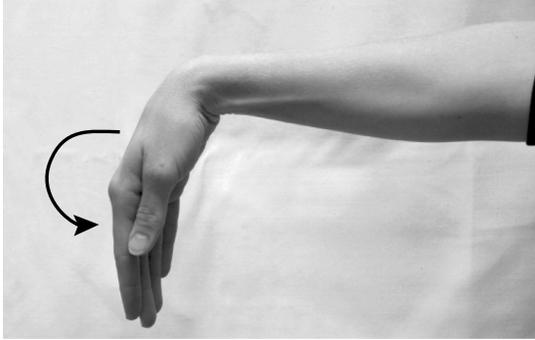
For Patients With Forearm Donor site:

- The following exercises **will be taught by your physiotherapist once the forearm cast is removed**.
- Continue exercises as instructed for 8 weeks following your discharge.



Elbow Supination and Pronation:

- Keep elbow by your side.
Holding your palm upward.
- Rotate forearm so your palm is down-ward.
- Repeat 5 times



Wrist Flexion and Extension:

- Bend your wrist forward.
- Then **gently** straighten wrist backward.
- Repeat 5 times

Keep Moving

- While in bed it is important to change positions frequently.
- To avoid stress on the incision, support the head and neck with your hands while moving.
- You will be encouraged to be out of bed and walking. The Physiotherapist and Nurse will assist you as needed.

You should report any of the following:

- Difficulty breathing
- Nausea and/or vomiting
- Pain or numbness in the fingers or toes of the limb where the free flap donor was taken from.
- Chest pain



Discharge Teaching Instructions

When you are discharged from the hospital, you may need general help at home. **It is best to make plans before being admitted to the hospital for your surgery.** Discuss your discharge plans with your nurse.

Look at the Clinical Pathway pages 4 to 10, as this will give you and your family an idea of what to expect on a daily basis.

Before leaving the hospital, make sure you have:

- Your prescription for your medication.
- Your surgeon may request that you have blood work done before your follow-up appointment. If blood work is necessary you will be given a form and instructions before leaving the hospital.
- Information regarding a follow-up appointment to see your Otolaryngology Surgeon in about one to three weeks.
- Arranged for someone to pick you up at 10 a.m. on the day of discharge.

Be sure you understand information related to the following, as well as any additional information not provided in this booklet.

Activity

- **Neck, shoulder and elbow Range of Motion Exercises and hand pumps should be performed 3 times per day for 8 weeks (staying within a pain free range).**
- **Avoid hyperextension of the wrist (if you have a Forearm Flap Donor site) and the neck for 8 weeks.**
- Avoid strenuous exercise including lifting heavy objects, grocery bags, shoveling snow and pushing a lawn mower until after you have seen your doctor at your first follow-up appointment.
- Resume your regular activities gradually over three to four weeks. Discuss any specific concerns with your doctor.
- Do not drive your car while taking narcotics to manage your pain.
- Take frequent rest periods as necessary. Let your body be your guide.

Wound Care

- Observe the incision for increased redness, tenderness, drainage, and open areas. Notify your doctor if any of these occur.
- Swelling or bruising may appear around the wound. This is normal and may continue for several weeks.

- Shower or tub bath as you prefer. Avoid hot tubs, Jacuzzis and saunas.
- Clean your incision with mild soapy water and pat incision dry.
- Any remaining sutures (stitches), clips (staples) in your skin incisions will be assessed at your follow-up visit with the surgeon. If steri-strips are in place they will fall off on their own. If they remain in place after two weeks gently remove them.
- It is ok to brush your teeth on the side of your mouth that did **NOT** have surgery. You may use regular toothpaste. Rinse your mouth well with tap water or salt water after each meal. When you see your surgeon at your follow-up appointment after discharge, they will instruct you on returning to your normal mouth care routine (i.e. brushing teeth on both sides of your mouth, etc.).

Medication

- Take pain medication as needed, for example, before going to bed or prior to activities. You should expect some pain for a length of time after discharge.
- Add fiber to your diet to avoid constipation from the pain medication, e.g. bran, whole grains, fruit. A laxative or stool softener may be necessary until your bowels are regular.

When to call the doctor or go to the Emergency Department

- Chills or fever (temperature greater than 38.5°C)
- Increased pain, redness, swelling or drainage or open areas in the incision.
- Difficulty breathing
- Increased pain in your throat and or difficulty swallowing
- Swelling in your leg(s)



Follow-Up

You will see your Otolaryngology Surgeon in one to three weeks after you leave the hospital. Your appointment will be at the Otolaryngology (ENT) Clinic located at the General Campus on the 2nd Floor, Module O. During this visit, your surgeon will check your incision and review your blood work (if required). Discuss any specific concerns you may have at this time with your surgeon. If you wish to contact your Otolaryngology Surgeon for any post-operative issues or to reschedule your appointment etc., please call the number for your surgeon located on the next page.

Otolaryngology surgeon can be reached at:

Dr. H. Alsaffar Office number: 613-737-8899, ext. 75076

Dr. S. Johnson-Obaseki Office number: 613-737-8596

Dr. A. Lamothe Office number: 613-737-8372

Dr. M. Odell Office number: 613-737-8899, ext. 73287



Resources

The diagnosis and treatment of head and neck cancer may have a major impact on you and the people close to you. The disease may affect your physical, emotional, social, spiritual and practical needs. As a result, you may experience many issues. There are many resources available within the hospital, community and internet to help you and your family.

The Ottawa Hospital Learning Services

Do you need help finding more information about your disease?

Please email Learning Services at learningservices@toh.ca

Publications:

- *What You Really Need to Know About Cancer: A Comprehensive Guide for Patients and Their Families.* R. Buckman, Key Porter, 1995.
- *Everybody's Guide to Cancer Therapy: How Cancer is Diagnosed, Treated, and Managed Day to Day.* M. Dollinger, E.H. Rosenbaum, G. Cable. Sommerville House, 1995.
- *Coping With Cancer Magazine* Published bi-monthly phone: 615-790-2400 E-mail: Copingmag@aol.com

Telephone:

- Canadian Cancer Society 1-888-939-3333

General information on health:

- <http://www.publichealth.gc.ca>
The Public Health Agency of Canada provides bilingual online national health information. They are a division of Health Canada
- <http://www.nlm.nih.gov/>
U.S. National Library of Medicine. Select “Medline Plus” to find information for patients on cancer and other health topics. You can search the Medline database (PUBMED) for free from this site.

General information on cancer

The web sites in this section are from national, government, non-profit and professional organizations and contain general information on cancer treatment, prevention, support etc. and links to other sites. If you are looking for information on rare cancers, you may wish to check these sites.

National organizations:

- <http://www.cancer.ca/>
Canadian Cancer Society – includes information about prevention, treatment, support in the community. Many booklets are available in PDF format.
- <http://cancer.org/> – American Cancer Society
- www.wellspring.ca – Wellspring (cancer support group)

Government and non-profit organizations:

- <http://cancercare.on.ca/>
Cancer Care Ontario is the agency of the Government of Ontario that oversees provision of cancer care in the province. Practice guidelines, drug information and links to the other Cancer Centre’s in Ontario are found here.
- <http://www.cancer.gov/>
U.S. National Cancer Institute’s site. Treatment and supportive care information for patients and health professionals. Clinical trials information is available here.
- <http://www.cancercare.org/>
Cancercare is a US site that offers treatment information, supportive care and many free publications.
- <http://www.cancerindex.org/>
Guide to Internet Resources for Cancer. Extensive resources for cancer information from around the world. A good source for information on rare types of cancer. U.K.

- <http://www.hc-sc.gc.ca/>
Health Canada's Web site. Has information on many health-related topics, as well as cancer. Also has information on nutrition.
- <http://www.oncolink.org/>
Oncolink, from the University of Pennsylvania Cancer Centre, is an excellent source of treatment, clinical trial, support information and cancer news. U.S.

Cancer Web Resources:

- Canadian Cancer Encyclopedia:
www.thecanadianencyclopedia.com/en/article/cancer/
- CancerNet (U.S. National Cancer Institute): www.cancer.net
Professional organizations:
- <http://www.asco.org/>
American Society of Clinical Oncology. ASCO is the professional organization which represents cancer physicians.
- <http://www.astro.org/>
American Society for Therapeutic Radiology and Oncology. Includes patient information on radiation therapy and related links.

We hope this booklet has helped to guide and support you at this time. This information comes from team members and patients like you. Your suggestions are important. The Division of Otolaryngology asks for your support in attaining Excellence in patient Care, Research and Education. Donations are welcome and should be directed to The Ottawa Hospital Foundation with attention to the: Ear, Nose and Throat fund.

The Ottawa Hospital Foundation
Attention: Ear, Nose and Throat Fund
737 Parkdale Avenue,
1st floor(box610)OttawaONK1Y1J8

www.ohfoundation.ca

613-798-5555, ext. 1-4677

