

Queensland Artificial Limb Service



Information for people living with amputation

2017 Edition



Information for Amputees

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Information for People
Living With Amputation
Part A

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Terminology used:

This book takes a common language approach, the use of “amputee” and “stump” were approved by Queensland amputee support groups.

All exercises and health advice presented in this book should be viewed as general information and not a substitute for medical advice. Individuals must seek their own medical advice before undertaking any of the exercises or health advice in this book.

Contents - Part A

Introduction to amputation surgery

Amputations in Australia	3
Amputation level & bone guide.....	4
Amputation levels and names.....	5
Amputation surgery.....	6

Preparing for amputation surgery

Preparing for surgery.....	11
Surgery and diabetes	12
Avoiding further diabetes complications.....	13
Medications	14
Alternative medicines and surgery.....	14
Medication list.....	15

Recovery from amputation surgery

Post surgical recovery.....	19
Physiotherapy.....	19
Occupational therapy.....	19
Infections and blood clots.....	20
Wound healing	21
Oedema prevention.....	22
Wearing a shrinker sock.....	23

Stump bandaging

How to bandage a below knee stump.....	27
How to bandage an above knee stump.....	31
How to bandage a below elbow stump.....	34
How to bandage an above elbow stump.....	35

Stump and foot care

Stump skin issues and inspection.....	39
Stump bathing	41
Perspiration.....	43
Care of the remaining foot.....	44

Pain management

Postoperative pain	49
Stump pain.....	49
Phantom limbs & phantom pain.....	50
Other causes of pain.....	52
Working with your doctor.....	52
Recording pain.....	52
Pain questions	54
Self-help for pain sufferers.....	55

Emotional recovery

Amputations and emotions.....	59
Grief and guilt.....	59
Phases of recovery.....	60
Depression.....	61
Anxiety.....	63
Post traumatic stress.....	63

Contents -Part B

Relationships, work and recreation

Body image and sexuality.....	67
Thoughts and behaviours of other people.....	68
Helping children to cope with your amputation.....	69
Returning to work and driving.....	70
Returning to recreation.....	71
Peer support groups.....	72
Choosing your support group.....	72

Physical recovery after amputation

Contractures.....	77
Stump positioning.....	78
Stretching and exercising.....	79
Stump massage and desensitisation.....	79
Illustrated stretches.....	80
Illustrated desensitisation techniques.....	83
Illustrated massage techniques.....	84
Prosthetic limb suitability.....	85
Non-prosthetic mobility aids.....	85

Falls

Amputees and falls.....	89
Preventing falls in the home.....	89
How we fall.....	90
How to get up from a fall on your own.....	93
Illustrated getting up from a fall with help.....	93

Your prosthetist and prosthetic limb

Your prosthetist.....	97
Choosing your prosthetist.....	97
Fitting a prosthetic limb.....	98
Socks and liners.....	99
Prosthetic limbs for lower limbs.....	100
Prosthetic limbs for upper limbs.....	102

Prosthetic limb care and socket fit

Care of your prosthesis.....	107
Cleaning a prosthetic limb.....	108
Keeping your prosthetic limb in good shape.....	109
Component maintenance.....	110
Silicone care.....	110
Socket fit.....	111
Never pad the socket.....	111
Fit issues caused by shoes.....	111

Exercises for prosthetic limb users

Exercising to make the most of your lower limb prosthesis.....	115
Exercises for lower limbs.....	115
Exercising to make the most of your upper limb prosthesis or crutches	118
Exercises for upper limbs.....	118

Contents -Part C

Osseointegration

Osseointegration.....	123
Advantages of osseointegration.....	123
Disadvantages of osseointegration.....	124
Who can have osseointegration surgery.....	124
Who cannot have osseointegration surgery.....	124
Does osseointegration fully replace a sound limb....	124
Illustrated osseointegration.....	125

Bionic and sound limbs

Bionic limbs: Where are they?.....	129
Smart limbs currently available.....	131

Information for carers

Becoming a carer.....	135
The four phases of caring.....	135
Communicating effectively.....	136
Stress and respite.....	137
Future and disaster planning.....	138
Staying physically healthy.....	139
Staying emotionally healthy.....	139

Caring and relationships

Caring for your partner.....	143
Advice for amputees.....	143
Caring for your parents.....	144
Caring and the extended family.....	145
Recognising when someone needs home help.....	146
Children with limb differences.....	146
Children and trauma.....	149
Teenagers with amputations.....	149
Siblings.....	150
Helping siblings to cope.....	150

Caring and specific conditions

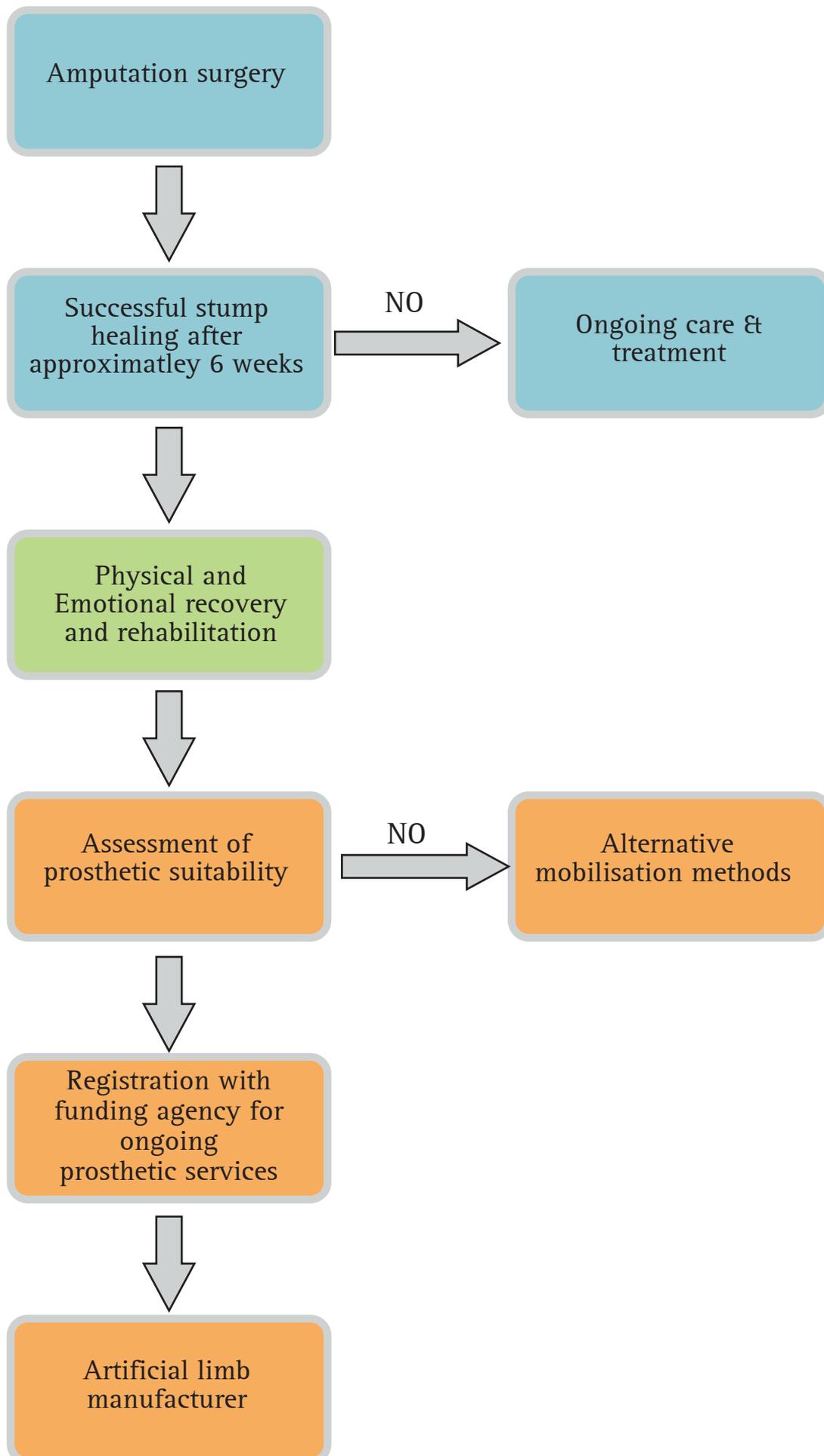
Caring and diabetes.....	155
Caring and chronic pain.....	155
Caring and depression.....	156
Caring and anxiety or post traumatic stress.....	159
Carers with secondary traumatic stress.....	159

Information for general practitioners.....	162
--------------------------------------------	-----

Glossary of terms.....	166
------------------------	-----

Contacts and appointments.....	170
--------------------------------	-----

The amputation and prosthetic pathway



Introduction to amputation surgery

In this section

1. Causes of amputations in Australia
2. Amputation names and levels
3. How amputation surgery is performed

Amputations in Australia

Limb amputation is one of the earliest forms of surgery, allowing a person to survive severe injuries and infections. Historically the main causes of amputation were trauma and wound infections.⁽¹⁾ However, in first world countries trauma is no longer the main cause of amputations because:

- Emergency medicine has greatly improved and more limbs are saved because a person can be transported to a hospital quickly.
- Some amputated limbs can now be reattached with microsurgery
- The number of workplace accidents has dropped significantly due to Health and Safety laws.⁽²⁾
- Surgical sterilisation techniques and antibiotics control most infections.⁽³⁾

In a modernised country such as Australia, the main causes of amputations are vascular disease and diabetes. Other causes of amputation are traumatic injuries, infections, tumours and congenital deformities.^(4,5)

Vascular Disease: Vascular disease occurs when the arteries in the legs become blocked. This condition can happen to anyone but is more severe in patients with diabetes. The narrowed arteries prevent the heart from pumping enough oxygenated blood to the feet, resulting in severe pain in the legs, foot ulcerations and ultimately gangrene of the toes/foot.⁽⁶⁾

Diabetes: Diabetes is the cause of half of the amputations performed in Queensland.⁽⁷⁾ Diabetes does not just increase the severity of vascular disease it also reduces feeling in the feet and slows wound healing; resulting in foot ulcers. People with diabetes are more prone to skin infections and gangrene or sepsis may occur, resulting in amputation.⁽⁸⁾

Trauma: Trauma resulting in amputation is most frequently related to motorcycle, motor vehicle and industrial accidents. Other causes are home accidents and burns. Most upper limb amputations are caused by traumatic injury. Trauma is the most common cause of amputation for young adults.⁽²⁾



An early example of a functional prosthetic limb is this iron hand from 16th century Europe. The fingers are articulated and operated by springs.

Image & info courtesy of http://commons.wikimedia.org/wiki/File:Prosthetic_hand_iron_and_springs_Oxford.jpg

Infection: Infection as a cause of amputation occurs when bacteria, for example, Staphylococcus (Golden Staph) and meningococcal enter the body. These bacteria rapidly overwhelm the body resulting in severe infection, often with the patient unconscious and therefore unaware of the situation. The progression of the infection is rapid often resulting in multiple amputations to save the patient's life.⁽⁹⁾

Congenital defects: Children are sometimes born with missing or misshaped limb/s. The limb may form without a large bone making it too short or it may have extremities that have formed differently such as 'nubbins' instead of fingers/toes. To allow fitting of a prosthesis part of the limb may require amputation. Congenital defects are the most common causes of amputation in children.⁽¹⁰⁾

Tumours: Bone cancer is a common cause of amputation. When a tumour does not respond well to conventional treatment it may be necessary to remove the affected tissue and bone to save the patient's life. Limb-sparing surgery is preferred but amputations are performed if the limb-sparing surgery would result in a non-functioning limb or the tumour is too difficult to remove without amputation.⁽¹¹⁾

Amputation level & bone guide

Bone names and locations are included here to assist you when talking with your medical team. The common names of the bones are in brackets after the medical names.

Bones and joints of the human skeleton

A: Clavicle (collar bone)

B: Scapula (shoulder blade)

C: Humerus (upper arm/
funny bone)

D: Elbow

E: Radius and Ulna
(forearm)

F: Carpus (wrist)

G: Carpals, metacarpals &
phalanges (hand & fingers)

H: Top: Pelvic girdle (hips)
Bottom: ischium

I: Femur head ('ball' of the
hip joint)

J: Femur (thigh)

K: Patella (knee cap)

L: Tibia (shin)
Fibula (small bone)

M: Calcaneus (heel) &
tarsals (ankle)

N: Metatarsals &
phalanges (foot & toes)

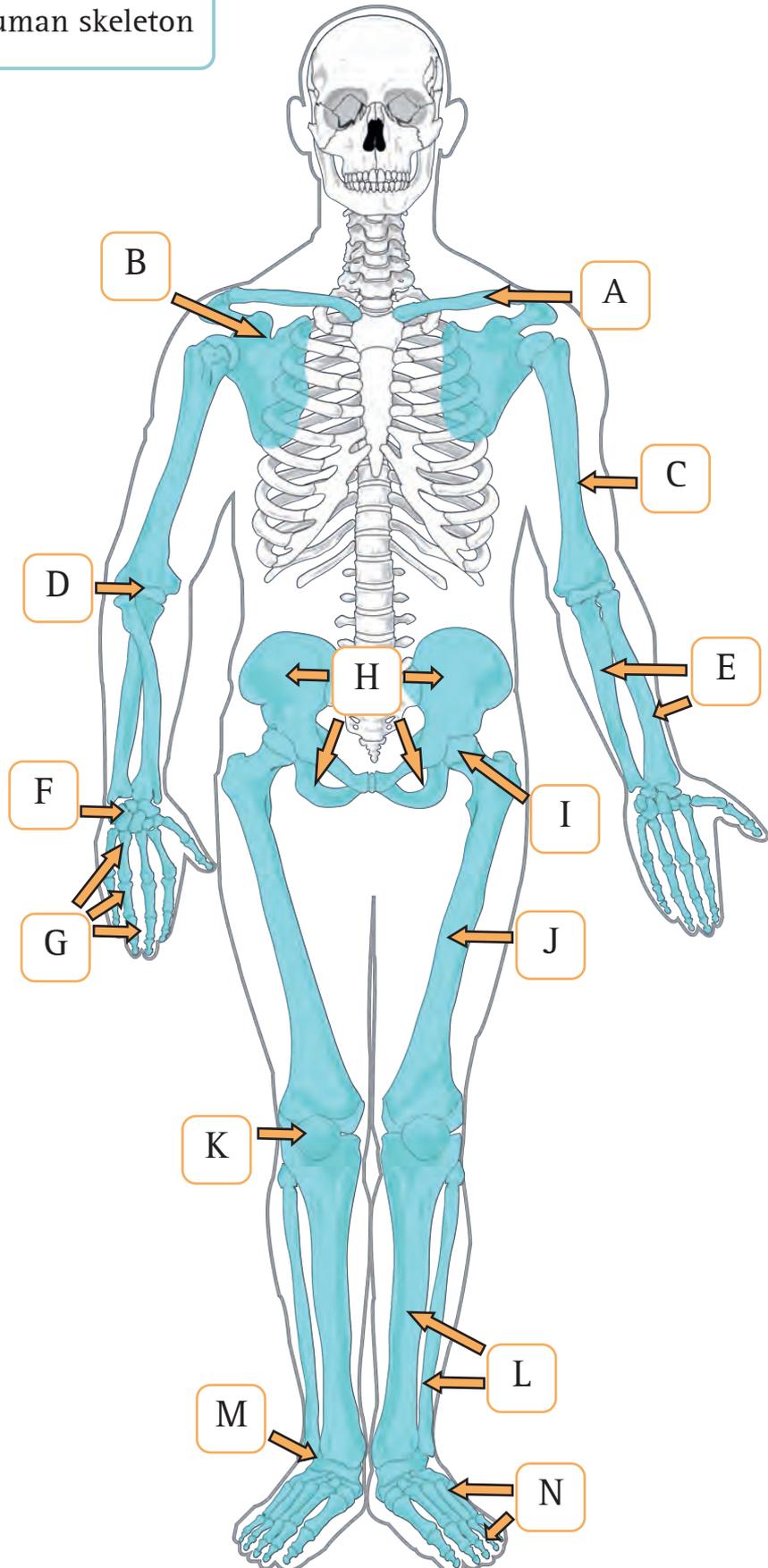
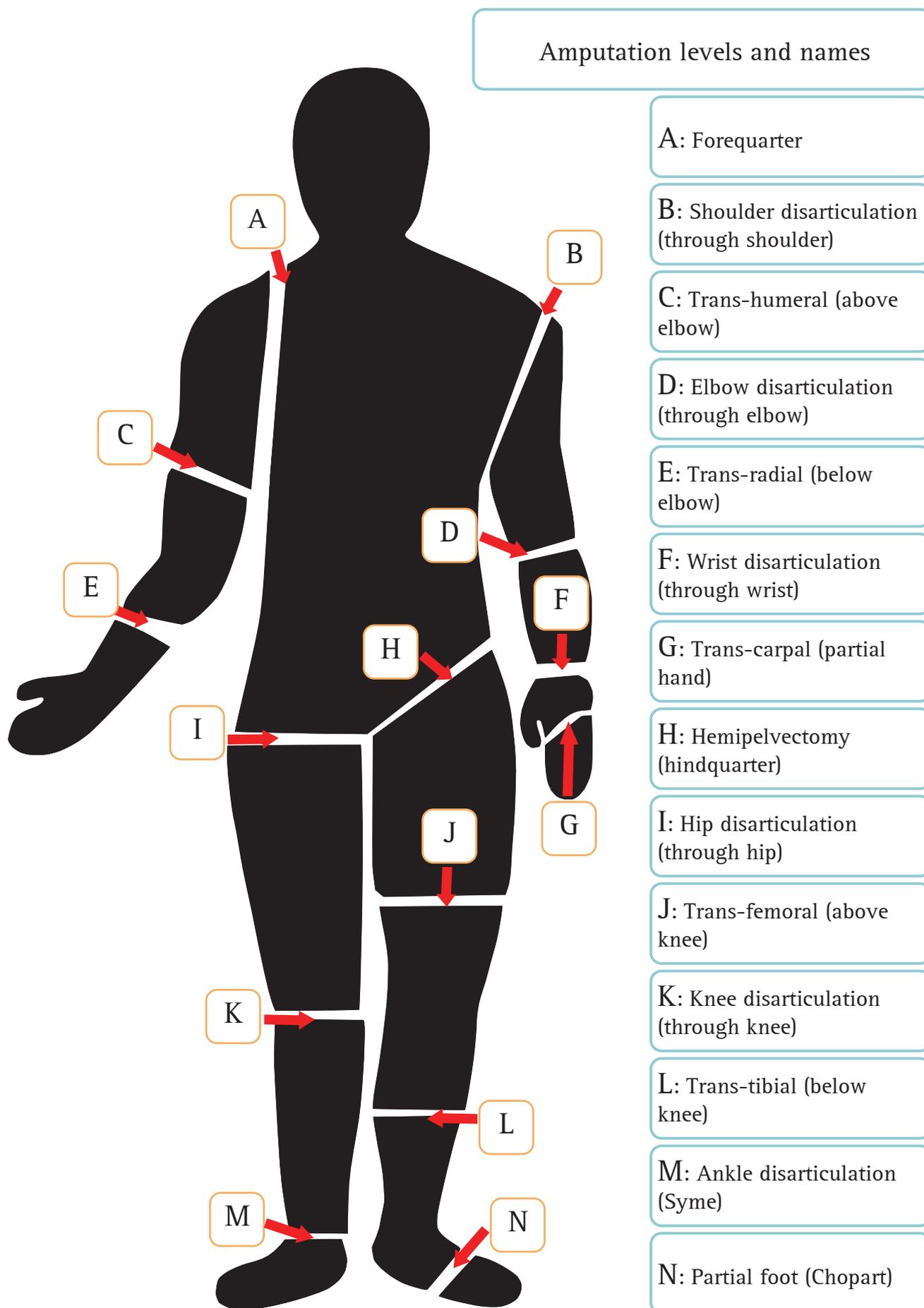


Image and bone names courtesy of Wikimedia Commons

Amputation names have changed with time so your medical/rehabilitation team may use different terms. Amputation names are taken from the affected bones and joints, sometimes amputations were named after the surgeon who pioneered the technique such as Chopart and Syme.^(1,4,5) Older names are in brackets.



Amputation surgery

Unless the amputation is being performed as an emergency, your doctor, physiotherapist and other hospital staff will be available to discuss all aspects of having the surgery, including the reasons for and the proposed level of the amputation. You should ask any questions you may have prior to the operation and ensure any concerns have been addressed.⁽⁴⁾ Your understanding of the prospective procedures and the order in which they will occur is very important. You need to be aware of the risks and benefits of each treatment step.

Your general health and fitness is also important and the physiotherapist will initiate a program for you to ensure the best possible outcome for you. The exercises prescribed for you are to prevent the formation of contractures (tightening of muscles), to maintain good joint range as well as maintaining muscle strength.⁽⁴⁾

A modern surgical amputation is nothing like the past when doctors were known as 'saw bones' for good reason. The goal of successful prosthetic use influences the surgical techniques used and in modern medicine an amputation is performed with precision.

The surgeon must sever many tiny nerves and blood vessels and close off their ends causing them to retract into the muscle.⁽³⁾ The bone will be filed so that it has no sharp edges to form a comfortable point for weight to be applied when using a prosthesis. The surgeon will close the opening by folding a flap of skin over the open area and stitch or staple the area closed.⁽³⁾

After the surgery, the residual limb will be very rounded on the end and swollen. This is normal as the healing process and surgery will make the stump swell. Wearing stump shrinkers will reduce this swelling.⁽¹²⁾

When you wake from the anaesthetic you will feel like your limb is still there. This normal, painless sensation is called a 'phantom limb' (not to be confused with phantom pain) caused by the brain

'remembering' the lost limb. This will initially be confusing but phantom limb sensations are needed for prosthetic use.⁽¹³⁾ More information on phantom limbs is in the pain section of this book.

What happens to the limb that was amputated?

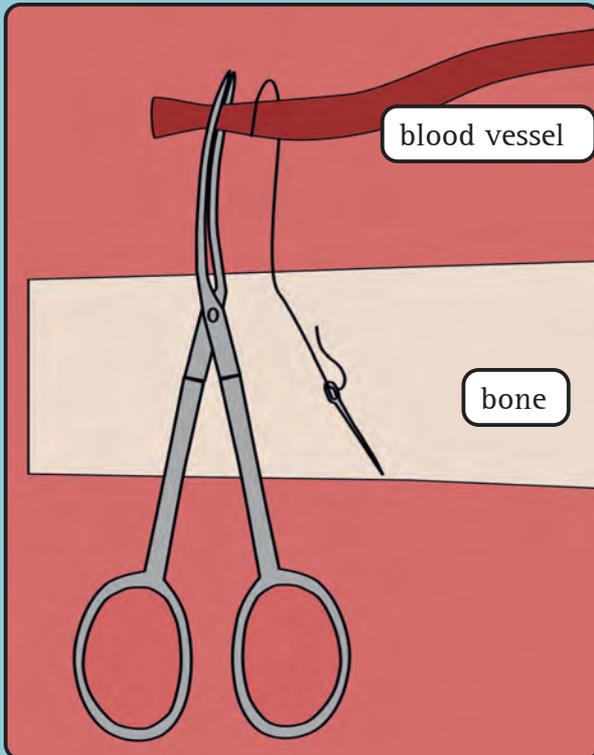
Under Queensland legislation, any part of a person removed during surgery must be stored and disposed of under clinical waste guidelines. These rules are very strict as such waste may carry disease and create a risk to public health. Unless you make specific arrangements the limb will be disposed of at the hospital; this means it will be incinerated with other human tissues as that is what the law requires. Once the tissues are incinerated they are disposed of according to government policy.⁽¹⁵⁾

If your religious/cultural practices prohibit cremation; discuss the situation with the hospital as you may be able to organise collection and burial of the limb by an appropriate member of your faith/culture.⁽¹⁴⁾ Discuss any special requirements with your doctors well before the surgery so appropriate arrangements can be made. If the hospital disposes of the limb in a way that contravenes your beliefs; consult representatives of your faith/culture so they can advise you.

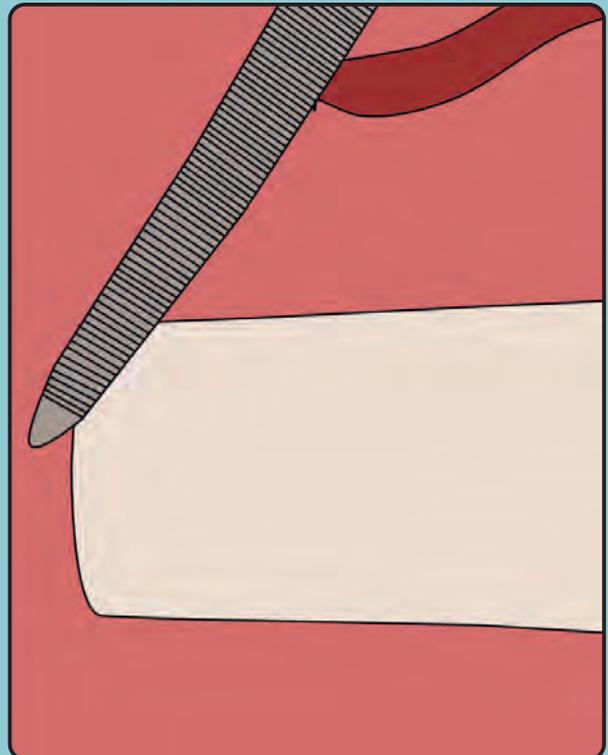
In Australia, it is possible to organise a private cremation of an amputated limb through a funeral director. Some people choose to do this for symbolic reasons or they are uncomfortable with the idea of part of them being disposed of as a waste product.⁽¹⁶⁾ If you would like to have your limb interred or buried it may be difficult to arrange as cemeteries are mostly operated by local councils who create their own guidelines for burials.

If your amputation was due to infection it will not be possible to have the limb released for private cremation due to the risk to public health. This includes meningococcal and staphylococcus infections. In these cases, the hospital is required by law to dispose of the limb.⁽¹⁵⁾

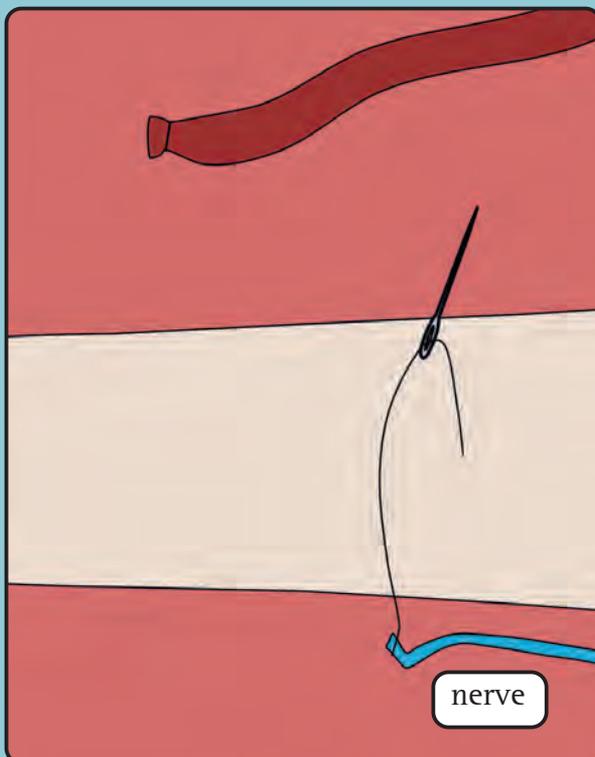
Surgical Amputation



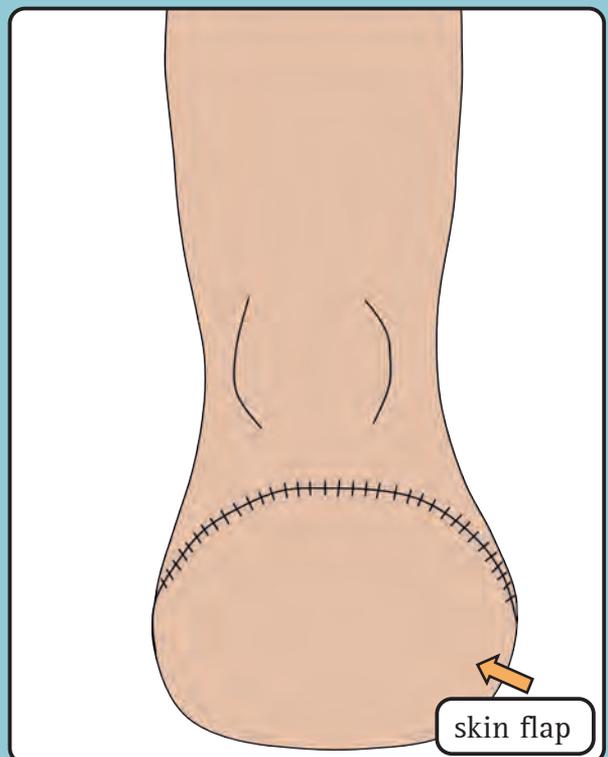
1. Blood vessels are stitched closed to avoid a blood loss. Some healthy muscle may be removed to shape the stump.⁽³⁾



2. The bone will be filed for comfort in the stump. Any pieces of broken bone will be cleared away.⁽³⁾



3. The nerves will be cut higher than the muscle and bone then stitched to muscles to avoid neuromas forming.⁽³⁾



4. The wound is closed with a skin flap. A skin flap is preferred because it has an existing blood supply.⁽³⁾

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Preparing for amputation surgery

In this section

1. Preparing for surgery
2. Surgery and diabetes
3. Avoiding further diabetes complications
4. Medications
5. Alternative medicines and surgery

Preparing for surgery

The following information is general pre-surgery guidelines for patients. Always follow the advice of your surgical team for your specific situation.

Expect your recovery to take longer than anticipated. Recovery times are averaged and you may need more or less time; don't overexert yourself or try to force recovery in a limited time frame. Your body will take the time it needs to recover.⁽¹⁾

Cut down on smoking or quit outright one month before surgery. Anti-smoking products are available without prescription in pharmacies and supermarkets. Before starting any nicotine replacement program talk to your primary care doctor or pharmacist.⁽¹⁾

You will be given instructions on when to bathe and eat before the surgery. Follow these instructions. The hospital may see you before the operation and give you special soap to use on the day of the surgery.⁽¹⁾

Be honest with your doctor about your lifestyle; do not understate the amount of alcohol you drink and tell him/her if you have used recreational drugs recently. The doctor will keep anything you disclose private.⁽¹⁾

Talk to your doctor about your medications. Always tell your doctor about any over the counter, alternative remedies and supplements you are taking as there is a risk of serious side effects and post-surgical complications.⁽²⁾

Organise a support person for drop off and pick up at the hospital. You cannot drive until you have had medical clearance. You need a reliable adult to assist your return home, depending on the hospital this person may need to present themselves to the discharge staff.⁽¹⁾

Do not shave the leg/arm before the operation; if you cut yourself or get infected hair follicles your surgery may be cancelled. The hospital staff will shave your limb.⁽²⁾



Tell your doctor about all medicine you take including non-prescriptions, supplements and natural remedies.

If you become sick before the surgery call your doctor. The surgery may be delayed but not telling your doctor can result in serious complications.

Bring your own toiletries to the hospital and have some comfortable clothes for discharge, spare pyjamas and underwear.⁽²⁾ If you are going to be in hospital for some time ask a friend or relative to bring new supplies when they visit you.

You may be in hospital for several weeks so plan for home security. A home that looks unoccupied is attractive to burglars and vandals. Ask a neighbour to collect your mail and take your bin in and out. Organise care for any pets and your yard.

Assess your home situation. If you are going to be alone after the operation you may need to arrange home help in advance. Organise delivery of fresh food such as milk and bread. Make sure there are some reliable adults nearby you can call on for help. Consider having someone check on you by visiting or phoning daily.

If you are a primary carer for someone organise respite or home care help if possible. You will not be physically fit enough after the surgery to care for somebody else.

Diabetes and surgery

Half of the people reading this book will experience a diabetic related amputation. If you have diabetes there are special considerations for surgery and recovery.⁽³⁾ The following is general information for Type II diabetics, always discuss your individual situation with your general practitioner or endocrinologist. Well managed as opposed to poorly managed diabetes improves surgical outcomes and will help prevent further complications.

Preparation for surgery

Meet with your primary care doctor or endocrinologist to discuss your preparation. Your doctor will want to check on how well your blood sugar is being managed. You will need to take regular blood sugar readings over several weeks to determine how stable your diabetes is. If it is not stable or not well managed you need to follow your doctor's advice as surgery with unmanaged diabetes is extremely dangerous.⁽³⁻⁵⁾

Your doctor should also advise you on how to prepare for the pre-surgery fast and how to manage your food intake after surgery. Make sure that any instructions you are given are written down so you can refer to them later and provide copies to your treatment team if needed. Clarify with the doctor how your diabetes management plan is changing and when you should see them for a follow-up assessment.^(4,5)

If you take medication either orally or by injection, it is likely your dosage will change. You will be advised on how to take your medicine before and after the surgery. Check with your doctor about taking your medicine the day before the surgery during the pre-surgery fast.⁽⁵⁾

Have any prescriptions filled ready for your hospital stay and return home. The hospital will provide medication related to the surgery but you are in charge of supplying your regular medicine during your stay. You may not feel up to leaving the house when you first come home so make sure you have an appropriate supply of medication ready for your return home.⁽³⁾

In the hospital

Your surgery may be scheduled for the early morning, often the first surgery of the day. Morning surgery results in a shorter fast and less chance of blood sugar instability. It is very important that all of your treatment team know that you have diabetes, this includes the nurses as they will be monitoring your condition.^(3,4)

Talk to your anaesthetist. The anaesthetist will monitor your diabetes during your surgery. Your anaesthetist will visit you before the surgery to discuss the process with you; tell them about your diabetic history, your medication and any complications you have. People with diabetes are at a higher risk of having their blood pressure rise while under general anaesthetic and may have shallow breathing. Your anaesthetist will need to prepare for these possible complications.^(3,4)

You may be given the option of an epidural anaesthetic. An epidural is anaesthetic that is injected into your spinal canal numbing from the waist down.⁽⁶⁾ As a patient, it may be very distressing to think about being awake for a major surgery. If you choose this option ask for ear plugs and eye covers.

People with diabetes are prone to a stomach condition called gastroparesis, this means your stomach does not empty fully after digesting food. If you have this condition you will feel very nauseous after surgery. Gastroparesis also places you at risk of vomiting when going under general anaesthetic so the anaesthetist needs to plan for this possibility.⁽⁴⁾

If after the surgery you are very nauseated or vomiting repeatedly tell the staff. If your food intake is affected you may need a medication adjustment. It is not unusual for patients to receive intravenous insulin after surgery to stabilise their blood sugar from the stress of the anaesthetic and fasting.⁽⁴⁾

Before you are discharged ask for instructions on how to manage your wound and bandage your stump.

After discharge

Follow your post-surgery management plan and make an appointment for a review with your primary care doctor as soon as possible. Do expect to visit your doctor several times as you recover and your blood sugar returns to normal levels.⁽⁵⁾

Monitor your blood sugar levels regularly and take medication as directed. Watch for the signs of high blood sugar such as frequent urination and thirst. Keep a written record of blood sugar levels to take to your primary health doctor.

If you find yourself not feeling well enough to eat regularly you may need to have your medication dosage adjusted to compensate for the lack of food. Once you are eating as normal your medication should be able to go back to your pre-surgery dose, but do not change your own dosage, see your primary care doctor.⁽⁴⁾

People with diabetes are at higher risk of infection and slow wound healing. Good wound hygiene and care is paramount to prevent infection. Monitor your wound for signs of infection such as:

- Foul odour and pus
- Redness and heat around the wound
- Fever⁽⁷⁾

More information on infection and wound care is provided in this book. Always call your primary care doctor or go to an emergency room if you believe your wound is infected as treatment must begin as soon as possible.

Undertake your exercises as instructed and keep as active as possible. Quit smoking if you smoke and follow a healthy diet with limited alcohol. Watch out for dehydration as it is not good for your kidneys. If you find yourself nauseated or vomiting keep hydrated with an electrolyte drink, this will assist in protecting the kidneys.⁽⁷⁾

Minimise stress. This is easier said than done but make an effort to relax when possible. There is more advice on stress management in the recovery section of this book.⁽⁷⁾

Avoiding further diabetes complications

If you have had a diabetes-related amputation you are at significant risk of other serious diabetic complications. You still have the opportunity to limit diabetes-related complications.

Managing your diabetes involves a range of health specialists as diabetic complications affect many areas of the body. If you do not already consult with the following specialists now is the time to begin.

Podiatrist

Your podiatrist will instruct you on foot care and how to perform daily foot care and inspection. By starting a foot care regimen now you reduce the likelihood of a second amputation. A podiatrist can trim your toenails so that you do not have to do it yourself.

Look for signs of rubbing caused by shoes. As many diabetic ulcers are caused by poorly fitting shoes consult a podiatrist about suitable shoes and socks. Discard any footwear that rub or are a tight fit. There is more information on foot care in this book.⁽⁸⁾

Optometrist

People with diabetes are at a significant risk of losing their vision. If you do not already see an eye specialist annually, book an appointment as soon as possible. Diabetic retinopathy can occur without symptoms making regular eye checks vital for every person with diabetes. Watch for eye related problems such as blurred vision, eye strain and headaches.⁽⁹⁾

Dentist

People with diabetes have a high chance of developing mouth and dental problems including gum inflammation, infections, dry mouth, ulcers and candida infections (thrush). To lower these risks consult a dentist twice yearly. Brush and floss twice daily with a soft-bristle toothbrush and any dentures or plates must be cleaned daily. If you need major dental work like a root canal consult with your primary care doctor before the procedure.⁽¹⁰⁾

Medications

The hospital doctor may need to change some of the medicines you were taking before you came into hospital and prescribe you some new medicines. Your hospital pharmacist will explain these changes to you as well as provide important advice.

It may be helpful to ask the following questions:

- What is the medicine supposed to do?
- How do I take it?
- Are there foods, drinks or other medicines that I should avoid?
- What if I miss a dose?
- Are there any side effects and what should I do if they occur?⁽¹¹⁾

It is important to know that there may be quite a few different brands of the same medicine. So, the medicine you receive in hospital could be the same as your usual medicine but looks different because the hospital keeps a different brand.

Information leaflets may be offered to help you understand your medicine better and how to take it wisely.⁽¹¹⁾

When you are in hospital, do not take any other medicines without the knowledge of your doctor, nurse or pharmacist. If you take alternative medicines, over the counter medicines or vitamin/mineral supplements remember that some interact with medication. Always tell your doctor and pharmacist about all medicine you take even if it is not a prescription medicine.⁽¹¹⁾

At Discharge

Your hospital pharmacist will discuss your discharge medicines with you to ensure that you know what you will be taking when you go home; how to take your medicines wisely and how to store them safely. You will be supplied with sufficient quantity of medicine for you to take home but you will need to see your primary care doctor to obtain prescriptions for further supplies of your medicine.⁽¹¹⁾

If you find your medicine schedule is hard to manage, you may be offered a 'Webster Pack'. This will be explained to you before discharge. You will also be supplied

with a medication list to help you keep track.⁽¹¹⁾ If you already use a Webster pack remember to bring your medication list to the hospital so staff have the names, strength and dosages of your medication.

After discharge

Follow-up by talking to your community pharmacist soon after you are discharged from hospital. Remember to take your medication list with you. Your local pharmacist will update your records to show any medicine changes made whilst in hospital and advise you about repeat prescriptions you may have at home.⁽¹¹⁾

Medicines taken in the wrong way can cause harm. If you are unsure of any medicines you may have from before coming to hospital, do not take them until you have checked with your doctor or pharmacist.⁽¹¹⁾

Regular medication reviews are needed to check whether the medicine is still needed; if it is the right dose for you and whether changes in your body suggest a change is needed in your medicine. Your family doctor and local pharmacist will help you to manage your medicines in the most beneficial way.⁽¹¹⁾

Alternative medicines & surgery

The use of alternative medicines is widespread and many people choose to take alternative medicines as part of their health routine. If you take alternative medicines it is important that your doctor knows what you are taking, especially before a major surgical procedure such as an amputation.

Many alternative medicines can react with other medicines causing side effects. Just because they are 'natural' does not mean there is no risk to your health if they are used incorrectly or combined with other medicines.⁽¹²⁾

If you are not sure that what you are taking is an alternative medicine the following guide will help, it is always better to tell your doctor if you are unsure.

Botanicals: These are plants and plant extracts. This includes products that you buy in pill or powder form such as echinacea or products that are eaten as a food such as goji berries.⁽¹²⁾

Vitamins: these are any vitamins that you have purchased including all the common vitamins: A, the B group, C, D (technically Vitamin D is a hormone) and E. Also tell your doctor if you are eating quantities of certain foods to obtain extra vitamins such as drinking lots of orange juice for the vitamin C.⁽¹²⁾

Minerals: Minerals are a commonly used supplement with the most popular being calcium, iron and magnesium.⁽¹²⁾

Fatty acids: These are supplements taken for heart health or cholesterol reduction, they include fish oils, cod liver oil, krill oil, flaxseed oil and 'omega 3' oils.⁽¹²⁾

Other types: there are other types of supplements including protein mixes and body building powders, animal derived products (glucosamine, royal jelly) Chinese medicines, homoeopathy, diet pills, pills for sexual dysfunction and injectables such as growth hormones and testosterone.⁽¹²⁾

What kinds of reactions can occur?
Some examples of alternative remedies that have side effects are:

- Aloe Vera and fenugreek can cause excess bleeding after surgery.
- Ginseng can react with blood clotting medicines.
- St John's Wort can react with prescription antidepressants and reduce their effectiveness.⁽¹²⁾
- Grapefruit can interact with some medicines such as those for excess stomach acid.

In addition, if your doctor does not know about all your medicines and remedies they may attribute side effects to a different medication or medical condition. They need to know why you are taking these medicines because you may need treatment for an underlying condition.⁽¹²⁾

When discussing your medicines with doctors it can be easy to forget about things like your daily multi-vitamin pill so it is handy to make a list of all the products you are using and the dosages or bring them with you to appointments. If the doctor does not bring up the issue then you need to volunteer the information for yourself.⁽¹²⁾

If you think your doctor does not believe in using alternative medicines do not hide your usage as your health could be put at risk by withholding the information. Before starting an alternative medicine talk to your doctor or pharmacist as there may be reactions and side effects you need to know about.⁽¹²⁾

My medication list

Prescription:

Non-prescription:

Alternative medicines:

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- 1 Fraser Health: *Preparing for Surgery* [internet cited 2013 Nov 15] Available from: http://www.fraserhealth.ca/?section_id=6230
- 2 General Surgeons Australia: *Preparing for Surgery* [internet cited 2013 Nov 15] Available from: <http://www.generalsurgeons.com.au/public-information/preparing-for-surgery>
- 3 American Diabetes Association: *Diabetes and Surgery*. In: Clinical Diabetes Volume 19, Issue 2 [internet cited 2013 Nov 15] Available from: <http://clinical.diabetesjournals.org/content/19/2/96.full>
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- 10 *Dental Care and Diabetes* [internet cited 2013 Nov 15] Available from: <http://diabetes.webmd.com/dental-health-dental-care-diabetes?page=3>
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- 12 American Diabetes Association: *Herbs, Supplements and Alternative Medicines* [internet cited 2013 Nov 15] Available from: <http://www.diabetes.org/living-with-diabetes/treatment-and-care/medication/herbs-supplements-and-alternative-medicines/>

Recovery after amputation surgery

In this section

1. Post-surgical recovery
2. Physiotherapy
3. Occupational therapy
4. Infections and blood clots
5. Wound healing
6. Oedema prevention
7. Wearing a shrinker sock

Post-surgical recovery

Immediately following surgery the residual limb will be bandaged and may have a drain tube. Bandaging the stump helps in reducing the swelling that occurs after surgery. In most cases, following lower limb surgery, you will be able to sit out of bed on the day after the operation.

Your physical rehabilitation will begin shortly after your operation. An occupational therapist or physiotherapist will assist you in transferring from a wheelchair and how to use mobility aids.

The nursing staff will dress the stump as required. If you go home with a dressing you must keep the wound dry and covered. The nurses will show you or a family member how to dress the wound at home. You must check for signs of infection and redress the wound daily.

Most amputations are closed with stitches (sutures) or staples. Some stitches are dissolvable and do not need to be removed. You will be advised on if/when the sutures need to be removed. Once the sutures are removed you can massage the scar and desensitise the skin on the stump.^(1,2)

During the hospital stay, staff will ensure that postoperative pain is controlled as best as possible. It is important for you to let staff know if you are having pain and to take medication as directed. People who have good pain control before and after an operation usually suffer less phantom and stump pain in the long term.

Some amputees require transfer to a rehabilitation unit for an inpatient program in order to maximise their independence. Others undertake rehabilitation as an outpatient. Your discharge to home is planned when your medical condition is stable.

Physiotherapist

The physiotherapist's main role is to help you move about safely and confidently. For some amputees, this will be in a wheelchair, but others will be taught how to use

crutches, walking frames or a prosthetic limb. To do these activities successfully you need to be as strong, fit and flexible as possible. The physiotherapist will help you achieve this through a plan consisting of daily exercises, stretching, balance activities and fitness work.

Once you have a prosthetic limb the physiotherapist and prosthetist will work together to help you achieve a comfortable and smooth walking style. If you are assessed as being unable to manage a prosthesis, the physiotherapist will assist you in obtaining an appropriate mobility device.⁽¹⁾

If you have an upper limb amputation, your physiotherapist will provide you with an exercise program aimed at strengthening muscles and joints involved in the operation of a prosthetic limb and in maintaining a good posture.⁽¹⁾

Occupational Therapist

The role of the occupational therapist is to assist you to become as independent as possible in your everyday tasks such as personal care activities (dressing, showering, grooming) and other community activities.

For the upper limb amputee, the occupational therapist will work with your physiotherapist to help you regain as much fitness in your amputated arm and whole upper body as possible. The therapist will supervise one-handed techniques, retraining to change your hand dominance and use of adaptive equipment, if required. If you elect to have a prosthesis fitted, the occupational therapist will supervise the intensive training needed to use it successfully.⁽¹⁾

Your occupational therapist will guide you to specialised sources of help for tasks including driving and funding for aids and equipment so your return to independence is easier and safer. It is important that equipment suits your lifestyle and environment. Rehabilitation staff are able to assist you with choosing equipment. They will ask you about the activities you were previously doing and complete an assessment of your needs.⁽¹⁾

Infections

After the surgery check your scar and stump daily for any signs of infection. Call your doctor or go to the emergency room of your local hospital if you notice any of the following symptoms:

- The scar has pulled apart.
- There is a bad odour coming from the scar.
- The scar or stump becomes red, hot or very swollen.
- Pus or thick discharge coming from the scar. Normal discharge should be watery but pus will smell very bad and be yellow or green and thick.
- A sudden increase in pain or a tender spot that feels hot.
- You develop a fever.⁽²⁾

Blood clots

When you are discharged from hospital you should receive instructions on avoiding blood clots and deep vein thrombosis. If you notice any of the following symptoms notify your doctor immediately or go to your nearest emergency room.

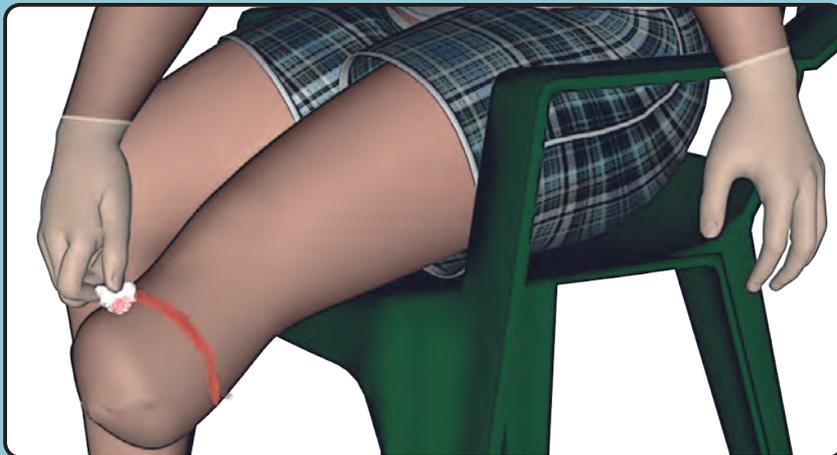
- Swelling in places away from the stump e.g. the thigh. The skin may be red and hot.
- Lower parts of the remaining limb becoming pale or cold
- Sharp pains in the leg.
- Fever
- Dizziness
- Difficulty breathing or chest pain.⁽³⁾

Changing a wound dressing

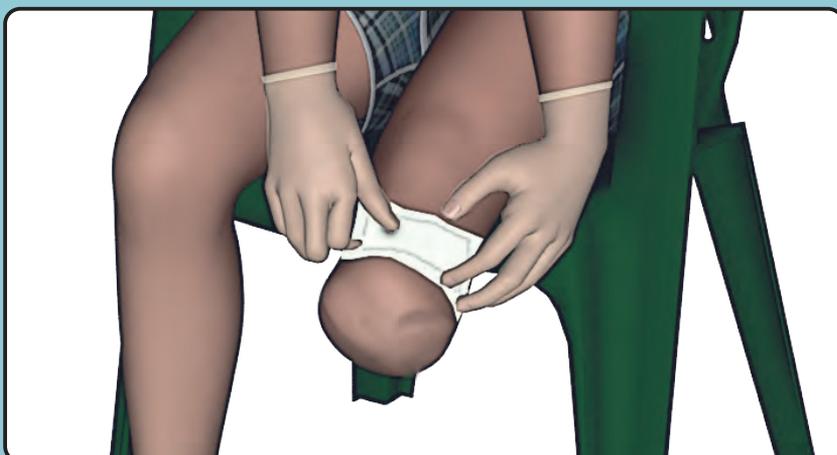
1. Gather all the necessary equipment: new dressing, soap, warm salt water or a purchased saline solution, surgical gloves, gauze and a small zip-lock plastic bag.⁽⁴⁾

2. Have all the equipment ready on a clean surface. Remove jewellery from your fingers and wash your hands with soap and water for 15-30 seconds. Dry your hands with a clean towel and put on the gloves.⁽⁴⁾

3. Pull off the dressing carefully, place it in the plastic bag. Wash the wound by dabbing with gauze moistened with salt water. Remove all debris such as dry blood. Dry with a piece of clean dry gauze.⁽⁴⁾



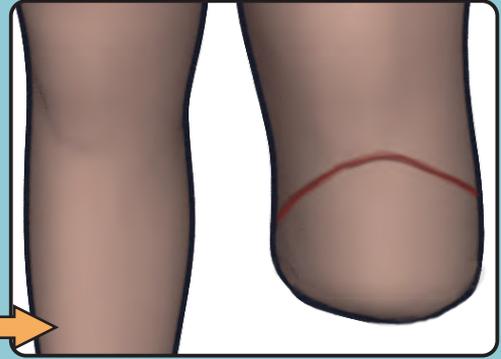
4. Remove the gloves then wash your hands. Put on a new dressing and place all used items in a plastic bag for disposal. Wash your hands again. If there is wound leakage on clothes or bandages change them.⁽⁴⁾



Wound inspection

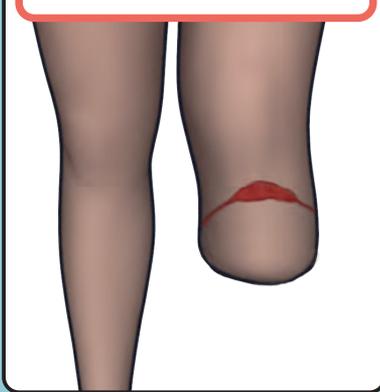
Healthy wounds

It is important to check your wound every day. It is natural to feel squeamish when you see a wound, especially your own, so if inspecting your wound is upsetting you have someone else inspect it for you. A healthy wound will have some swelling and discharge but the sutures will not be pulling apart and the wound will not smell bad.⁽²⁾

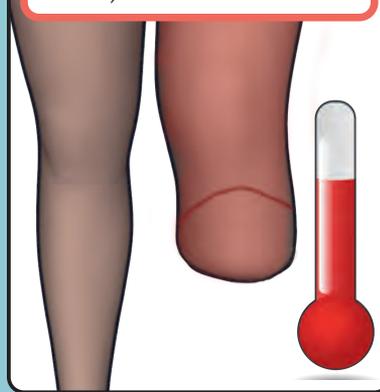


Unhealthy wounds

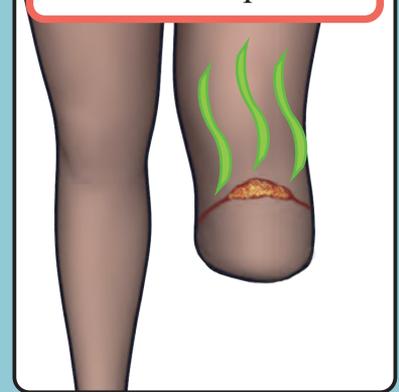
Sutures come apart



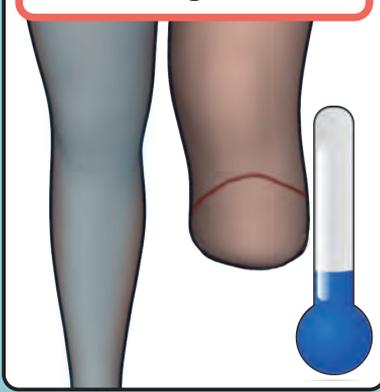
Red, hot & swollen



Odour or pus



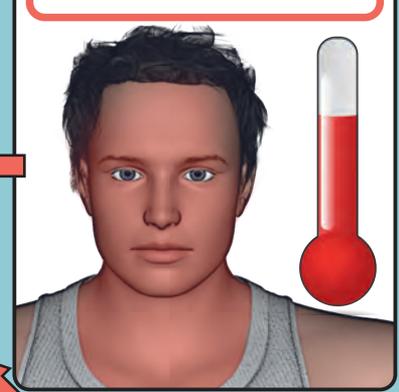
Other leg is cold



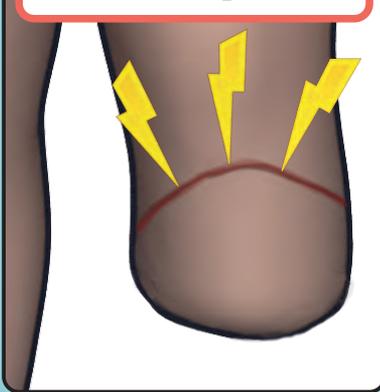
Call your doctor immediately



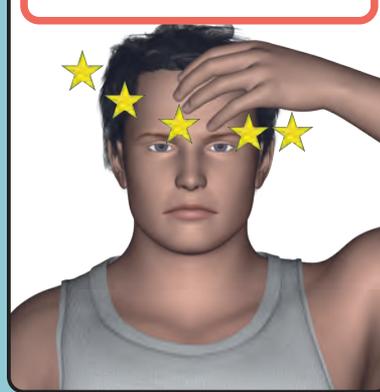
You have a fever



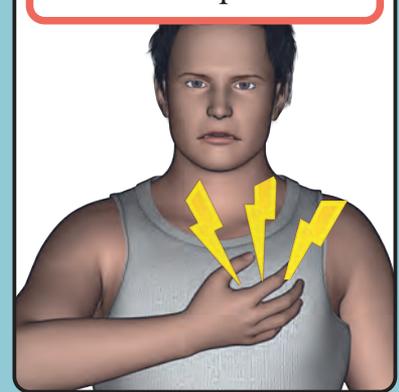
Intense pain



Dizziness



Chest pains



Oedema prevention & shrinker socks

Your stump will significantly vary in size from the immediate postoperative period to when you are fitted with a prosthetic limb.⁽¹⁾ This is normal after surgery and healing and one of the reasons why a drainage tube is attached to most surgical wounds. When swelling occurs after an injury it is due to oedema which is a build up of fluid in the tissue. In the case of amputation it is caused by the trauma of surgery, however, conditions such as diabetes can make oedema worse.⁽⁵⁻⁶⁾

Oedema is caused by the small blood vessels leaking fluid (primarily water) into the spaces between tissues. This is the body's attempt to bring white blood cells to an injured area for healing. This fluid leakage causes noticeable swelling as it has nowhere to go, this is especially problematic after an amputation because gravity will draw fluid to the end of the limb. Others symptoms of oedema include:

- tight and shiny skin in the swollen area
- heavy legs and stiff joints
- pressing the area leaves a dent in the skin
- clothes are tight around the area⁽⁵⁻⁶⁾

Oedema needs to be treated as it hampers healing prosthetic use by affecting the socket fit. It can indicate a medical condition that needs treatment such as kidney disease. Amputees are shown how to apply compression wraps to their stumps to alleviate oedema, some more tips to reduce fluid retention are:

- Exercise regularly
- When sitting do not allow the limb to hang over the edge of your seat; use a suitable stump support.
- Bandage the limb or wear a shrinker as directed.
- In some cases, a rigid removable dressing is fitted.

When the wound has healed adequately and before prosthetic limb fitting, you will be shown how to apply compression to the stump to reduce oedema and encourage good stump shape prior to prosthetic limb fitting. You may be shown how to do this with bandages or a shrinker sock.⁽¹⁾ A

shrinker sock is similar to an elasticised brace used for injuries to knees or elbows.

Both methods of compression work well when done correctly. Regardless of which method of compression wrap you use, make sure that it is reapplied after bathing. When you remove the compression wrap it is recommended that you massage the stump for 10-15 minutes before reapplying. Do not leave the same compression wrap on for more than 12 hours without re-application and do not leave the compression wrap off for more than 15 minutes as any swelling can return rapidly.⁽⁷⁾

Once the prosthetic limb is fitted, increases in stump size will hinder comfortable socket fitting. It is important to continue to use the compression sock as directed. You will experience an initial rapid decrease in stump size and this process will become less evident as you become more mobile. You will need to continue to use the sock until you have used your prosthetic limb for some months and your stump is not varying in size. However, you may find the sock is comfortable and you may continue to use it indefinitely when you are not wearing your prosthesis, especially at night.^(1,5)

Amputees who do not use a prosthetic limb can still wear their shrinker sock to protect and help keep their stump in good condition.

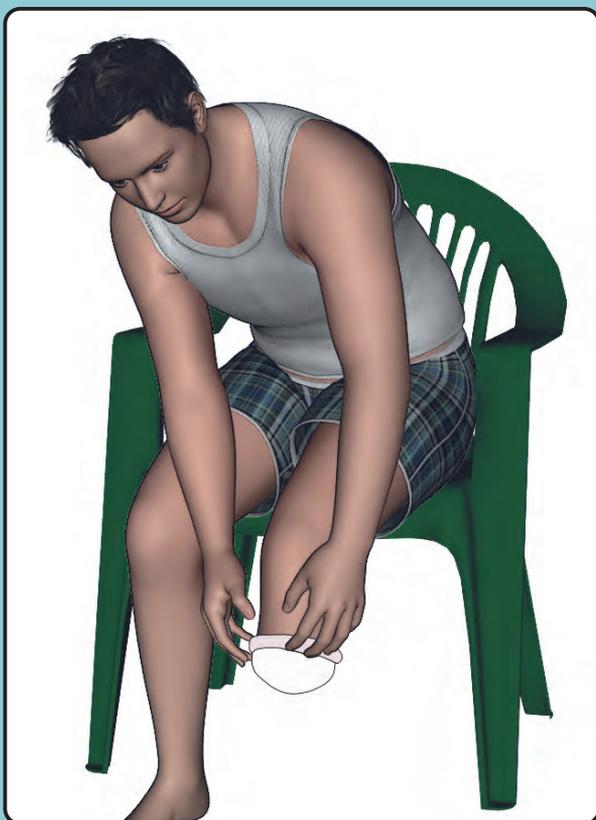
How to put on a shrinker sock



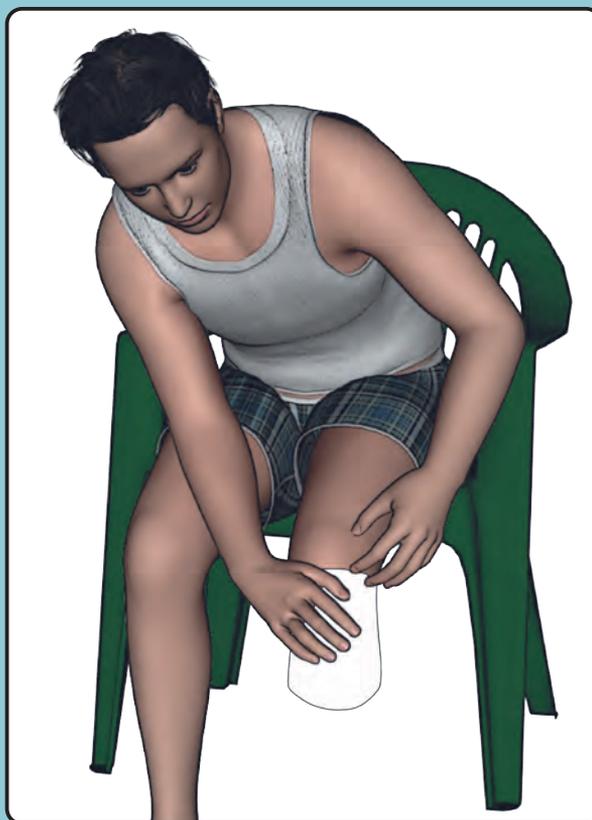
1. Your stump needs to be shaped so that a prosthesis will fit correctly.^(1,7)



2. Roll down the shrinker so that it looks like a doughnut.⁽²⁾



3. Roll the shrinker up your stump until it is completely unrolled.⁽²⁾



4. Smooth out any creases, air pockets and folds.⁽²⁾

References

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- 6 WebMd: *Edema Overview* [internet cited 2013 Nov 20] Available from: <http://www.webmd.com/heart-disease/heart-failure/edema-overview>
- 7 Muilnberg A & Bennett Wilson A: *Fitting the Prosthesis* In: *A Manual for Above Knee Amputees* 1996 [internet cited 2013 Nov 20] Available from: <http://www.oandp.com/resources/patientinfo/manuals/ak4.htm>

Stump bandaging illustrated guides

In this section

1. How to bandage a below knee stump
2. How to bandage an above knee stump
3. How to bandage a below elbow stump
4. How to bandage an above elbow stump

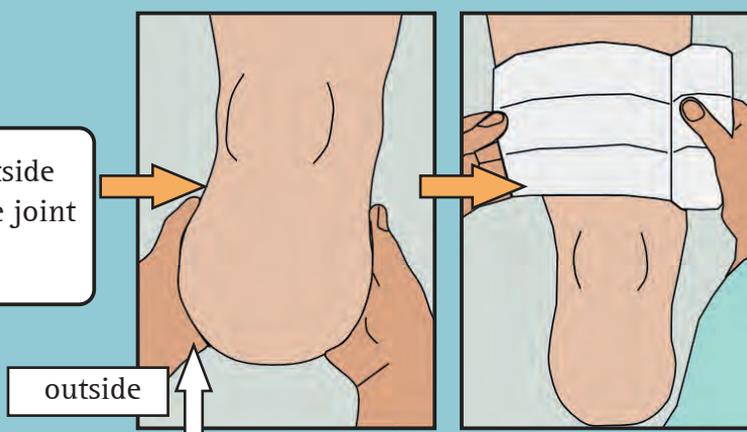
Stump bandaging for below knee amputations

Successful shaping of a stump by bandaging requires:

- effective bandage material: ask your physiotherapist for suitable types.
- effective bandage size – 10 cm for shorter BK stumps or 15cm for larger the bandaging to extend above the knee joint to provide low tension suspension
- learning to keep the bandage always applied to the leg; lifting it off creates bad tension lines
- all tensioning turns to be long spirals
- a conical pressure gradient on the stump
- the avoidance of congestion in the stump; congestion causes swelling and PAIN
- fixation of the bandage with 2 safety pins, NOT adhesive tape

These instructions were created by G.F Lamb of the New Zealand Artificial Limb Service, some alterations have been made from the original.⁽¹⁾

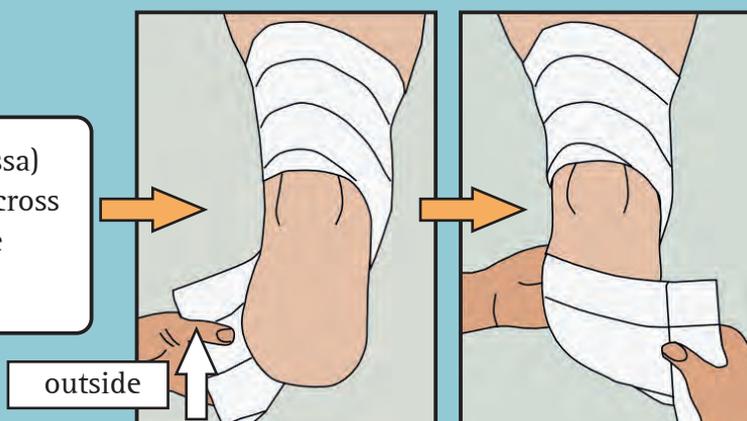
1 START the bandage at the outside side of the thigh clear of the knee joint which should be 30-40° flexed.⁽¹⁾



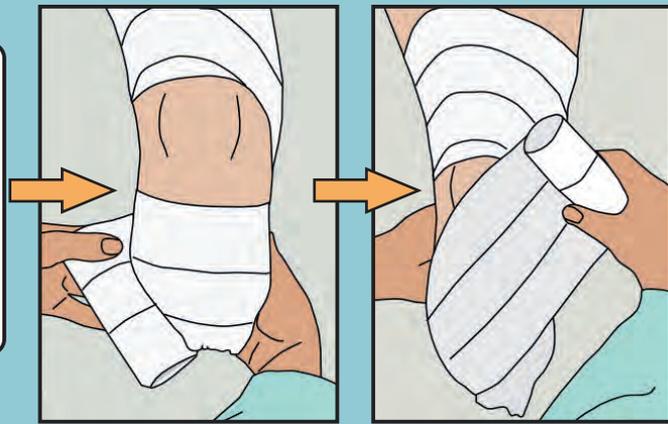
2 Anchor the bandage by carrying it across the front of the thigh and complete 1.25 turns (360° + 90°). There are now two thicknesses of bandage across the front of the thigh, one at the back. The bandage should thus arrive at the medial side of the thigh travelling towards the back.⁽¹⁾



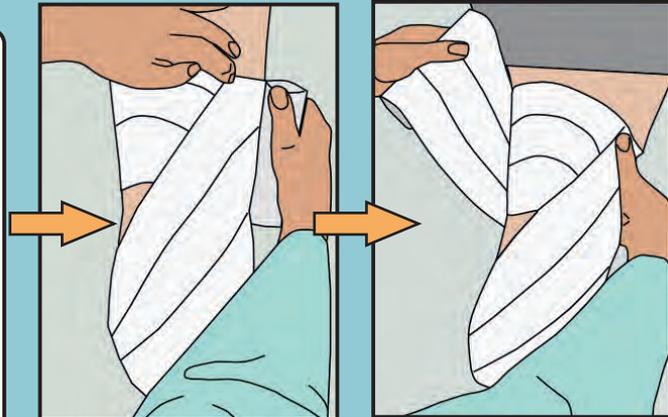
3 From the knee pit (popliteal fossa) change direction to spiral down across the back of the stump to reach the lateral side of the stump tip.⁽¹⁾



4 Take an untensioned turn around the stump and then travel up by a long oblique to the medial side of the thigh above the knee. The purpose of this untensioned turn is to provide a better surface for the subsequent tensioning turns to slide upon.⁽¹⁾

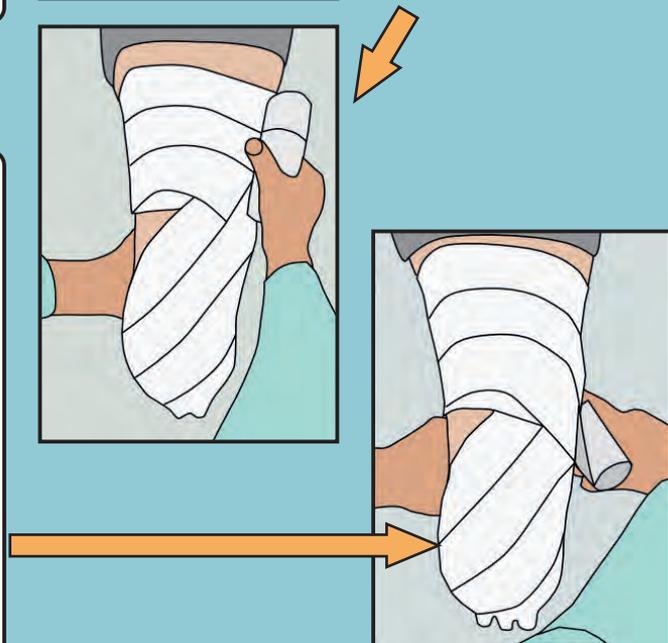


5 The next is an important stage. The bandage, once having reached its high point on the thigh, changes direction sharply and that point needs to be stabilised with a finger of one hand until caught by the next anchoring turn around the thigh. That anchoring turn must not be tensioned and travels so the bandage is retracing step 2.⁽¹⁾

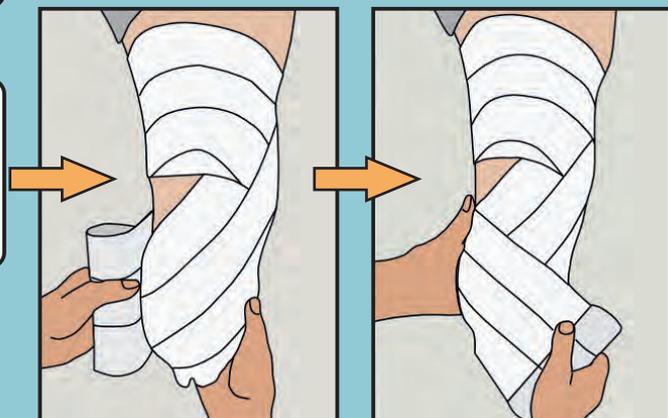


6 Now the tensioning begins. The next turn spirals down from the inner side of the knee across the stump to the lateral side as in step 3, but as it travels the bandager lets out less bandage than the distance travelled so that tension is applied.

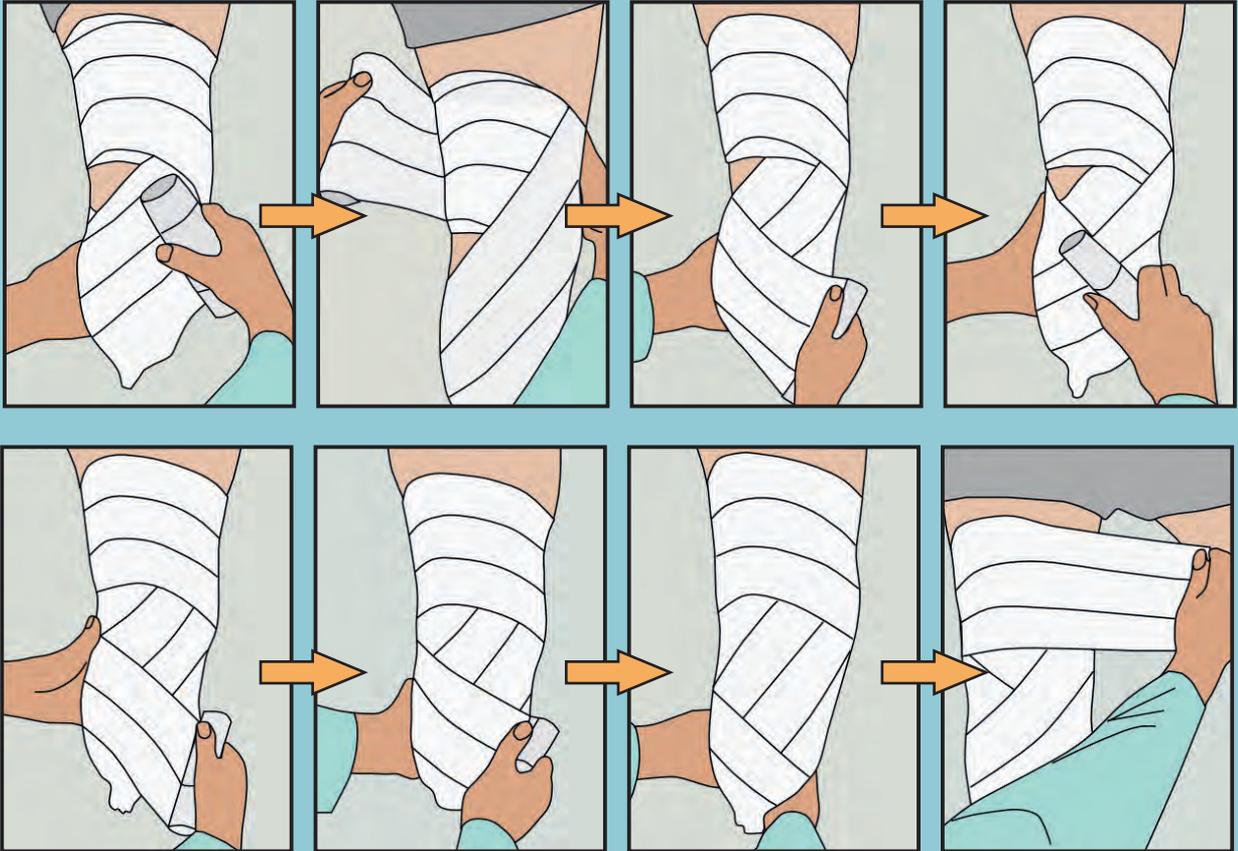
It is important that the bandage stays applied to the limb throughout this manoeuvre so that tension is applied evenly.⁽¹⁾



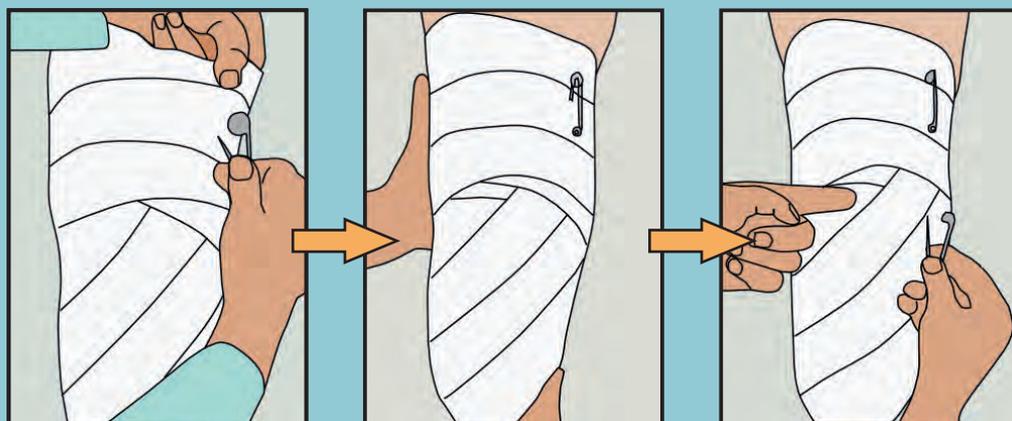
7 At the tip of the stump only about 2/3 of the bandage should be covering the stump, the rest overhanging the end.⁽¹⁾



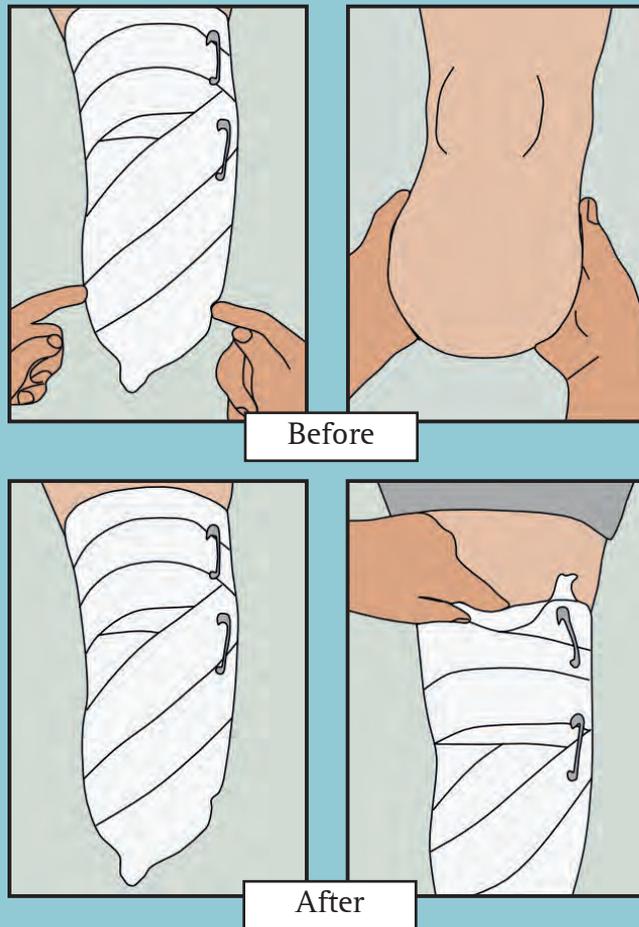
8 The spiral turn continues around the distal part of the stump, round the lateral aspect still under tension, continuing to the antero-medial aspect of the thigh again where again it changes direction sharply as in steps 4 and 5.⁽¹⁾



9 The bandage is now travelling in figure of eights with long spiral tensioned turns around the stump and circular untensioned anchoring turns around the thigh. As bandaging proceeds the tensioning turns should vary their position a little to ensure that the desired shape is being achieved. It is not necessary to cover every bit of skin with bandage: oedema around the knee is usually minimal. The elastic bandages tend to close in over the end of the stump and there is no need to bandage the end provided the turns in that region use only 2/3 of the bandage width on the stump itself. When all the bandage has been used secure it with safety pins. Adhesive tape does NOT hold it properly. Two pins are needed, one through the full thickness of the bandage at the place of direction change in step 3 and one at the point of cross over just below the medial side of the knee.⁽¹⁾



10 CHECK that the bandage tension is graded, it should be tightest at the end of the limb and gradually loosen as it moves up the limb towards the body. CHECK that the bandaging has shaped the stump as intended. CHECK that the thigh anchoring turns are loose enough to get a hand under comfortably (most important). CHECK that the knee is free to move from full extension to 90°. ⁽¹⁾



11 Tell the amputee that their bandage should feel firm but never painful.

If the bandage has been properly applied it will tend to slide off because it is tighter at the bottom than the top; this is why stump bandages need to be reapplied during the day. If the amputee is physically able and has the cognitive capacity to do their own bandaging they can be taught how and encouraged to do it, achieving a consistent bandaging pattern and also accustoming them to handling their stump. ⁽¹⁾

PAIN = CONGESTION, so TAKE THE BANDAGE OFF.

Always use clean bandages when wrapping your stump. To clean your bandages wash them with gentle soap and warm water. Dry the bandages by laying them out flat, roll them up when completely dry. You will need to reapply the bandages several times a day as they will loosen over time. If the bandages become soiled during the day replace them with a clean set.

Stump bandaging for above knee amputations

Successful shaping of a stump by bandaging requires:

- effective bandage material: ask your physiotherapist for suitable types.
- effective bandage size – 10 cm for shorter BK stumps or 15cm for larger the bandaging to extend above the knee joint to provide low tension suspension
- learning to keep the bandage always applied to the leg; lifting it off creates bad tension lines
- all tensioning turns to be long spirals
- a conical pressure gradient on the stump the avoidance of congestion in the stump; congestion causes swelling and PAIN
- fixation of the bandage with 2 safety pins, NOT adhesive tape

These instructions were created by G.F Lamb of the New Zealand Artificial Limb Service, some minor alterations have been made from the original.⁽²⁾

1 Bandaging is most effectively done with the patient standing on the other leg, and supported by holding on to furniture etc. The bandager is best kneeling behind the patient on the amputated side at 45°. Note: The patient should be nude.⁽²⁾

2 START the bandage at the side opposite the amputation. Take an anchoring turn around the waist.⁽²⁾

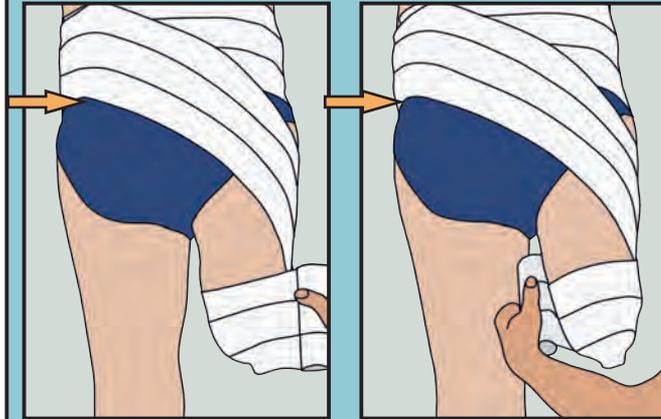
3 The bandage now travels down over the buttock to the lateral side of the stump spiralling towards the front pulling the stump into full extension at the hip, reaching the medial aspect of the distal stump. This turn is not specifically tensioned but provides a good surface for later turns to slide on.⁽²⁾

4 A turn around the stump then spirals back up the stump towards the groin and under the perineum (anal region) emerging on the buttock where it crosses the original bandage.⁽²⁾

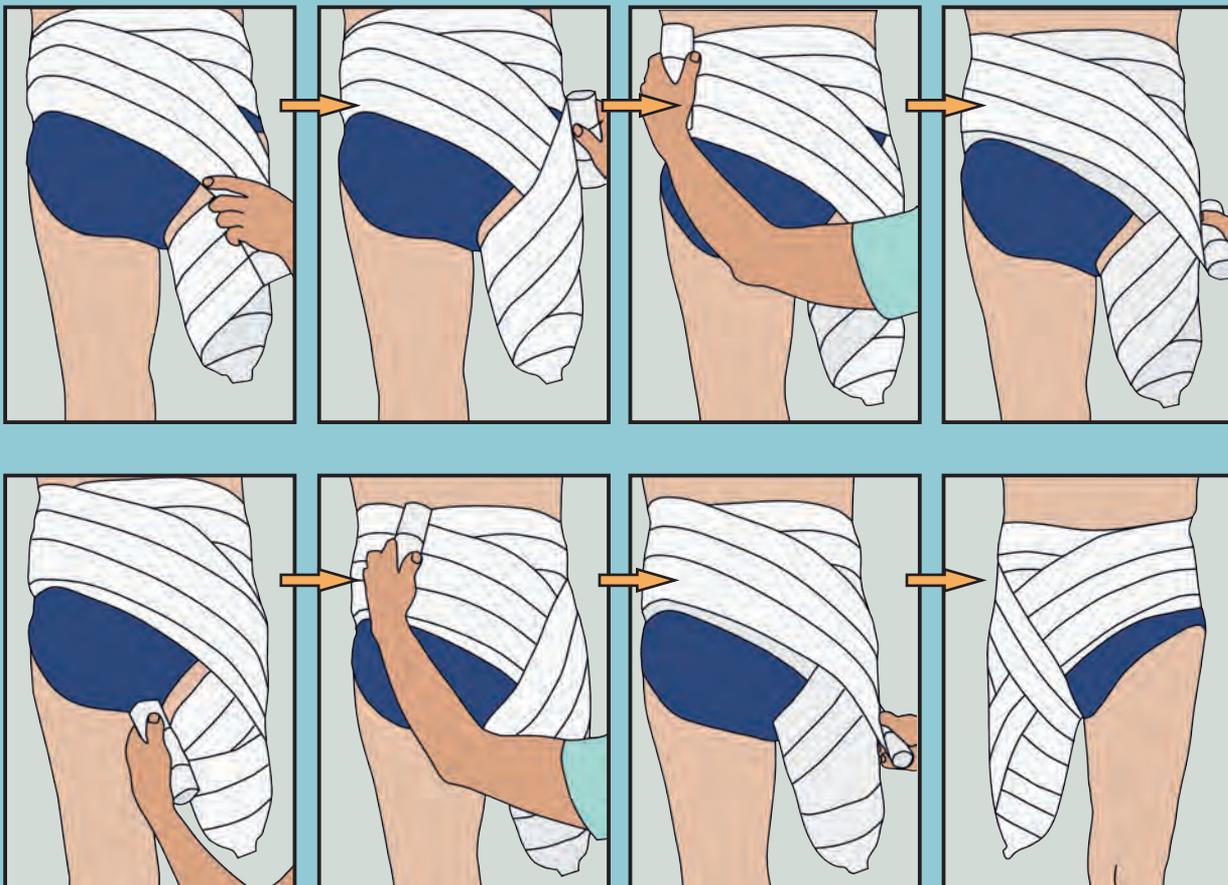


5 It then travels around the waist as a suspensory turn until it descends over the buttock of the amputated side once more and spirals down the stump. This turn is beginning to apply tension over the distal part of the stump by paying out less bandage than the distance covered.

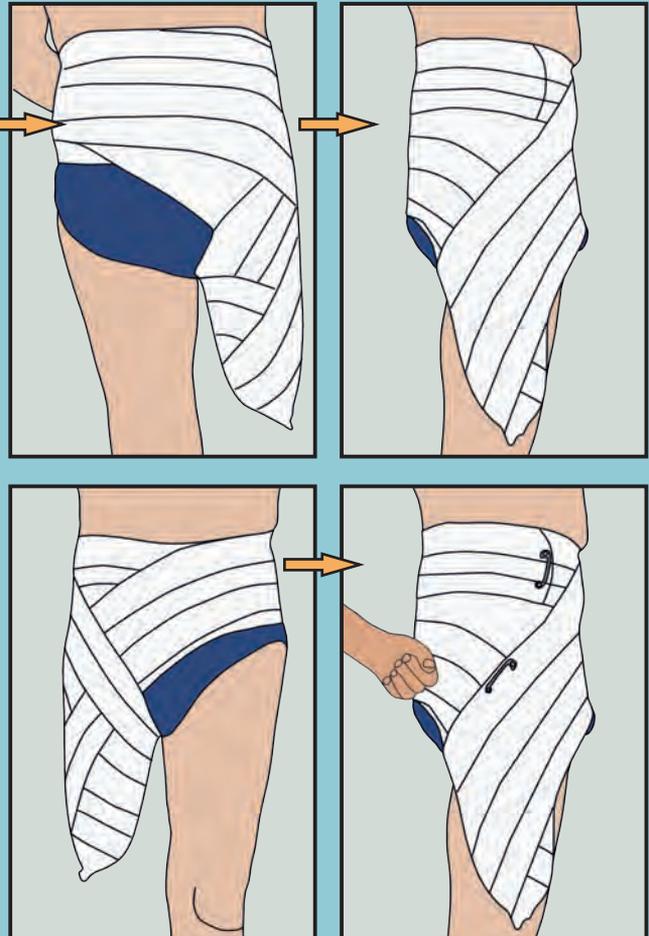
It is essential that the bandage be kept fully applied to the stump throughout to avoid uneven tension lines. At the stump tip only about $\frac{2}{3}$ of the width is applied to the stump. The remaining third will automatically close in over the end of the stump.⁽²⁾



6 The bandage is then spiralled up to the hip as before and the whole sequence repeated varying the precise route of the turns to achieve the shaping required until all the bandage is used. It is important to ensure that the hip joint is kept extended throughout and at least one turn of the bandage reaches up into the perineum and one turn right up to the groin crease to avoid the production of fat rolls in those susceptible places.⁽²⁾



7 The bandage is then secured with 2 or 3 safety pins which act to sew the layers of the bandage together by catching all layers. The pins work best at cross over points of the bandage but beware leaving them placed so as to make lying or sitting miserable.⁽²⁾



8 CHECK that the bandage tension is graded, it should be tightest at the end of the stump and gradually loosen as it moves up the limb. CHECK that the bandaging has shaped the stump as intended. CHECK that the waist anchoring turns are loose enough to get a hand under comfortably (most important). CHECK that the hip is free to move from full extension to 90°.

Tell the amputee that their bandage should feel firm but never painful.

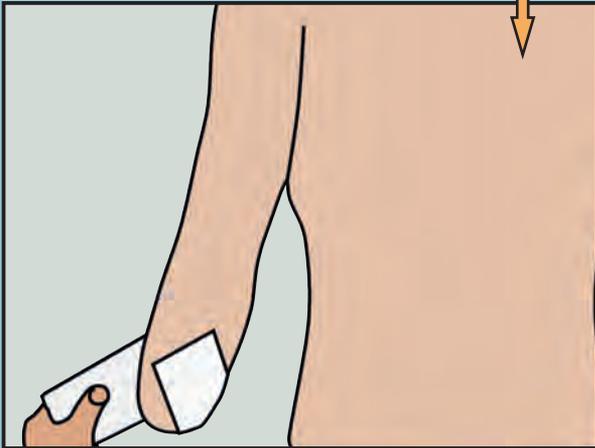
Bandaging over underclothing is depicted for modesty only. In practice above knee bandaging needs to be done with the patient nude so that underclothing can be worn and removed without affecting the bandage.⁽²⁾

PAIN = CONGESTION, so TAKE THE BANDAGE OFF.

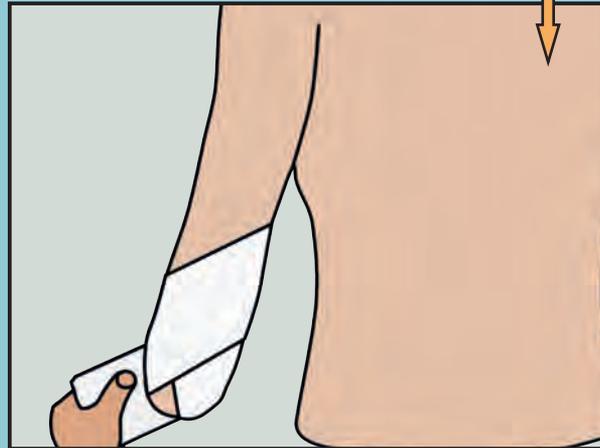
Always use clean bandages when wrapping your stump. To clean your bandages wash them with gentle soap and warm water. Dry the bandages by laying them out flat, roll them up when completely dry. You will need to reapply the bandages several times a day as they will loosen over time. If the bandages become soiled during the day replace them with a clean set.

Stump bandaging for below elbow amputations

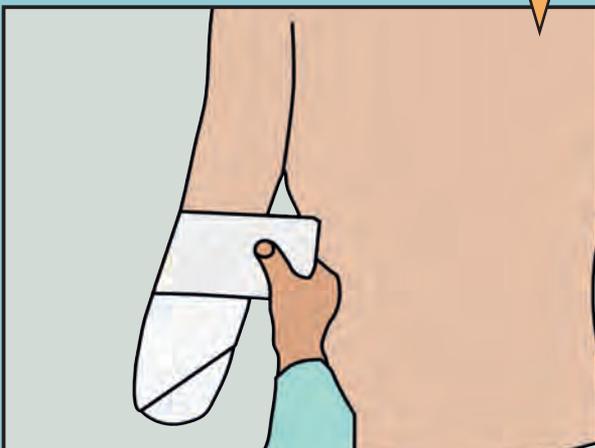
1. Hold the end of the bandage by putting it between the elbow and body. Start wrapping from the bottom outer corner and work your way upwards. Go over the bandage end so that it no longer needs to be held.⁽³⁾



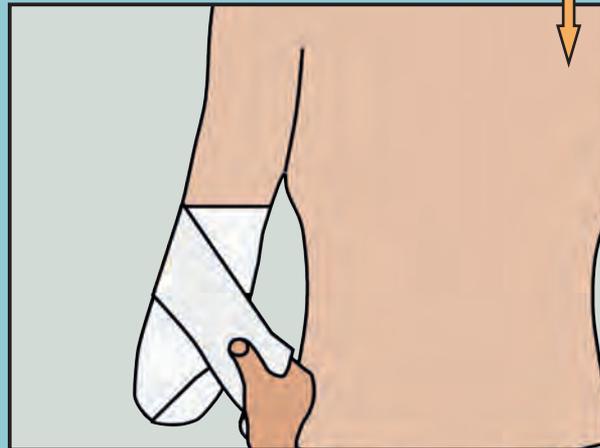
2. Work upwards diagonally until you cover the back of the elbow.⁽³⁾



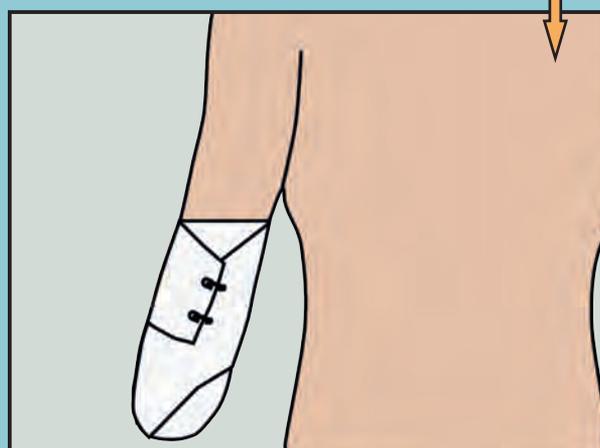
3. Cover the elbow crease with the bandage positioned horizontally not diagonally. This part can be a little loose to allow movement.⁽³⁾



4. Now turn the bandage and wrap down the arm follow the previous 2 steps in reverse; cover the elbow again, then move down to the start of the bandage.⁽³⁾



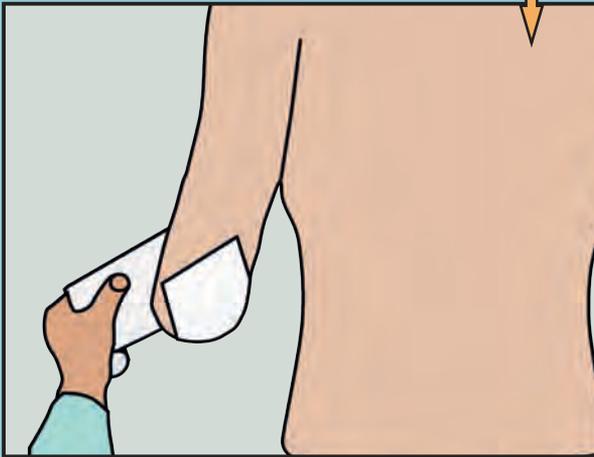
5. Take the bandage up to the top of the wrapping and then make one more wrap. Secure the bandage to itself.⁽³⁾



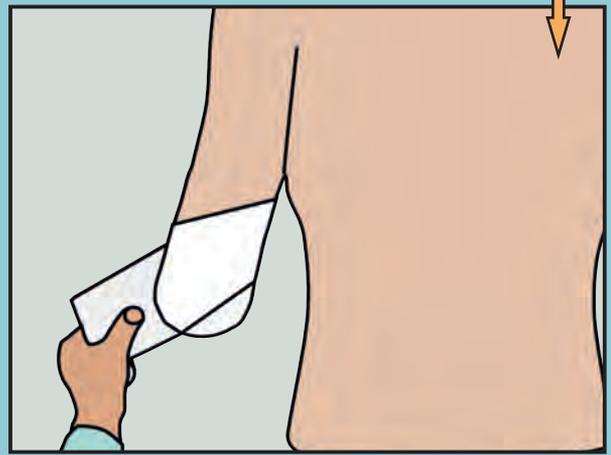
Always use clean bandages when wrapping your stump. To clean your bandages wash them with gentle soap and warm water. Dry the bandages by laying them out flat, roll them up when completely dry. You will need to reapply the bandages several times a day as they will loosen over time. If the bandages become soiled during the day replace them with a clean set.

Stump bandaging for above elbow amputations

1. Hold the end of the bandage by putting it between the stump and body. Start wrapping from the middle of the stump and work your way upwards. Go over the bandage end so that it no longer needs to be held.⁽³⁾



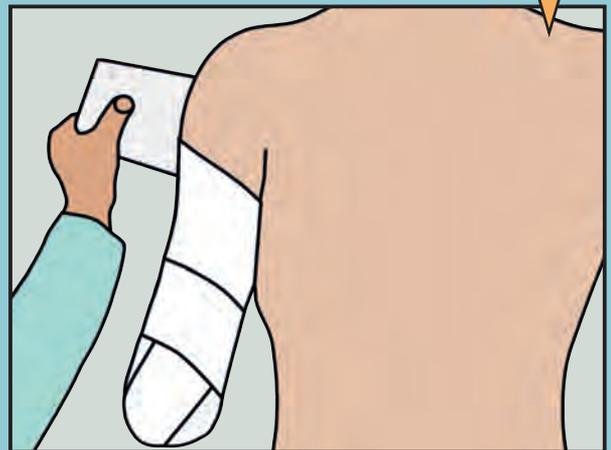
2. Wrap diagonally upwards until you are close to the armpit.⁽³⁾



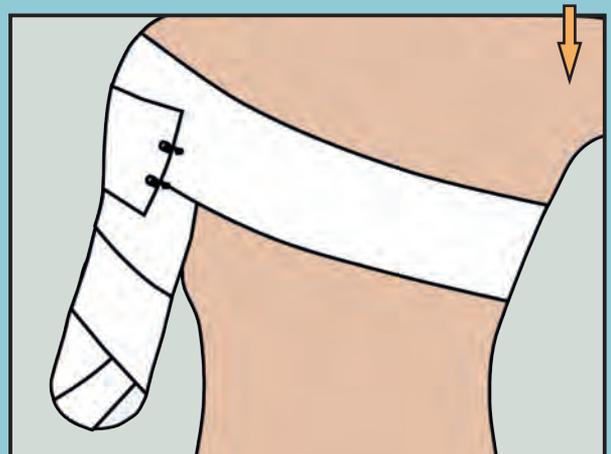
3. Take the bandage back down so that the bottom corner of the stump is covered.⁽³⁾



4. Wrap diagonally upwards so that all skin is covered. When the shoulder is reached stop at the back of the arm.⁽³⁾



5. Wrap from the shoulder of the amputated side to below the armpit of the other side. Secure the bandage.⁽³⁾



Always use clean bandages when wrapping your stump. To clean your bandages wash them with gentle soap and warm water. Dry the bandages by laying them out flat, roll them up when completely dry. You will need to reapply the bandages several times a day as they will loosen over time. If the bandages become soiled during the day replace them with a clean set.

References

- 1 Lamb GF & New Zealand Artificial Limb Service: Below Knee Stump Bandaging [internet cited Nov 20] Available from: <http://nzals.govt.nz/assets/Resources/Posters-and-Pamphlets/Posters/StumpBandagingbelowkneeA42sides.pdf>
- 2 Lamb GF & New Zealand Artificial Limb Service: Above Knee Stump Bandaging [internet cited Nov 20] Available from: <http://nzals.govt.nz/assets/Resources/Posters-and-Pamphlets/Posters/above-knee-stmp-bdg.pdf>
- 3 MossRehab: The Rehabilitation of People With Amputations [internet cited 2013 Nov 15] Available from: <http://www.mossrehab.com/Amputation-and-Prosthetics/mossrehab-regional-amputee-center.html>

Stump & foot care

In this section

1. Stump skin issues and inspection
2. Stump bathing
3. Perspiration
4. Care of the remaining foot

Stump skin issues

Amputees are prone to skin problems as the skin on the stump was not designed to bear weight or experience friction and the use of a prosthetic limb creates a warm, moist environment that bacteria prefer.

Inspect your stump daily and if you notice any problems such as cysts, rash, bumps, white flakes or brown patches on your stump contact your doctor. If you cannot see your whole stump use a small mirror.

Once you begin to use a prosthetic limb you may develop skin issues from prosthetic use. You will find the symptoms subside after you remove the prosthesis. If this happens see your prosthetist as you may need a socket adjustment or replacement supplies.

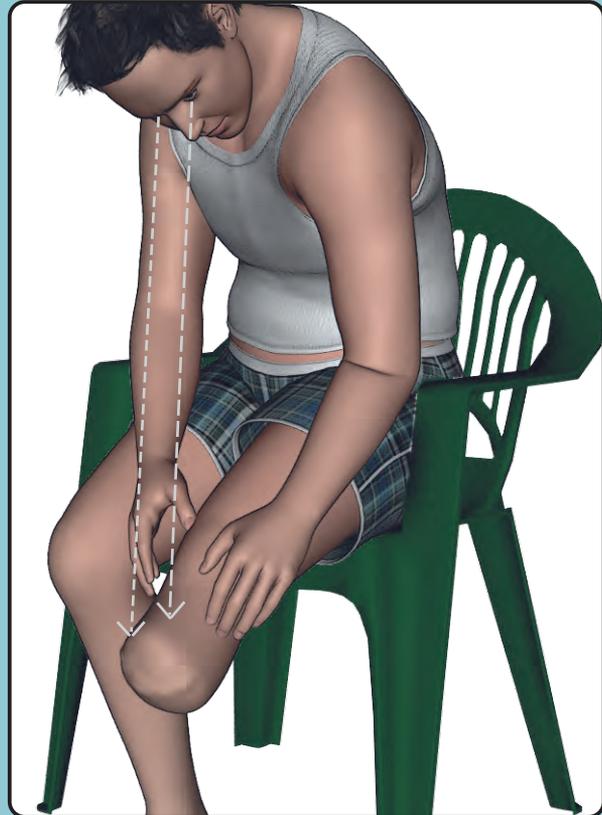
Some skin products may affect prosthetic liners so discuss your choices with your prosthetist if you use a gel or silicon liner.⁽¹⁻³⁾



Stump inspection



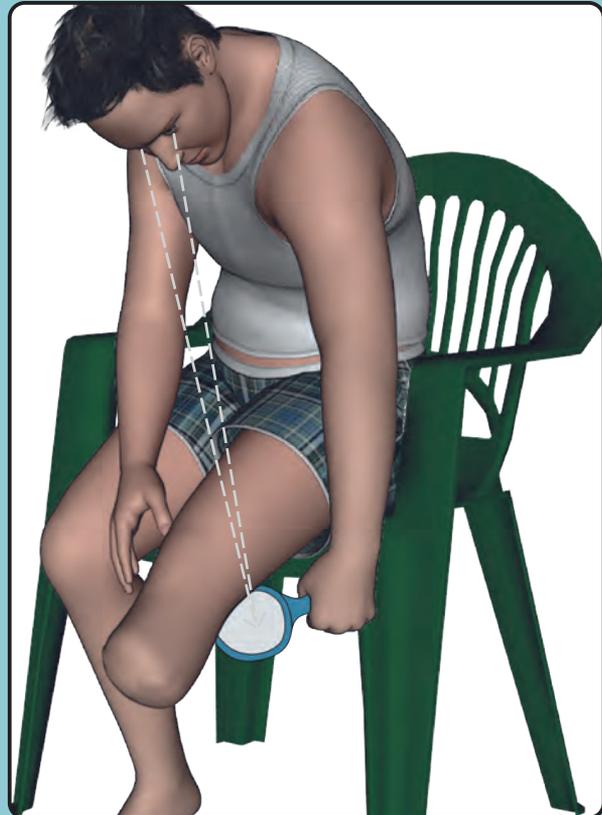
1. Remove any wraps or socks so that the entire stump is exposed.



2. Look carefully at the skin for signs of irritation like redness or pimples.



3. Run your hand over the stump to feel for bumps and rough patches.



4. Use a mirror to check any areas you cannot see or ask someone to look.

Stump bathing

It is best to wash the stump daily with a mild soap. Make sure you work up a good lather and clean any skin creases thoroughly. If you prefer to shower or bathe in the morning you will still need to wash and dry the stump thoroughly after you have removed your prosthetic limb in the evening. After washing, the stump must be dried thoroughly and moisturised. Also:

- Do not let your stump soak in a hot bath as it may swell.
- Do not shave the stump as the stubble will cause friction and may become infected.
- Always test products on a small patch of your stump before you use them for the first time.

To moisturise, use a Vitamin E cream or another suitable mild lotion. Moisturiser is best applied before going to bed rather than in the morning, prior to putting the prosthetic limb on. If your stump skin is dry do not use astringents such as isopropyl alcohol (brand name Isocol®), toners or witch-hazel. These products are designed for oily skin and have a drying effect.⁽¹⁻³⁾

There are many soap and fragrance-free products available from supermarkets and pharmacies; suitable, inexpensive brands include Alpha Keri®, Ego QV®, Aveeno®, Cetaphil® and Dermaveen®. If your skin is very dry creams with urea such as Uraderm® and Nutraplus® are available.



Avoid wearing your prosthetic limb if you develop a skin problem. Continual prosthetic use can make the problem worse.

Morning stump routine



1. Put your chosen antiperspirant on the stump and let it dry.

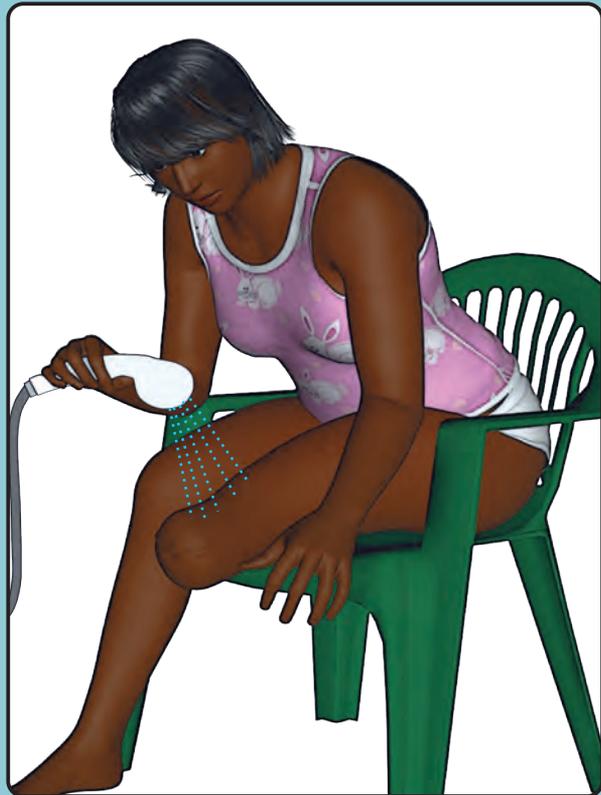


2. Put on a clean stump sock/liner before donning your prosthetic limb.

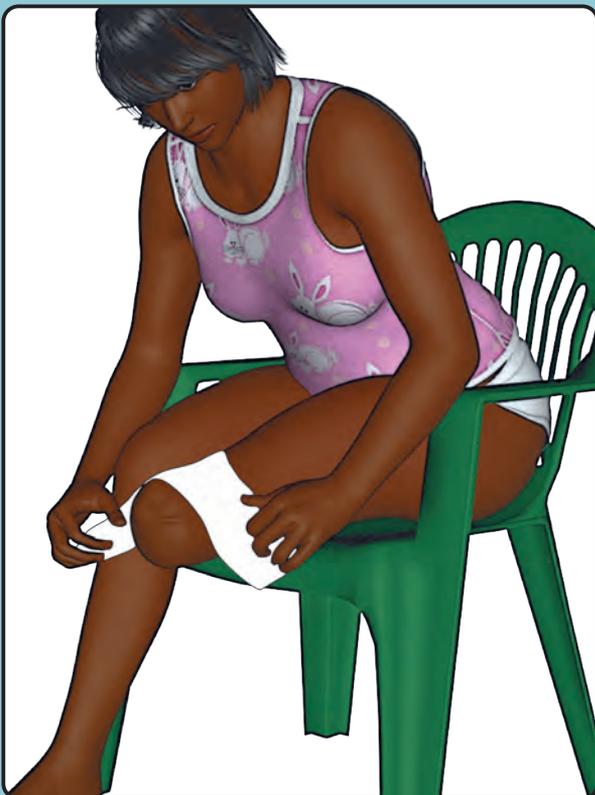
Stump bathing before bed routine



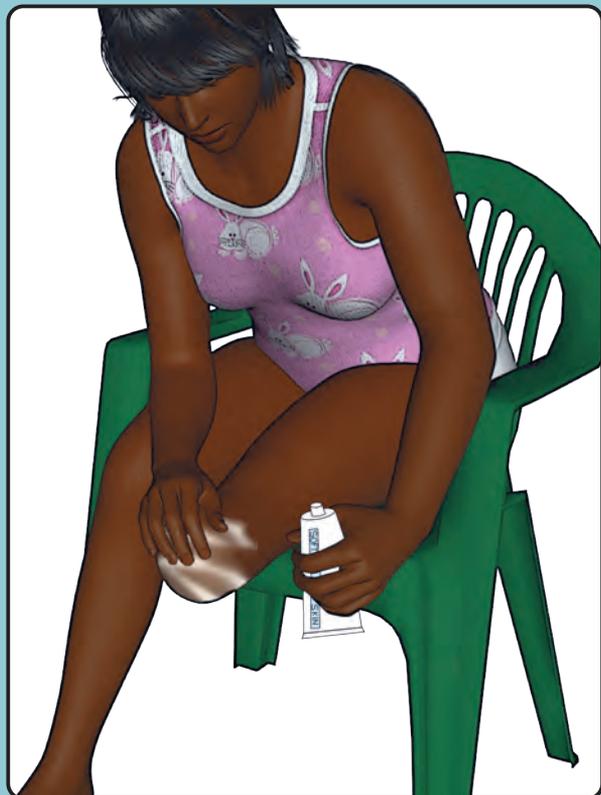
1. Wash the stump with gentle soap.



2. Rinse well with warm water.



3. Dry the stump with a soft towel. Make sure there are no damp spots.



4. Moisturise the stump, put on a stump sock when the moisturiser has dried.

Perspiration

Amputees will sweat more than they did before the amputation. There are several reasons why this happens:

- The body has lost surface area so the remaining sweat glands must work harder to cool the body's core.
- It takes more energy to ambulate with a prosthetic limb which results in the body heating up during regular activities.
- Prosthetic sockets trap heat and stop evaporation of sweat.⁽⁴⁾

Excessive perspiration will cause skin irritations and body odour. To treat perspiration and odour apply a fragrance-free antiperspirant to the stump daily. Do not apply antiperspirant onto any open sores or inflamed skin.

There are stump socks that can help wick moisture away from the stump. Wear clean stump socks every day. In warm weather

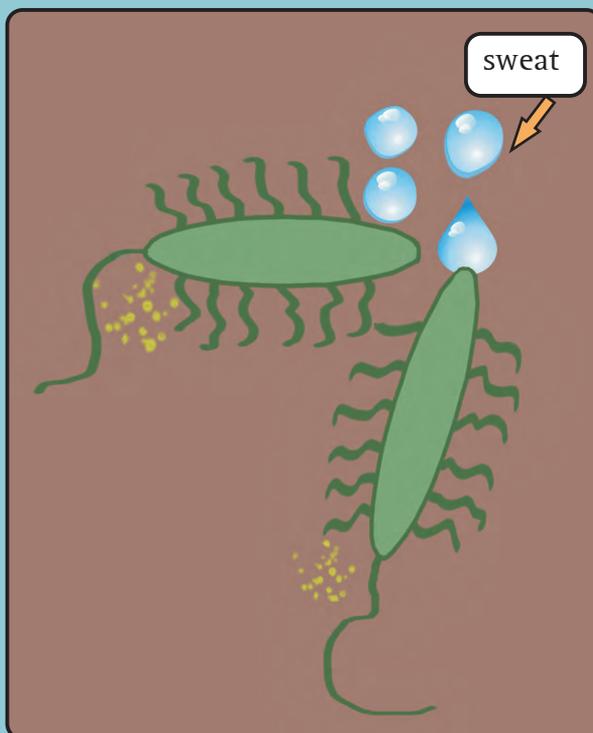
you may need to change your stump sock several times over the course of the day.

If you wear a prosthetic limb for long periods remove it during the day to refresh the stump and socket. Wipe down the stump and inside the socket then reapply antiperspirant. Exposing the stump to air will dry and cool the stump.^(4,5)

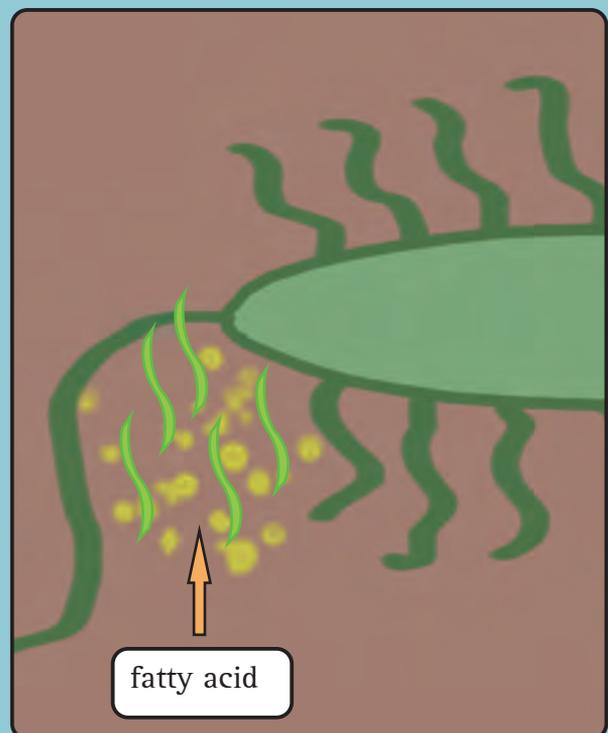
Always make sure you are using an antiperspirant. Products labelled as a deodorant such as Lynx®, only mask unpleasant odour with a stronger 'pleasant' odour. The sweat and bacteria are still being produced in the same quantity.⁽⁵⁾

If the sweating is excessive extra strength deodorants are available. Some amputees may opt for osseointegration; a prosthetic implant procedure that removes the need for a socket (see osseointegration section for information).

Why do we have body odour?



When we sweat natural bacteria on the skin feed off of the sweat. These bacteria multiply while they feed so the more sweat there is to eat the more they multiply.⁽⁶⁾



The bacteria excrete fatty acids as a waste product. These fatty acids have what we know as the 'body odour' smell. Stopping the sweating stops the bacteria from multiplying as they have no food.⁽⁶⁾

Caring for your remaining foot

Following an amputation, care of the remaining leg is of utmost importance, particularly if you have had your leg amputated due to poor circulation or diabetes. It is essential to realise that the disease can progress to involve the remaining leg and foot. Regular check-ups, regular foot care and monitoring by your doctor or a podiatrist are advisable, especially if you have poor circulation or diabetes.⁽¹⁾

If you have diabetes, it is important to attempt to maintain a stable blood sugar level to prevent complications such as reduced sensation or poor circulation to your limbs. Maintain good general health and stop smoking. Smoking may accelerate deterioration of circulation to the leg and foot.⁽¹⁾

Daily care

Your foot should be carefully washed every day using a mild non-medicated soap. After showering, the foot should be dried carefully, especially between the toes. The temperature of bath water should always be tested before immersing your limb otherwise you may scald yourself. You should also avoid the extremes in temperature.

Dry skin should be moisturised daily, using a non-greasy cream. Avoid using moisturisers and powders between the toes as this could encourage excessive moisture in these areas. If you have any problems with your feet, consult your doctor.

Toenail care

It is always best to have the remaining limb assessed by a podiatrist. They can advise you on the safety aspects of trimming your own toenails. People with diabetes and poor circulation should not cut their own toenails, and should routinely see a podiatrist for toenail reduction.^(1,7)

Regular inspection

The foot and leg should be carefully inspected every day for any changes. Do not forget to check between and under the toes and the back of the heel. A mirror placed on the floor may be useful in inspecting the

bottom of your foot. Consult your doctor if you notice any changes. Ask someone else to check your leg and foot if you have problems with your vision. If minor scratches or abrasions do not heal quickly (that is, within two days) consult your doctor.⁽¹⁾

Buying and wearing shoes & hosiery

It is important that it fits properly straight away and that it doesn't hurt your foot in any way. Wear shoes as often as possible to avoid damaging your feet.

When choosing a shoe look for:

- As low a heel height as possible. The heel should be firm to provide the most support.
- Adequate room in the toe area, both in height and in width.
- Adequate length at least 1cm from the end of the longest toe to the end of the shoe.
- Laces, straps or buckles are best.
- A cushioned, flexible sole.
- The same shape as your foot.

When shoe shopping some handy tips are:

- Look for shoes towards the end of the day (mid-afternoon).
- Take along the socks or hosiery that you would normally wear.
- If you have any insert or orthotic, remember to take this with you.
- Don't shop for shoes if your feet hurt.
- Buy shoes by the fit and not the size.
- Make sure you try them on properly fastened in the shop.
- Make sure the shoes don't hurt. Shoes, if fitted properly, shouldn't need to be "broken in".⁽⁷⁾

Hosiery

Clean hosiery should be worn daily. Socks and stockings with tight elastic bands and garters should not be worn on the remaining limb as they may reduce circulation to the foot. Natural fibre socks, such as those made from pure cotton or wool, are best, as they will allow your feet to breathe.⁽¹⁾

A healthy foot

Once you have had an amputation due to diabetes or vascular disease the likelihood of having your other foot or leg amputated increases. To lower your chances of a second amputation maintain a healthy foot.

Do not try to remove any corns or callouses with razor blades, scissors or chemicals. If you have callouses it means your shoes do not fit properly. Your podiatrist can remove corns and calluses safely.⁽⁸⁾

All ulcers must be seen by a doctor, even small ones.

No marks from poorly fitting shoes

The heel is supple and without cracks

The toes are free of fungal infections

The toenails are trimmed and filed



An unhealthy foot

Sores or ulcers



Call your doctor or podiatrist



Cracks & cuts



Blisters



Inflamed skin



Calluses



References

- 1 Queensland Artificial Limb Service: *Information Handbook for Queensland Amputees* 2003 Edition [book 2003]
- 2 National Amputee Centre: *Skin Care & Stump Hygiene* [internet cited 2013 Nov 20] Available from: <http://www.waramps.ca/nac/health/skin.html>
- 3 Rossback P: Caring for Skin: *Prosthetic Skin Care*. In: *Military in-Step* [internet cited 2013 Nov 20] Available from: <http://www.amputee-coalition.org/military-instep/caring-prosthetic-skin.html>
- 4 National Amputee Centre: *Heat & Perspiration* [internet cited 2013 Nov 20] Available from: <http://www.waramps.ca/nac/health/heat.html#reasons>
- 5 *Deodorant* [internet cited 2013 Nov 20] Available from: <http://en.wikipedia.org/wiki/Antiperspirant>
- 6 *Body Odor* [internet cited 2013 Nov 20] http://en.wikipedia.org/wiki/Body_odor
- 7 Queensland Artificial Limb Service: *Podiatry protecting your remaining limb* [pamphlet 2008]
- 8 American Diabetes Association: *Foot Complications* [internet cited 2013 Nov 20] Available from: <http://www.diabetes.org/living-with-diabetes/complications/foot-complications/>

Pain management

In this section

1. Postoperative pain
2. Stump pain
3. Phantom limbs & phantom pain
4. Other causes of pain
5. Working with your doctor
6. Recording pain
7. Pain questions
8. Self-help for pain sufferers

Post-operative pain

Pain in the area of a wound is common after an operation as the tissue starts to heal. This pain should improve over the first few weeks and usually requires some pain medication until the wound is healed. Increasing pain following the surgery can indicate a problem such as an infection or fluid build up and you should let your surgeon/doctor know if your pain is not settling.⁽¹⁾

It is very important for amputees to understand the various types of sensations and pain that may occur so that they can effectively deal with them. Although pain is common after an amputation, in most patients it is short lived and only a small number have ongoing problems with pain.

There are two major types of pain that amputees may experience; stump pain and phantom pain. Amputees may also experience a phenomenon called 'phantom sensation' or 'phantom limb syndrome'.

There are many different medications that are used to manage pain. Your doctor will assess the type of pain you are experiencing and advise the best option. As with all medications, great care needs to be taken to ensure that any interactions and side-effects are kept to a minimum.⁽²⁾

Stump Pain

This refers to pain that is felt in the stump rather than in the absent limb as occurs in phantom pain. All patients will have some degree of stump pain as the wound heals following the operation. It is quite important to take medications as advised by the doctors and nursing staff. Research has shown that if stump pain is controlled well during this phase, there is less chance of experiencing ongoing stump or phantom pain. Some people experience stump pain at a later time. There are a few common causes of this pain.⁽²⁾

An ill-fitting prosthetic limb may cause skin breakdown and the development of infections that are painful. It is important that you inspect the stump regularly to see

if any areas of pressure are developing or if any areas of infection or inflammation have occurred. If so, you should see your prosthetist in case the prosthetic limb needs adjustment. Good stump hygiene can prevent or reduce the number of skin infections and associated problems.⁽²⁾

Some people get persisting pain in the stump even after the wound has healed. The nerves in this area have been cut and the scar can become sensitive. It is usual to try local measures such as an elastic stocking, massage, vibration and pain-creams to try and help this type of pain. Persistent pain in the wound can be due to a number of conditions and you should ask your doctor to review the wound and check for problems.⁽¹⁾ Common conditions that cause stump pain are as follows.

Neuromas: these are a common cause of pain. Neuromas occur when nerves are cut in the operation. Your surgeon will have minimised the chance of most neuromas forming. Unfortunately, neuromas may still occur and may recur. They generally present as a localised, very tender and painful area. Sometimes they may trigger an electric shock type pain and in some patients, they actually trigger phantom pain. Therefore, it may be difficult for you to know which pain is which. Consult your doctor if this problem is occurring.⁽²⁾

Bony Spurs: occasionally, small bony growths appear on the cut end of the bone in the stump. In most cases, these bony spurs do not cause any problem. Occasionally they are large enough or near an important structure such as a nerve and can cause pain from irritation or pressure. The bony spur may need treatment by surgical removal. Your doctor will advise you of appropriate treatment.

In most cases, the development of a new stump pain will be due to a problem with the fitting of a prosthesis. In this case, a review by your prosthetist may help to determine what the problem is and quickly rectify it. If not they may need to refer you to your primary care doctor.⁽²⁾

Phantom limbs & pain

Phantom limbs and pain are still poorly understood in the medical community. It was thought that both were psychological conditions caused by an amputee's emotional reaction to limb loss. Once amputees' brains were scanned in MRI machines it was found that the brain and nervous system is involved.

Understanding the human brain is still in the early stages and no definitive cause of phantom limbs and pain has been found, however, new research on the brain's ability to adapt has led to several theories on these sensations. For a long time, it was believed that an adult brain was in a fixed state but research has shown that adult brains do try to adapt to their surroundings and rewire their connections.^(3,4)

Phantom limbs

When an amputee can still feel their missing limb it is referred to as phantom limb. Current theories on the causes of phantom limbs are the brain filling in missing information using memories of prior experiences. In phantom limbs, the brain has the memory of the limb so nerve impulses are still triggered after the limb is amputated causing various painless sensations including:

- the amputated limb behaving as a fully functioning limb.
- the amputated limb is gradually shrinking back into the body.
- the amputated limb is moving about
- feelings of heat, cold, itching or tingling in the amputated limb.⁽⁵⁾

The feeling of the amputated limb can be so real that amputees have injured themselves trying to stand up or walk on the phantom limb. This usually happens when waking suddenly from deep sleep.^(4,5)

Phantom limb sensations are proving to be useful in the design of high-tech prosthetic limbs that detect nerve sensations to initiate movement. Amputees with traditional prosthetic limbs report that phantom limb sensations can be used to control a prosthetic limb as the prosthetic and

phantom limbs feel as if they are working together resulting in a prosthetic limb that is easier to control.⁽⁶⁾

Phantom pain

Phantom pain causes amputees to feel pain as if the amputated limb was still present. Initially, neuromas were blamed for the condition and while neuromas play a role they are not the sole cause of phantom pain.⁽⁷⁾

The current theories for the cause of phantom pain involve the brain becoming confused after the amputation and attempting to recreate the sensation of the missing limb. Those who had long term pain prior to amputation may find that the brain recreates what it has become accustomed to feeling, resulting in phantom pain sensations.^(3,7)

In those who did not have prior limb pain, the brain may be creating pain to signal that there is a problem with the limb in that it cannot locate it. In this case, pain is a rudimentary response to tell you that something is not right. Other contributors to phantom pain are damaged nerve endings and scar tissue on the stump. Most cases of phantom pain will have several of the aforementioned factors involved.^(3,6)

Phantom pain falls into 3 broad categories: cramping, burning and stabbing. These pains may be persistent or intermittent. Some amputees find that the pains are triggered by certain activities such as yawning, coughing or changes in temperature. Other amputees find that the pain will become more prominent when they are stressed, feeling depressed or having trouble sleeping.^(2,5)

The severity of phantom pain can be reduced by maintaining pain control prior to an elective amputation and by early rehabilitation following amputation. Many patients who suffer from phantom pain notice that it can be controlled fairly well during the day when they are active. However, it causes problems when they are trying to sleep.⁽⁴⁾

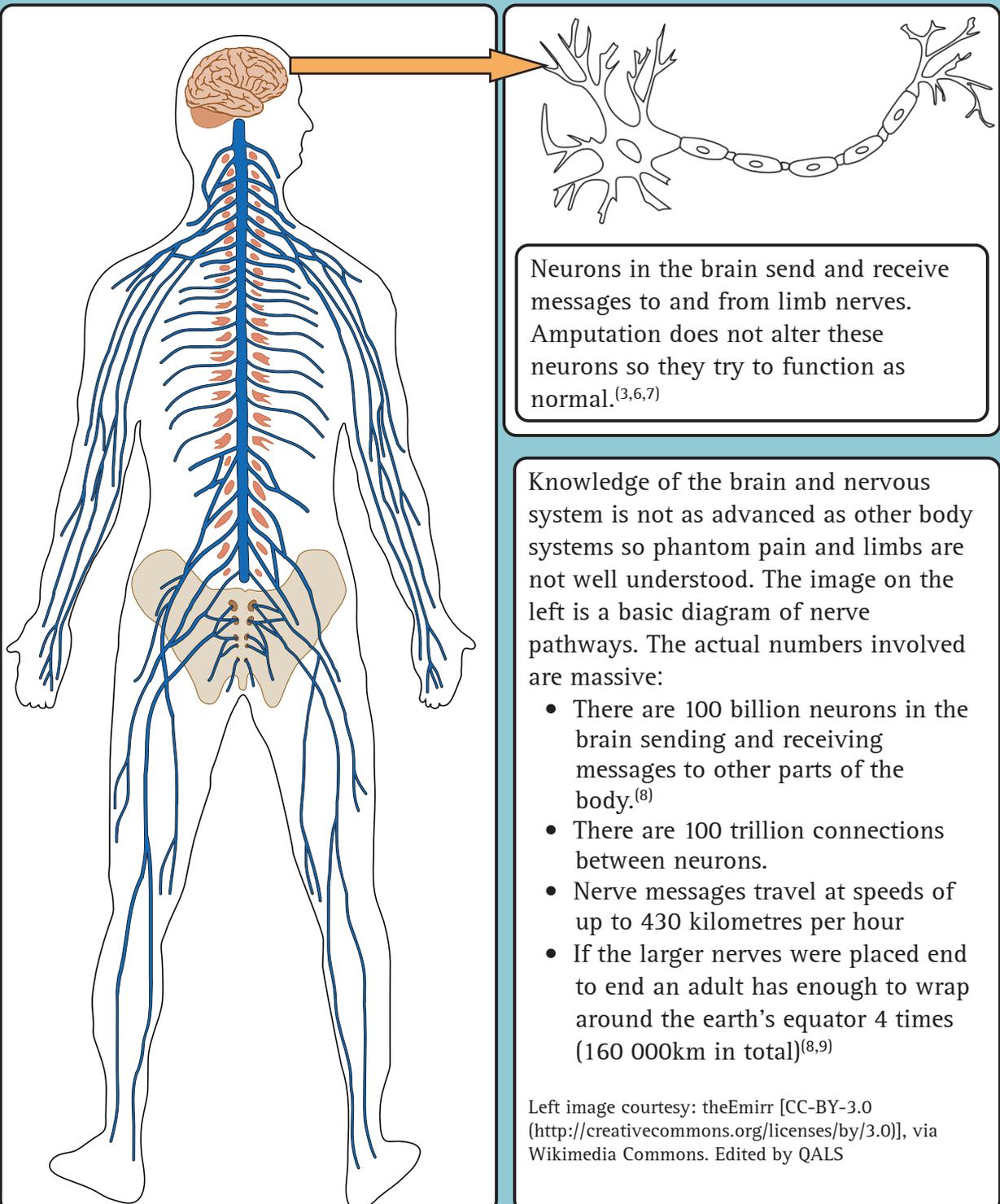
If you are troubled by phantom pain, it is important to consult a doctor who is experienced in treating it. Often it does not need any treatment besides early mobilisation.

There are several ways to treat phantom pain including medications, physical therapies, behavioural training and psychological therapies. The same treatment

options do not work for everyone so you need to discuss your individual situation with your primary care doctor.

Phantom pain is almost impossible to eliminate completely, so you and your doctor may need to focus on ways to cope with chronic pain. Difficult to treat cases may require referral to a pain management specialist or clinic.^(2,4,5)

The human nervous system



Neurons in the brain send and receive messages to and from limb nerves. Amputation does not alter these neurons so they try to function as normal.^(3,6,7)

Knowledge of the brain and nervous system is not as advanced as other body systems so phantom pain and limbs are not well understood. The image on the left is a basic diagram of nerve pathways. The actual numbers involved are massive:

- There are 100 billion neurons in the brain sending and receiving messages to other parts of the body.⁽⁸⁾
- There are 100 trillion connections between neurons.
- Nerve messages travel at speeds of up to 430 kilometres per hour
- If the larger nerves were placed end to end an adult has enough to wrap around the earth's equator 4 times (160 000km in total)^(8,9)

Left image courtesy: theEmirr [CC-BY-3.0 (<http://creativecommons.org/licenses/by/3.0/>)], via Wikimedia Commons. Edited by QALS

Other causes of pain

Amputees may experience pain in their stump that is not due to the actual amputation, walking with a prosthetic limb or using a mobility aid. The pain may be caused by numerous alternative conditions including:

- Arthritis of the existing joints
- Ruptured discs in the back
- Sciatica
- Tendonitis
- Bursitis⁽⁵⁾

Always have pain investigated by a doctor, do not assume it is something you have to endure.⁽¹⁰⁾ If you notice that your pain is worse when you use your prosthetic limb see your prosthetist for an assessment.

Working with your doctor

Nobody understands your pain the way you do. You are not a “bad” patient if you tell your doctor you have pain. Doctors want to make you feel as comfortable as possible and improve the quality of your life. They cannot do this unless you share your experience of pain with them.

Coping with unrelieved pain can be exhausting and can keep you from enjoying friends, relatives, and other activities.

Asking for pain relief medication is not a sign of weakness. Most side effects from pain medicine can be managed as long as you tell your doctor about them. If you feel your pain is not being adequately relieved, tell your doctor immediately. Your doctor may:

- reassess your pain.
- adjust your current dosage of medication, prescribe a different medication or use a combination of medication to relieve your pain.
- refer you to a pain specialist.

Your doctor needs to know what kind of pain you are feeling and how bad it is. Your doctor may ask you some of the following questions:

- Where is the pain? List all the painful areas. You may even want to draw a simple picture of your body and mark areas where you feel your pain.
- What does the pain feel like? Is it aching? throbbing? burning? sharp?⁽¹⁰⁾

Words to describe pain

Dull	Throbbing	Tight
Burning	Shooting	Pinching
Crushing	Cramping	Tender
Sore	Knot-like	Electric
Stabbing	Deep	Pulsing
Prickling	Stretching	Gnawing
Pounding	On-the- surface	Aching
Pins & Needles	Pressing	Sharp ⁽¹⁰⁾

Recording Pain

Regardless of the cause of chronic pain, it may be beneficial to keep a written record of pain to take to your doctor. By keeping written records it is possible to track the effectiveness of pain management techniques. There are many pain journal templates available on the internet and there are now pain tracking applications available for smartphones. When keeping a pain journal record the type and severity of pain, what you did that aggravated the pain and what relieved the pain.⁽¹¹⁾

The pain scale

When you were in hospital you probably had doctors and nurses ask you to rate your pain on a level of 0-10. If you decide to use a pain journal the numerical pain scale is helpful, as it is universally understood. The numbers represent your pain as follows and common ailments have been added to clarify the ratings:

0: No pain

1-3: Mild pain that is annoying but doesn't interfere with daily living. E.g. indigestion, sunburn

4-6: Moderate pain that interferes with daily living. E.g. toothache, twisted ankle

7-10: Severe pain that is debilitating. E.g. kidney stones, migraine⁽¹²⁾

Keeping a pain diary is not for everybody. Some find it makes them focus too much on the pain. If you find this happening stop keeping the diary and look into other ways of managing pain.⁽¹¹⁾

One week pain diary

If you would like to keep a pain diary photocopy this template. There are also numerous templates available online and smartphone applications for pain tracking are available.

Week Number	MON Date:	TUE Date:	WED Date:	THU Date:	FRI Date:	SAT Date:	SUN Date:
What time of day did you feel pain?							
Where was the pain?							
Rate the pain from 1-10. With 1 as mild and 10 as intolerable							
What words describe the pain?							
What activity were you doing when the pain began?							
List all medication used to relieve the pain							
Could you alleviate the pain? e.g. by resting							
Concerns to discuss with your doctor:							

Pain questions

Sometimes we do not seek treatment for our pain as pain is often misunderstood, some common questions and misconceptions are outlined below.

 *If I get a prescription for pain-killers will I become addicted to them?*

There is a small chance of addiction with some types of pain medication. Taking your medication as prescribed will reduce this risk. Doctors are often reluctant to prescribe pain-killers: if your doctor refuses to prescribe them listen to their concerns; but seek a second opinion if you feel your pain is not being adequately managed.⁽¹³⁻¹⁵⁾ If you do not want to use pain medication discuss your options with your doctor.

 *If I treat the pain now, what options will I have if it gets worse?*

Most pain relief prescriptions start with smaller doses, it is unlikely you would be prescribed a maximum dose initially. Consider lifestyle changes such as weight loss and exercise/physiotherapy with occasional pain medication to alleviate irritating but not debilitating pain.^(15,16)

 *If I go to the doctor will I look like a whiner or a coward?*

Pain is highly individual. Tolerance and thresholds for pain vary greatly. Leaving pain to fester greatly reduces your quality of life. If you do not feel comfortable discussing your pain with your doctor seek a second opinion or referral to a pain specialist.⁽¹⁵⁾

 *Why do people tell me it's all about my attitude and to think positive?*

While there are benefits to having a positive attitude; pain cannot be cured by thoughts alone. Most people who say this believe they are helping but it is not helpful as it effectively blames the person for not curing themselves.⁽¹⁴⁾

 *Isn't pain part of the healing process and it will eventually go away?*

If pain is still occurring 3 months after the normal healing time, you may require a different treatment approach.⁽¹⁷⁾

My doctor can't locate the cause of the pain, does that mean I'm imagining it?



It is not imaginary; you may have a condition caused by nerve pathways becoming over-sensitive as a result of long-term pain. In the case of phantom pain, it is the brain and nerve endings adjusting to amputation.⁽¹⁴⁻¹⁷⁾

I thought pain was physical, why did the doctor prescribe antidepressants?



People with depression may feel pain more intensely due to the chemical changes in the brain. Certain antidepressants can help relieve some types of pain. There is nothing to be ashamed about if you need to have your depression treated.⁽¹⁴⁻¹⁶⁾

Doesn't pain medicine stop you from driving because you're always sleepy?



Side effects of medication can be managed and only some pain killers cause drowsiness. If you find the side effects of your medication are causing issues see your doctor. Most side effects are controllable or lessen with time.⁽¹⁴⁻¹⁶⁾

I'm in pain but the doctor told me to take Panadol, why?



Paracetamol based drugs (e.g. Panadol®) are very effective at treating moderate pain. There is evidence that paracetamol tablets are just as effective as anti-inflammatory drugs when it comes to managing pain related to surgery.⁽¹⁸⁾

Is pain relief all about finding the right medicine?



You will find your pain is best managed by a team such as your doctor, physiotherapist, prosthetist and psychologist/counsellor.⁽¹⁴⁾

Don't you become tolerant to pain medicine and need more and more?



It is possible but uncommon to become tolerant to medication. If your usual dose of medication is not relieving your pain, have your pain reassessed.⁽¹⁵⁾ Never adjust your dosage without seeing your doctor.

Self-help for pain

When you live with pain it is overwhelming. An important facet of your pain management is self-help through non-medical techniques to reduce pain. The following are some steps you can take to manage your pain. Remember everyone is an individual when it comes to pain and always see your doctor or physiotherapist before starting an exercise program.

Be you own advocate

When you are actively involved in your pain management it makes you feel in control, this can alleviate feelings of hopelessness. Stay informed and active in your care; if you are unhappy with your pain management seek other opinions. When you are going to appointments ask questions about the proposed treatment and why your doctor has decided on this course of action.⁽¹⁸⁻²⁰⁾

Relaxation

Pain is stressful therefore stress reduction is a very important tool in managing chronic pain. Everyone has different preferences for relieving stress so choose what works for you. Many people like to meditate, others like to sit outdoors and watch nature. If you enjoy hobbies such as crafts or playing a musical instrument make time for them in your routine.⁽¹⁸⁻¹⁹⁾

Exercise

Good fitness can alleviate pain. Of course, you should not overdo it but try to incorporate exercise into your routine. Exercises such as pilates and tai-chi also help you to relax while others have a social element such as gyms or ten pin bowling. Do not exercise too close to bedtime as it may keep you awake and always discuss your exercise plans with your doctor or physiotherapist.⁽¹⁸⁻²⁰⁾

Pleasure

Keep pleasurable interests in your life and try to laugh. Pleasurable activities do not need to be outside the home or cost money, a favourite TV show or playing with your pet are ways to have pleasure at home. It may seem hard to keep humour in your life but laughter releases endorphins, the

brain's 'feel good' chemicals. Watching a good comedy routine can also distract you from your pain so think about what makes you laugh and seek it out, for example, many classic comedy programs are readily available on DVD and the internet.^(18,21)

Reaching out

A very important part of managing chronic pain is talking to other people about your experiences. You can join an amputee support group or a chronic pain group. You could get together with other people living with chronic pain in your community informally and share your experiences.

While community involvement helps you it also helps others and you can feel better knowing that you are making a difference to somebody else's life.⁽¹⁸⁾ If you are mobile think about reaching out to those who are not able to leave their house. If leaving the house is difficult or you live in a remote area the internet has many online support groups that may be of interest to you or you could start your own online group.

Rest

Pain is worse when you are fatigued but good, restorative sleep is very difficult when you are in pain. Look into ways to help you sleep such as cutting down caffeine, adjusting your sleeping positions, eliminating light or noise, having a suitable mattress and pillow and keeping the bedroom cool. Try to wake up at the same time every day and do something relaxing before bed such as drinking herbal tea.

When we are anxious we tend to lay awake going over our worries. If you have anxiety (see section on anxiety for more information) your sleep will be affected. If you find yourself in the situation of worrying instead of sleeping see your doctor as anxiety treatments are available.

Some medications may cause insomnia as a side effect. If you think a medication is causing problems for your sleep schedule discuss the issue with your doctor.⁽¹⁸⁻²⁰⁾

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Emotional recovery after amputation

In this section

1. Amputation and emotions
2. Grief and guilt
3. Phases of recovery
4. Depression
5. Anxiety
6. Post-traumatic stress

Amputation and emotions

An amputation is a major life event that will result in some changes in daily living activity. Talking to the hospital social worker about the issues related to amputation can be very helpful in learning about rehabilitation and reducing anxiety. Where possible it is best to see the social worker prior to having the amputation. They can provide information on the rehabilitation process, advise you about non-hospital agencies that help amputees and arrange for you to meet an amputee who has been through rehabilitation if you wish. An amputee who is using a prosthetic limb can provide first-hand information on their life after an amputation.⁽¹⁾

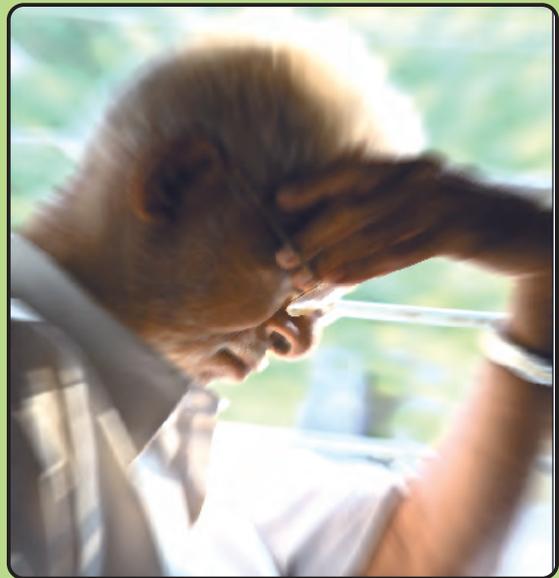
The social worker will provide you and your family with an opportunity to discuss any fears or concerns you have about how the amputation may affect your relationships, sexuality or any other aspects of your life.

It is common to feel a strong sense of loss following an amputation. There is no one right way of reaching a comfortable acceptance of the loss of a limb, however discussing issues with the social worker can be helpful. The issues that are most important vary from one person to another, and can be influenced by many things including age, gender and personality.⁽¹⁾

Amputees often go through the process with little or no prior knowledge of amputation. The process of amputation will be confusing, distressing and overwhelming for the amputee and their loved ones. The following is a guide to assist you and those close to you with the emotional challenges of being an amputee.

Grief & guilt

Amputees will experience grief, you may have survived your accident or illness but now you may find yourself grieving for the life you had and the future you had planned. You may struggle with dependence after a long period of functioning autonomously. You also may struggle with fears of rejection by your loved ones and ridicule from the public. Feelings of guilt often occur after amputation. You may feel



Grief will occur after an event such as an amputation.

and many other "What if" and "I should have" thoughts. Others around you may express anger at you for what happened. Remember that they are grieving too and they will feel their own guilt: guilt over their own "What if" and "I should have" thoughts.⁽²⁻³⁾

You may have heard of grief stages. The stages are not necessarily fixed in order and duration; in fact the phases may overlap. To help you understand the process of grieving the stages of grief are outlined below.

1. Denial and Isolation: "I don't want to talk about it" "The doctors will find a solution before surgery"
2. Anger: "I don't deserve this" "I only have diabetes because my doctor is a fool"
3. Bargaining: "God if you're out there you'll help me"
4. Depression: "What's the point, my life's over"
5. Acceptance: "This is the reality, I'm not dead yet so I should keep on living"

While grief can be divided into stages, in theory, remember that people experience and cope with grief in different ways and there is no 'right' way to grieve. Grief will lessen no matter how overwhelming it may be in the beginning.⁽⁴⁾

Psychological recovery from amputation

The Amputee Coalition recognises six phases of psychological recovery outlined in the table below. These phases of recovery are influenced by factors such as your overall health, amount of social support and how the amputation affects daily living tasks.

These phases are like the grieving process in that individuals will experience the phases in different ways and for different time periods.⁽⁵⁾

A variety of resources exists to help successful recovery from amputation.

- Peer visitation
- Amputee support groups

- Online support groups
- Individual or group counselling with a social worker or psychologist
- Vocational Rehabilitation
- Supportive family and friends⁽⁵⁾

You must remember that there is no correct way to react to an amputation and reaching the point of acceptance takes courage and determination. Do not give up on your recovery: seek help from others, understand that most people who 'try to help' are well intentioned and stay involved in your recovery.⁽³⁾

The six phases of amputation recovery

1. ENDURING: Surviving amputation surgery and the pain that follows
Hanging on; focusing on present to get through the pain; blocking out distress about future: it is a conscious choice not to deal with the full meaning of loss and self-protection.

2. SUFFERING: Questioning: Why me? How will I.....?
Intense feelings about the loss: fear, denial, anger, depression, vulnerability and confusion; return to the Enduring stage, emotional anguish about the loss of self, adds to the pain.

3. RECKONING: Becoming aware of the new reality
Coming to terms with the extent of the loss; accepting what is left after the loss; implications of the loss for future; minimising own losses in comparison to others' losses.

4. RECONCILING: Putting the loss in perspective
Awareness of one's strengths and uniqueness; more assertive; taking control of one's life; self-management of illness and recovery; changed body image; need for intimacy.

5. NORMALISING: Reordering priorities
Bringing balance to one's life; establishing and maintaining new routines; doing the things that matter; allowing priorities other than the loss to dominate; advocating for self.

6. THRIVING: Living life to the fullest
Being more than before; trusting self and others; confidence; being a role model to others; this level of recovery is not attained by everyone.

Depression

Everyone has their share of good and bad days. Life is filled with many ups and downs. Some days may be so bad that we have trouble doing what we need or want to, or we might not feel like doing anything at all. This could be depression.

People who have limb loss or other traumas are considered at risk for depression. So are those with diabetes or other chronic conditions. People with both limb loss and diabetes are even more likely to have depression. Depression and poor health form a vicious cycle. For instance, a person with depression may not eat right, take medication correctly, or follow medical advice. This can lead to poor health. As the person's health gets worse, so does the depression.⁽⁶⁾

Depression can affect a person's mood (feelings), mind (thoughts) and actions. Depression can also affect how the body functions and even relationships with others. Here are some symptoms of depression:

- Sad feelings that last more than two weeks
- Loss of interest in things you usually enjoy
- Changes in appetite: wanting to eat a lot more or much less
- Changes in weight: gaining or losing noticeable body weight
- Trouble sleeping: either sleeping too little or too much
- Restless feelings: like you always have to be doing something
- Little or no energy
- Feelings of being guilty or worthless
- Trouble thinking or paying attention
- Frequent thoughts of death or suicide

Depression affects men, women, and children of all ages and backgrounds. Men and women often cope with depression in different ways. For instance, women may become withdrawn and avoid people. They may also gain or lose a lot of weight. For help, women may look to their friends and family. Men may say they feel tired or grouchy, not depressed. To cope, men may drink, use drugs, work too much, or engage

in reckless behaviour such as driving cars too fast. Children react to depression differently to adults. Family-related stress can exacerbate depression in children.⁽⁶⁾

People with a lot of stress or problems such as losing jobs or getting divorced may have depression. People with poor health are also at risk for depression.⁽⁶⁾ The good news is that depression can be treated. Here are some things you can do:

- Make an appointment for a medical examination. Talk with your doctor about any symptoms of depression. Your doctor can check whether these are due to physical illness, medication or depression.
- Ask for a referral to a mental health professional. He or she can talk with you about treatment options such as therapy and antidepressant medication
- Stay active. Make an effort to do activities you enjoy, such as walking, yoga or other types of light exercise.
- Be with others. Try not to always be alone. Many people with depression find it helpful to join a support group (either in person or online). This is a way to talk with others who are dealing with problems like yours. Ask your doctor or mental health professional about support groups that are right for you.
- Be patient. Do not expect too much from yourself right away. It takes a while to feel better after depression. The good news is that millions of people with depression feel better each day.⁽⁶⁾

While it is normal to feel sadness as part of the grieving process, serious depression should be treated. It may be hard to separate grief and depression but the chart on the following page will help you.⁽⁷⁾



If you are thinking of suicide help is available 24 hours a day, call:
Lifeline on 13 11 14 or
Emergency services on 000

Is it grief or is it depression?

Normal grief

You are able to respond to comfort and support.

You are often openly angry.

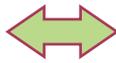
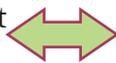
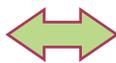
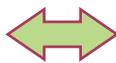
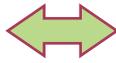
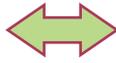
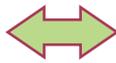
You can relate your depressed feelings to your experience of loss.

You can still experience moments of enjoyment in life.

You may have physical complaints that come and go.

You might express guilt over some aspect of the amputation.

These feelings can affect your self-esteem.⁽⁷⁾



Clinical depression

You cannot accept comfort or support

You are irritable and may complain but do not directly express anger

You do not relate experiences to a particular life event

You have a sense of doom that overshadows your days

You have physical complaints most or all of the time

You feel guilty about most things much of the time

Your self-esteem is low most of the time.⁽⁵⁾

Dispelling some common depression myths

Depression isn't a real illness and you can snap out of it if you want to.

Depression is recognised as a legitimate illness. Severe depression may require a variety of management strategies including medication and professional counselling. Talking to family or friends can help but severe depression requires professional intervention.⁽⁸⁻¹¹⁾

Depressed people are overemotional attention seekers.

The idea that depression is a choice that people make for the attention is pervasive in society but it is very wrong. Depression is a distressing condition, nobody with it enjoys it and much of the attention received is negative.⁽⁸⁻¹¹⁾

Talking about your feelings makes you dwell on them.

The media has given people the wrong idea about therapy: it is not all talking about your childhood. Therapists are there to help you with coping strategies in addition to talking about your feelings.⁽⁸⁻¹¹⁾

Depression is a female thing.

While it is true that women seek treatment in higher numbers than men, it does not mean that women are more likely to get depression. Men often worry about being seen as weak if they admit to depression and do not seek help. This is due to cultures where men are seen as stoic and women are seen as emotional.⁽⁸⁻¹¹⁾

Medication makes you an emotionless zombie.

Anti-depressants do not affect your personality. The brain chemicals altered are not connected to your personality traits.⁽⁸⁻¹¹⁾ Antidepressants have common side effects but these can be managed with appropriate treatments.

It is expected that you would feel sad after something like an amputation

You will experience grief but depression is different. You may not feel just sad; most likely you will feel fatigued, overwhelmed, guilty, anxious and sad. Grief and sadness become less over time, depression does not.⁽⁸⁻¹¹⁾

Anxiety

Anxiety disorder is a normal stress response that has become chronic. While it may be normal to feel anxious about certain events such as an amputation, constant anxiety needs treatment. Anxiety can be triggered by a major stress in one's life so it is often a concern for amputees and their loved ones.⁽¹²⁾ Signs of an anxiety disorder include:

- You have worries that you cannot stop
- You worry about things that other people would not spend time worrying about.
- You feel emotionally on edge all the time.
- Your body feels physically tense all the time.
- Physical symptoms such as headaches, fidgeting, stomach ache and shallow breathing.
- You lie awake at night.
- You find it difficult to concentrate.
- You find yourself avoiding your usual activities due to stress.
- You anticipate disaster and expect the worst possible outcomes to events.

If you develop long-term anxiety after your amputation, therapy and medication may help you. Discuss the issue with your doctor you may be referred to a psychologist or counsellor who specialises in anxiety management.⁽¹²⁾

Caffeine Reduction: For some people, anxiety is made worse by caffeine. If you are anxious caffeine reduction may alleviate the symptoms.⁽¹²⁾ The obvious sources of caffeine are coffee, colas, tea and energy drinks. Less obvious sources are chocolate, some pain medications, weight loss supplements and mocha flavoured foods.⁽¹³⁾

Post-Traumatic Stress

Post-traumatic stress is caused by going through or witnessing a traumatic event. It is often associated with war veterans but it can happen to anyone who goes through an event that causes fear, injury, pain and a chance of death. The body triggers an emergency response as a form of self-preservation. In post-traumatic stress disorder this feeling of panic does not stop.

Post-traumatic stress can affect amputees and those close to them.⁽¹⁴⁾ The signs of post-traumatic stress disorder are:

- Repeated flashbacks to the event
- Nightmares and trouble sleeping.
- Feeling 'numb' or emotionless
- Anxiety when reminded of the event by people, locations, objects, sounds etc..
- Avoiding reminders of the event e.g. not being able to drive on a certain street.
- Being unable to remember some parts of the event but vividly recalling other parts.
- Hyper-vigilance and constantly feeling alert
- Trouble concentrating
- Uncharacteristic irritability and anger

If you find this happening to you or someone close to you professional help is needed. There are treatments available including medication and therapy so talk to your doctor.⁽¹⁵⁻¹⁶⁾

Anxiety for survival

Early humans escaped from predators by fighting or running away. A rapid heartbeat, fast breathing, upset stomach, sweating, and tremors are the body pulling resources into the muscles needed for speed and releasing adrenalin for strength.⁽¹⁵⁾



Modern humans still have this reaction to predators (if you are unlucky enough to come across one) but we also react to situations like giving speeches. This is the biological cause of anxiety symptoms.⁽¹⁵⁾

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