



Musculo-skeletal

North Bristol 
NHS Trust

Lower Limb Amputation



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Contents

Page

Below Knee Amputation

Introduction	2
Reasons for an amputation	3
Peripheral vascular disease (PVD)	3
Risks and complications of surgery	4
Following your operation	4
The surgeons and doctors	4
The nursing staff	5
The social worker	5
Physiotherapists.....	6
Early exercises	6
Physiotherapy gym	7
The occupational therapist (OT)	7
Wheelchairs	8
Disablement Services Centre (DSC).....	8
Caring for your remaining leg	9
Wound Care after an Amputation	9

Contents	Page
Managing your Phantom Limb Pain	
Phantom limb pain	10
Stump pain	10
Pain cycle	11
Pain management techniques for phantom pain	
Medication	12
Stump shrinkers	12
Farabloc or relax socks	12
Counselling	13
Prosthesis	13
Relaxation	13
TENS	13
Complementary therapies	13
What are complementary therapies?	13
Mirror box	14
References	14

Below Knee Amputation

Introduction

Following your surgery you will undergo a period of rehabilitation. You will meet a number of health professionals who will help you to regain your health and improve your independence in everyday activities.

They will include:

- Surgeon.
- Ward doctors.
- Nursing staff.
- Physiotherapist.
- Occupational therapist.
- Counsellor.
- Social worker.

They will all be happy to answer any questions you have about any part of your treatment. This booklet however is aimed to try and answer some of your many questions!

It provides information on what to expect and who you may meet before and after your operation. It also provides some insight into what you need to do to help your rehabilitation.

Reasons for an amputation

An amputation is offered when all other forms of treatment have been tried or considered. It is performed because the leg is:

- So diseased that life is threatened, or
- So painful as to make life a misery, or
- So injured that it no longer works as a functional limb.

Common reasons for an amputation and percentage of overall amputations are:

- Circulatory problems – including peripheral vascular disease (PVD) and diabetes 75%
- Tumour 2%
- Infection 7%
- Trauma 9%
- Other 5%

Peripheral vascular disease (PVD)

PVD is thought to account for approximately 72% of all amputations. This disease results in the narrowing of the arteries that supply the blood to the legs and feet. This can cause many symptoms including severe pain when walking, pain at night, numbness and leg discolouration. The poor blood supply to the leg will also inhibit the healing of any injuries to the leg or foot e.g. ulcers.

If the surgeon is unable to increase the blood supply to the legs, amputation is considered to decrease pain, and help preserve life.

Risks and complications of surgery

- Because of the poor blood supply, wound healing can sometimes be slow and very occasionally it is necessary to perform another amputation higher up the leg if the wound does not heal.
- The wound can become infected and if so, will require treatment with antibiotics.
- Chest infections can occur following this type of surgery, particularly in smokers, and may require treatment with antibiotics and physiotherapy.
- As with any operation there is a small risk of a heart attack, stroke, or even dying as a result of the operation.

Following your operation

After your operation you may initially feel disorientated due to the anaesthetic. This will hopefully pass quickly. When you wake up after your operation you may notice a number of tubes attached to you. These may include:

- Oxygen mask.
- Catheter (a tube draining urine from your bladder).
- Wound drain.
- Drip (a needle in your arm allowing fluid, pain relief and medication to be given).
- Epidural (thin tube in your back to provide pain relief; this may also temporarily make your lower half feel numb).
- PCA (patient controlled analgesia - a button you can press which will allow a dose of painkillers into your body).

Multidisciplinary team

A large team of health professionals work closely with you and each other to provide a high standard of care.

The surgeons and doctors

You will be under the care of a consultant surgeon on the ward. They will have a team of doctors that will come to see you regularly to monitor your condition and that of your newly amputated limb, referred to as your “stump”.

The consultant surgeons will try to see you at least once a week. They often come round on a Wednesday with their team to view your wound and check your condition. If your operation was carried out by an orthopaedic surgeon, this will not necessarily apply.

The nursing staff

Your ward will have a nursing team lead by a Charge Nurse and s/he wears a dark blue uniform. The other members of the nursing team include staff nurses (light blue uniforms) and health care assistants (light green uniforms). The nursing staff will support you while you are in hospital with a number of everyday tasks. They will be your first port of call and will coordinate your care and your discharge from hospital.

When you are admitted to hospital the nursing staff will take details about you in order to get to know you and to plan your stay in hospital as well as your discharge home. They will be with you both when you go to and come back from theatre and will assist you with any help you may need. It is important that you speak to the nurses about any of your concerns so they can help, whether it is regarding pain or any other issue.

After discharge your wound care will be provided by the District Nurse or your Practice Nurse at your GP surgery. This will be organised by the ward staff before you leave hospital.

The social worker

The ward can request a social work assessment if you need extra help at home. You can also contact them if you want advice on certain issues, e.g. benefits.

The counsellor

The counsellor is a trained professional who offers people time in private to process their thoughts and feelings and manage any stresses in their adjustment to limb loss.

Counselling is used in a variety of ways:

- To help with the shock of losing a limb.
- To help with feelings of loss i.e. numbness; bitterness; relief.
- To explore past feelings that amputation can trigger.
- To cope with change.
- To make decisions associated with amputation.

Any of the professionals involved with your care will be happy to contact the counsellor. If you are unsure if you want counselling then the counsellor will be pleased to discuss this with you.

Physiotherapists

You will be seen on the ward by a physiotherapist. Physiotherapists wear blue trousers with a white t-shirt or white tunic with blue trim.

They will introduce you to early exercises and encourage and assist you to move around the bed. When you are well enough, you will be helped to move out of bed into a chair. The physiotherapist and occupational therapist will help you to achieve this. There are many different ways to help you out of bed and they will choose the most suitable for you. You will receive as much help and guidance as necessary for you to transfer safely.

Early exercises

Exercising your stump is very important in helping your rehabilitation. It is important that you only do the exercises your physiotherapist specifically recommends for you.

You will be taught an exercise to keep your knee straight on your amputated leg. It is very important to be able to do this as early as possible after the operation. Otherwise, your knee can become 'stuck' in a bent position. If you have had a below the knee amputation this does not apply if you have had a above the knee amputation.

Physiotherapy gym

As soon as you are fit enough you will be able to attend the gym in the physiotherapy department. This is usually the second or third day postoperatively if all your drains etc have been removed and you are medically stable. Please come suitably dressed with a safe non-slip shoe on your remaining foot. In the gym you will practice wheelchair manoeuvres, exercises on a plinth (bed) and work in the parallel bars. The aim is to maximise your strength and independence.

The physiotherapist can also work with you to practise functional tasks that you will need to do at home i.e. getting on and off the bed, getting in and out of a chair and going up and down stairs if this appropriate for you.

The occupational therapist (OT)

The occupational therapists wear green trousers with a white t-shirt or a white tunic with a green trim. They are responsible for providing you with a wheelchair. They may also fit your wheelchair with a "stump board". This is a board to rest your stump on. It is very important to keep your stump straight when sitting out, as this helps to decrease any swelling and prevents your knee from getting tight or 'stuck' in a bent position if you have had a below the knee amputation.

Initially, you may be unsure how to do everyday activities such as washing, dressing, or working in the kitchen. The occupational therapist will teach you how to do these tasks safely and as independently as possible. This is done with lots of practice, lots of support and advice, possibly with some specialist items of equipment to help you.

The occupational therapist will also arrange to visit your home as soon as possible. The aim of this visit is to identify any problems that you may encounter in your home environment. They will try to find solutions to allow you to return home e.g. fitting rails to enable you to transfer to the toilet safely. The occupational therapist will liaise with other agencies e.g. the local authority if any alterations to your housing are required, to enable you to return home.

Wheelchairs

All patients requiring a wheelchair will have this and a cushion supplied by the NHS unless they are a resident in a nursing home. The home will supply the chair instead.

The occupational therapist will assess you to determine which wheelchair would be most suitable for you. Two common options are shown overleaf:



These are wheelchairs you can propel yourself. They have two large wheels at the back and two small wheels at the front. Most can be folded up for transporting in a car.

These are wheelchairs you can be pushed in by a carer, or member of your family or a friend. These have four small wheels. Most can be folded up for transporting in a car.



If you have a below the knee amputation. Your wheelchair will be fitted with a device known as a stump board. This is to rest your amputated limb on.

Disablement Services Centre (DSC)

If the multidisciplinary team decide that you are suitable for an artificial limb they will refer you for assessment at the DSC. The DSC team consists of prosthetists, doctor, counsellor, physiotherapists, occupational therapist and a nurse. Not everyone has the physical strength or capability to use a prosthetic limb. Your surgeon and physiotherapist will give you advice on this.

Caring for your stump

Initially, the nursing staff will dress and care for the wound whilst the stitches are in place. Once the stitches are removed, you will be encouraged to care for your stump independently. It is important you wash and dry your stump carefully everyday. Using a mirror will enable you to inspect the stump fully. You should try to notice any changes in the stump e.g. redness or broken skin. If you notice any changes or develop any problems it is important to contact your doctor immediately.

It is also important that when you move, e.g. changing position in the bed, or transferring to your wheelchair, that you ensure you do not knock your stump. Knocking the stump may cause the wound to break down and damage your stump, thus inhibiting your rehabilitation.

Caring for your remaining leg

It is also important that you look after your remaining leg very carefully. Wash and dry your foot carefully every day and inspect it daily. If you notice any changes e.g. broken skin, contact your doctor or podiatrist immediately.

It is important to wear correctly fitting shoes, and not to walk around in bare feet. Small cuts can become easily infected. It is also useful to wear socks with loose elastic tops, as tight elastic can inhibit your circulation.

Wound Care after an Amputation

This information explains when you need to contact a health professional about your wound, who you should contact and why.

If your wound or stump becomes:

- Increasingly painful – note some diabetics have limited pain sensation.
- Itchy.
- Hot/inflamed/red.
- Starts oozing fluid/pus or bleeding.
- Develops a rash.

you may have an infection or a reaction to a type of dressing, which may delay the healing of your wound if not treated.

If you are a diabetic, it is very important that you have treatment as soon as possible if you experience any of the above problems with your wound/stump. Diabetics have a higher risk of delayed wound healing and infection which may affect the management of your diabetes. Please increase checks on your diabetes and inform staff as overleaf.

Please contact the following health professionals (as ticked):

- Staff Nurse or Doctor at the Disablement Services Centre

- District Nurse Tel. No.

- Practice NurseTel. No.

Managing your Phantom Limb Pain

Phantom limb pain

This leaflet aims to help you in managing phantom pain that may occur after removal/amputation of part of that limb.

Pain is never purely physical.

Phantom limb pain – is the pain felt in an absent limb.

Phantom limb pain may be referred to as phantom sensation and is an extremely common occurrence. Phantom sensations can be a painful or non painful feeling where the limb is not present. These sensations can feel like the limb is actually present. They may decrease over time but may continue or regularly occur at intervals for several years. The pain/sensations are felt where the limb used to be and are very real.

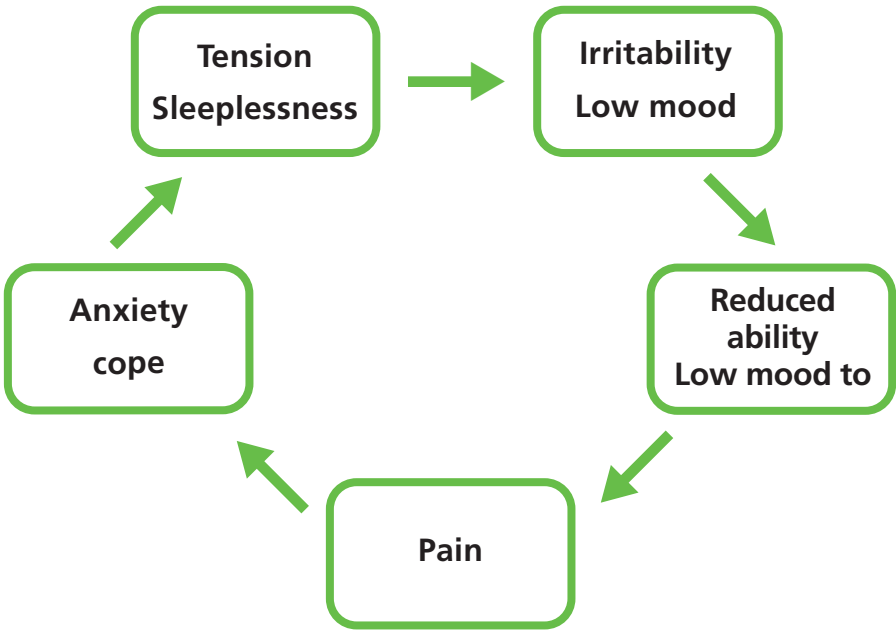
Although the body has lost a limb, the brain still has the old geography/map wired in and therefore it still transmits pain signals.

Stump pain

Pain that is felt only in the stump of the amputated limb.

It is difficult to completely cure phantom pain but we know that an individual's ability to cope with pain may be affected by many things. If pain occurs, it may follow a cycle (see diagram on the next page).

Pain cycle



Modified from D Carroll (1993)

This cycle may be broken by using various pain management techniques as listed below. You should discuss these with your Doctor as some will have to be prescribed. It may be helpful for you to see a Counsellor to discuss ways of coping with pain or for you to be referred to a Psychologist. A Counsellor is based in the Disablement Services Centre (DSC). There is further information on this service provided in a leaflet available from the reception area or **from the nurse on duty at the DSC**. In addition, you will be encouraged to develop and carry out your own pain management.

Pain management techniques for phantom pain

Medication:

This can be discussed with and prescribed by the Doctor at the Disablement Services Centre or your own GP.

The medications that you may be prescribed include drugs used to treat disorders of the nervous system. This includes nerve pain caused by injury to nerves from amputation. The drugs that may be used are –

- **Antidepressants:** such as Amitriptyline, used to treat depression but, because of the way in which they work, can be used to treat nerve pain.
- **Anticonvulsants:** Gabapentin (Neurontin) or Pregabalin (Lyrica). They are used for epilepsy but, because of the way in which they work, can also be used to treat nerve pain. They act by calming down the nerves which have become over active after amputation, by decreasing signals from the brain to the remaining part of the limb/stump.

These drugs are prescribed in small doses and are gradually increased to a level that relieves the pain.

Stump shrinkers

These are elasticated socks that will help to reduce swelling and phantom sensations. You will need to be measured for a Shrinker. It will then be fitted on your stump and further information given to you about the wearing and care of the Shrinker.

Farabloc or relax socks

These are made from a material that has been designed to reduce stimulation of the nerve endings in the stump. These can be ordered for you by the Doctor at the DSC.

Counselling

Pain is associated with much unhappiness and worry. A Counsellor is available within the DSC to discuss this and support you in developing ways of coping.

Prosthesis

Wearing a prosthetic limb can sometimes help to relieve phantom sensations. Not everyone post amputation will be able to tolerate a prosthetic limb.

Relaxation

This can help break the pain cycle. Advice can be obtained from the Nurse on duty or the Counsellor at the DSC

TENS (Transcutaneous Nerve Stimulation)

Small pulses of electricity are administered via pads placed on the stump. These pulses produce pain relieving natural chemicals that may reduce sensitivity of the nerve endings. Further advice can be obtained from the Physiotherapist, Nurse, or Doctors looking after you.

Complementary therapies

There are many complementary therapies although most are not available on the National Health Service.

What are complementary therapies?

They are a form of therapy that aims to treat you and not just your symptoms. They can complement traditional medical care.

A few examples of complementary therapies are:

- Acupuncture.
- Hypnosis.
- Massage.
- Homeopathy.

There are many more.

It is important that whichever method you are considering, you should discuss it with your own Doctor or a member of the Health Care Team within the Disablement Services Centre.

Mirror box

Ordinary mirrors are used to reflect the remaining limb into the position of the amputated limb and this may be used to learn to control and reduce the incidence of phantom pain. This treatment is only available at certain hospitals.

Who can give me advice about phantom pain?

Health professionals in the Disablement Centre:

Doctor

Nurse

Counsellor

Physiotherapist

Prosthetist

Occupational Therapist

References and further information

ARC (1999) [Pain and Arthritis](#). Arthritis Research Campaign

Carroll, D (1993) [Pain management and Nursing Care](#).

Butterworth & Heinemann: London

ELLIS K (2002) A review of amputation, phantom pain and nursing responsibilities. [British Journal of Nursing](#), 11, 155

Limbless Association

**Roehampton Rehabilitation Centre, Roehampton Lane,
London SW15 5PR**

Tel: 02087881777

Website available at:

www.limbless-association.org [accessed April 2007]

The Murray Foundation

Established by David Murray in November 1996 as a support service for those affected by limb loss in Scotland.

Website available at:

www.murray-foundation.org.uk [accessed April 2007]

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How to contact us:



**Disablement Services Centre
Southmead Hospital,
Westbury-on-Trym,
Bristol BS10 5NB**



**(0117) 323 5703 –
Reception**



**(0117) 323 5736 –
Clinic Secretary**



www.nbt.nhs.uk

If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.