

Amputee Therapy Team, Douglas Bader Rehabilitation Centre, Queen Mary's Hospital

Upper Limb Amputees

Information for patients and relatives

This leaflet is designed to support the verbal advice and information you will receive from the various professionals you will meet during your rehabilitation.

As there is a lot of information to remember, this leaflet has been written as a guide for you and for family, friends and carers.

If you have any queries or questions regarding any information in this leaflet, please do not hesitate to ask a member of the team.

First meeting

On your first visit to the centre, you will meet several healthcare professionals, which may include:

Consultant

This is the doctor who is responsible for your overall clinical care. The consultant will ask you for some background information about your medical history and this information will be used to help plan your care.

Prosthetist

This is the healthcare professional responsible for measuring and fitting your prosthesis / artificial limb.

Occupational Therapist

The occupational therapist will help and advise you on how to live independently whether or not a prosthesis is provided.

Physiotherapist

Physiotherapists can introduce you to exercises that will increase your strength, improve your range of movement and encourage good posture when doing activities.

Psychologist

The psychologist can talk to you privately about your feelings and how your limb loss may affect you and / or any members of your family.

Clinical Nurse Specialist

The Clinical Nurse Specialist will be your first point of contact and co-ordinates the referrals. S/he assesses and treats any wounds or skin breakdown issues on your residual limb.



What will happen during my rehabilitation?

We will be working with you to help you achieve as much independence and function as possible.

We advise that you attend regularly at the start to make the most of your rehabilitation. There may be changes to your appointments, for example when your prosthesis is being adjusted or finished in the workshop.

- Initial appointments – You will receive advice and practise how to adapt, increase your independence and function with the Occupational Therapist and / or Physiotherapist
- Meeting the Psychologist to discuss adapting to limb loss and assess your general psychological well-being.
- Meeting the Prosthetist to discuss prosthetic options

If you have a prosthesis, you will be able to practise putting on your prosthesis and see how it fits. Your prosthesis will not be finished, so the prosthetist can make any changes needed for it to fit more comfortably. You will be advised what to look for on your skin, for example pressure marks from the socks. Please wear a vest top or suitable undergarment to each appointment, as this will allow the prosthesis to be fitted and removed easily.

You will begin with simple daily tasks with the Occupational Therapist, slowly building up tolerance and strength to wearing the prosthesis.

When you can use your prosthesis safely and the fitting is correct, you will then take it home to begin using it in your home setting.

What prosthetic solutions are available for upper limb amputees?

There are different types of prosthetic solutions that are offered on the NHS. When thinking of which prosthesis you want, it is important to think about what you need the prosthesis to do for you prior to making your choice. We have samples of all the prostheses described below and we are more than happy to show and explain them to you on any visit to the centre.

A prosthesis is not always the answer. At times a new way of doing something can be simpler and more useful. There are two broad categories of prosthesis that are available – cosmetic and functional.

Cosmetic arm

A cosmetic arm is a made-to-measure plastic socket, with a foam inner hand and cosmetic glove to make it look real. It is lightweight and will be self-suspended using bony prominences, suspended by a locking liner or appendage straps.

A cosmetic arm is mainly provided to give the appearance of a real arm – although it looks like a hand, it has no moving parts and does not function as an arm would. It can, however, be used passively, for example to hold things in place.



Functional body powered arm

Body-powered devices come with straps that loop around your back so that the motion of your body assists the movement of the prosthetic. It has a made-to-measure plastic socket with a wrist unit, which can fit either:

- a split hook attachment, carbon gripper or prehensor
- a mechanical hand.



A split hook is the most functional appliance. It enables you to pick up, hold and release objects; however, it does not look like a hand. It is robust and so requires less maintenance. The wrist unit can be a vehicle for many functional devices. A mechanical hand looks like a hand, is more functional than a cosmetic arm and will allow you to pick up, hold and release objects. However, it is harder to use than the split hook.

Myoelectric prosthesis

This is a complex device, which uses electrical signals from your muscles to operate the hand.

It has a made-to-measure plastic socket with small sensors on the inside of the socket to control the hand. This means that the hand can be operated without the use of straps, although if you have an amputation above the elbow you will need a strap to hold the prosthesis in place and to operate the elbow unit.

Efficient use of a myoelectric prosthesis requires a large amount of resolve and training. A myoelectric prosthesis needs good muscle control, the motors in the hand can make it heavy and it is therefore hard to use at first. It is also difficult to achieve a fine grip and it needs regular upkeep. The advantages are that you can maintain a grip in any arm position.



Please note that multi-articulating hands such as the Be-Bionic and I-limb, electric elbows and new provision of high definition silicon are NOT currently available from the NHS. These products can be purchased privately, but please be aware that the NHS is not allowed to maintain or service privately purchased prosthetics and therefore careful thought needs to be given regarding the continuing costs.

Prostheses for high-level amputation

Patients with high-level amputation - above the elbow or through the shoulder, for example - will be provided with suitable arms with necessary joint replacements. All the prosthetic hands and adaptive aids listed above can be used with these types of arms.

Special appliances

Special appliances are bespoke devices with a distinct function. This may be a feeding strap or a special socket for playing the guitar or riding a bike. Over the years we have made many special appliances for many different activities.



No prosthesis

You may prefer not to wear a prosthesis for all or some occasions. You will continue to receive advice and care from the centre.

Chat to your Prosthetist about the available options for your situation.

If I have a prosthesis, when can I use it at home?

When you can use the prosthesis safely and independently, you will take it home to use for normal, everyday tasks, slowly increasing how long you wear it. Keep gradually increasing the time of these sessions by half an hour, until you are wearing the prosthesis all day.

You don't need to be using your prosthesis all this time, just do what you would do in the normal day, seeing which tasks the prosthesis can help you to do. Some things will be easier to do without the prosthesis.



Things to be aware of:

- A prosthesis is not a replacement hand
- Use of gadgets to assist
- Remembering to change attachments if appropriate

Be aware as you use your prosthesis more often, your residual limb (stump) will continue to shrink. You may need to add more prosthetic socks. Please ring the centre for advice.



Developing Good Habits

How do I care for my residual limb / stump?

Wash your residual limb daily with mild soap and warm water. If you are worried about any scabs or unhealed areas ask the nurses for advice.

Check your skin daily for any broken areas. You may need to use a mirror or get someone else to check for you. Dry the skin thoroughly. Avoid talcum powder. Do use a gentle moisturiser for example E45 but avoid open areas.

Surgical wounds and scars can take up to 18 months to fully heal. During this time, it is important to maintain the scar health by regularly massaging in non-scented / gentle moisturiser to help with suppleness of the skin and scar movement. If a scar becomes adhered, this can make putting on your prosthesis more uncomfortable.

The skin on the residual limb is often very sensitive following the surgery. There are ways to reduce these sensations: Use different textures, for example a soft brush, sponge, towel, etc.

An ill-fitting socket can cause discomfort and skin breakdown impacting on your ability to use the prosthesis successfully. If your prosthesis is causing you pain you should stop wearing it and seek advice.

Managing a good prosthetic fit between something that changes, i.e., your body, and something that doesn't, i.e., your socket, can be challenging particularly in the early days. Once you know what a good fit feels like, you can then recognise when something has changed and adjust accordingly. If possible, try to minimise changes to your residuum / stump by looking after your diet and regularly exercising. Also regularly review how your prosthesis feels, ensuring that you check your skin. You can adjust your fit by changing sock combinations which you should learn about during your rehabilitation. Speak to your Prosthetist or Occupational Therapist about problem solving ideas which may be helpful to you.

Where possible, try to be aware of your residual limb position and make use of its position when lying down to elevate it slightly with a pillow to help reduce swelling. It is also possible to exercise the muscles in your residual limb which will then act as a pump to help remove any swelling – please see Upper Limb exercise section for information and discuss with your physiotherapist.

Try to avoid hiding your arm / hand. When hiding your arm, this tends to result in your arm being held into your body which can result in stiffness and pain in your shoulder, neck and upper back.



If you get any skin breakdown or rubs, stop using your prosthesis and seek advice from the rehabilitation centre

How do I care for myself?

- Take measures to reduce overuse injuries
 - Repetitive tasks – typing / texting
 - Use technology to assist – voice control
 - Try not to load your arm too much by picking up heavy loads – think about using trollies, rucksacks, multiple trips with smaller loads, etc.

Improving the Dexterity of the Sound Side

Training will be tailored depending on whether you dominant or non-dominant side has been amputated. This can include fine motor skills, dexterity and strength training. If you now need to use your non-dominant hand, your skill will improve with lots of practice, for example writing and brushing your teeth.

Advice on how to wash your remaining arm – approaches will depend on the level of your limb difference and these may include using a shower mitt or placing the shower gel onto your torso and then rubbing your remaining arm over it. Speak to your Occupational Therapist for more tips and advice.

- Consider your posture
 - Swing your arms when walking
 - Try not to twist in a sustained position – for example driving, ironing, working on computer, etc.



How do I care for my prosthesis?

Useful tips for using a prosthesis:

- Wipe the inside of the socket daily using a damp cloth or an antiseptic wipe.
- Do not get the metal or electrical components wet, as this will cause them to rust or break down.
- Please take care of the prosthesis. Look for signs of wear and tear and make an appointment for repairs when needed.
- Look at your arm regularly to ensure the socket is fitting well and that there is no sign of skin irritation.
- Having a regular review with the prosthetist is essential to maintain a good-fitting socket.

Tips for using arm socks / mitts - if required:

- These can be made of cotton or nylon and are worn against the skin of the affected arm to help protect it from potential chafing and to keep it comfortable in the socket.
- Arm socks come in different sizes and thicknesses. The prosthetist will advise you on the correct ones and will supply and replace socks as required.

- It is recommended that socks are washed regularly and that a clean sock is used every day.

Tips for using straps and gloves:

- You may find the new straps uncomfortable. We suggest slowly building up tolerance and wearing these straps over a vest to prevent skin irritation.

Cosmetic gloves (gloves that cover the prosthetic hand).

- The gloves should be washed or wiped down daily with a damp sponge or baby wipes.
- Cosmetic gloves will mark and can be torn, so you should clean them immediately following spillages. The prosthetist will replace gloves as needed.

Never put your prosthesis in water as it is not waterproof and water could lead to corrosion of the prosthesis. Please wipe the inside of the socket with a damp cloth each night to remove sweat and skin flakes, giving the socket time to dry completely. Keeping the contact surface of the prosthesis or liner clean helps to avoid skin irritation; if you wear a liner, please care for it daily according to the user manual.

If you are concerned about the mechanical state of your prosthesis at any time, ring the centre straightaway for advice.

Will I need to do any specific exercises?

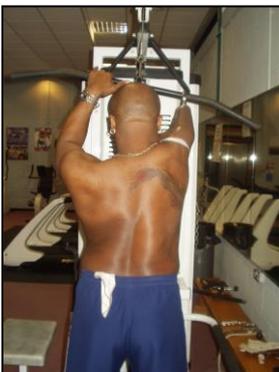
We strongly recommend that you do exercises to stretch and strengthen your trunk, arms and leg muscles. This is to help reduce any future possibility of injury and to enhance your abilities / skills. This programme will be tailored to your individual needs to follow at home and to continue after you have been discharged.

Your physiotherapist will go through the exercise programme with you and indicate how often and how many of the exercises you should do.



When can I return to normal activities?

Returning to sport, exercise or other activities may require some adaptations to help you achieve these. Please talk to your therapist for advice and support. They can discuss different strategies and possible adaptive devices that can be tailor made to help you to return to your leisure activities and pastimes. A gym with cardiovascular and weights equipment is available at the centre. If you would like more information about this please ask your therapist.



Using the gym



Going fishing

Driving

If you wish to return to driving, you may need an assessment and some adaptations made to your car, for example single handed steering aids. Information regarding these can be discussed with the Occupational Therapist.

What happens when I am discharged?

When you are safely using your prosthesis at home you will be discharged from the therapy department at Roehampton.

You will be given follow-up appointments after you have been discharged from therapy. At these appointments your prosthesis will be reviewed by the prosthetist, your residual limb (stump) and related conditions will be checked by the doctor and your function using your prosthesis will be checked by the therapy staff. Further appointments will be made as needed.

If at any time you have any problems or concerns, just contact the centre for an appointment with the doctor, prosthetist or both.

What types of appointments will I have?

AMC - Amputee Management Clinic:

- In this clinic you will see one of the rehabilitation doctors. They will check you and your progress.
- They will deal with any medical problems that may directly affect the use of your prosthesis such as skin problems, swellings, painful nerve endings, prominent bones etc.
- The doctors will also discuss different surgical options, if any, that are appropriate to your level of amputation and improve your function.
- You can also discuss any problems with your other upper limb that would reduce your overall function.

PMC - Prosthetic Management Clinic:

These appointments are for the care, maintenance and updating of your prosthesis and will be with the prosthetist only. You might have a PMC appointment for any of the following:

- **Repairs** and **checks** of your prosthesis.
- For your prosthetist to **adjust** your current prosthesis to make it more comfortable. They may adjust your socket or the alignment of your prosthesis or decide that you need a new socket.
- For your prosthetist to take a **cast** or **measurements** so a new socket can be manufactured if your current socket no longer fits correctly.
- For your prosthetist to review your progress with a new socket or prosthesis.

Following discharge, you will have a review appointment booked. If you require an additional appointment before your review you can call to request one. Otherwise please book annual reviews for the prosthesis to be checked every year.

What terms will I hear being used and what do they mean?

Adjust

The prosthetist will alter either the fit or the alignment of your prosthesis as you progress through your rehabilitation process. For this your limb may need to be taken to the workshop.

Component

Any part of your prosthesis that is below your socket, for example wrist rotators, elbow and assistive devices, etc. These can be changed later to suit your needs and activities.

Socket

The part of the prosthesis that is made to fit you by your prosthetist. All measures will be taken to ensure that it is as comfortable as possible.



Suspension - The means by which your prosthesis is held onto you.

Workshop

The workshop is where your prosthesis will be built, set-up and adjusted. It is next door to the amputee rehabilitation gym. Depending on the work required it might take 20 minutes or one to three days for any adjustments to be carried out by the technicians.



What is the psychological and emotional impact of amputation?

Having an amputation is a life-changing experience. As you adjust to this change it is normal to have a range of emotional reactions that come and go. Some of the most common ones are listed below, but everybody is different and your personal reactions and concerns may not be the same as these.

Early on you may have feelings of shock, disbelief, bewilderment or, perhaps, relief. Many people feel sadness and for some the sense of loss can at times be overwhelming. You may experience anger about what has happened and frustration as you begin to adjust to doing things in different ways. You may worry about how you will cope and how your life will be from now on. It is also natural for your self-confidence and self-esteem to be lowered for a while. Over time you will hopefully begin to adjust to the new situation by learning new skills, adopting new roles and setting new goals for yourself for the future. Your body may have changed physically but remember you are still the same person on the inside.

It is common for limb loss to have an impact on our body image. You may experience negative thoughts about yourself and fears about how other people see you. Some people cope with this by trying to hide their limb loss from others, particularly whilst in public. Some may even avoid going out altogether. Whilst these thoughts and feelings are natural at first, they can lead us to feel vulnerable and isolated. If they persist, you might consider getting support to deal with these. Cosmetic limbs can help to deal with body image issues. However, it is important to remember that cosmetics have limitations. They are not a replacement for a hand and have limited functional value.



Having an amputation may also change your relationships with other people including partners, family members, friends or strangers. The way you see and feel about yourself affects how you interact. It is natural to feel worried about how other people may react to your limb loss. It is normal to avoid talking to family members and friends about the amputation due to fear of how they will feel and react or to avoid further painful emotion for them or yourself. People may also avoid talking about the amputation with you because they do not know what to say or are afraid of saying the wrong thing. This may feel uncaring and hurtful to you. Sometimes you may feel frustrated when people try to do too much for you rather than allowing you to learn and develop new ways of doing things for yourself. It can be helpful in this situation to explain how you feel in a calm manner. You may find that discussing issues and feelings like these will help with any relationship problems, even though it can be upsetting and difficult at first.

If at any time you feel that you would like to have someone independent to talk to in confidence about how you are feeling, please ask your doctor, physiotherapist, occupational therapist or nurse to arrange for you to meet with the clinical psychologist who specialises in working with amputees and who is based at the rehabilitation centre.

In addition, many amputees find it useful to talk to people in similar situations as themselves. Peer support can be an important part of recovery with the opportunity to share experiences, tips and ideas. Please contact a member of your treatment team if you would like to be introduced to a fellow amputee. Alternatively, there are many online forums and support groups available. Please see the “Useful sources of information” section at the end of this leaflet for further details.

Phantom limb information

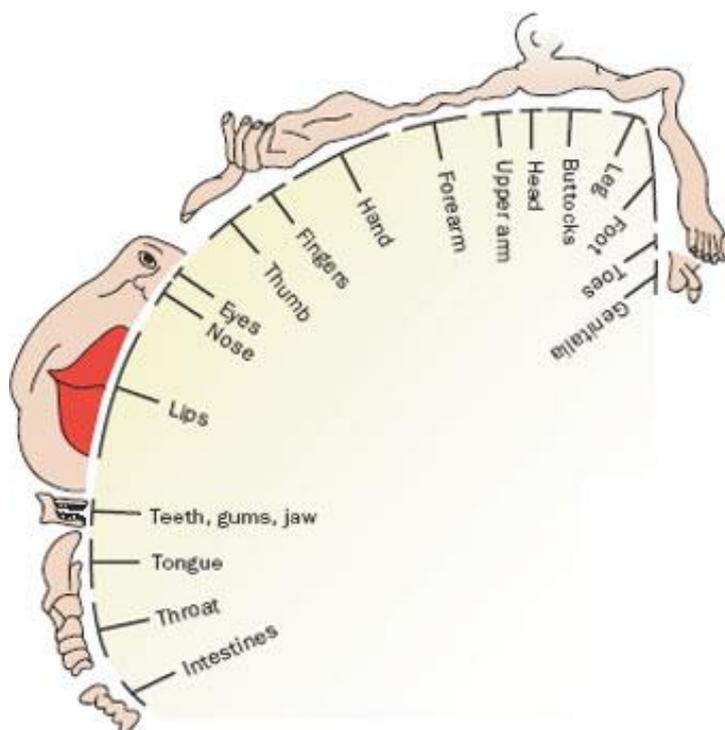
This offers more information about your phantom limb. If you have any further questions or concerns, please speak to the staff member in charge of your care.

Why do I feel that my limb is still present?

Most amputees are still able to feel their limb after it has been amputated. This feeling is called a phantom limb and is quite normal. What the phantom limb feels like is different for different people, some amputees can just feel the phantom limb, and for others it can sometimes feel painful.

There is an area of your brain - called the sensory homunculus or primary sensory cortex, which holds a map of every area of your body. If you were born with two arms and legs, this information is hard-wired into the map. Areas which need more sensation – for example the hands, feet, lips and tongue - have more nerve endings and are a larger part of the map.

The following is what the mental map - sensory homunculus - might look like if it was a picture:



Some parts of the body are shown as bigger than others because of the amount we use them and feel with them. Other parts of the body are shown as smaller.

When your limb is physically removed, it does not mean that your brain wipes it from your mental map, but as the information coming into this area of the brain has changed, what is felt or experienced is different too.

What's the difference between phantom sensation and phantom pain?

Phantom sensation is felt by most amputees - 80% - and is the feeling that the missing limb is still there.

The missing limb may still feel normal in size, shape and sensation or it may feel different, for example you may only feel your fingers rather than the whole arm.

You may also have normal sensations such as itchiness or aching.

If the feelings and sensations are not painful, you can try to manage them by rubbing your residual limb - stump - or your remaining limb in the same area where you feel the phantom itch or by trying to move your phantom limb.

It can be common to have stronger phantom sensations when you are touching your face on the same side as your amputation, for example shaving or rubbing in face cream.

Phantom pain may happen if, for example, your phantom limb feels shortened or in a painful position. The pain is very real and can also lead to:

- anxiety and depression
- other physical or mental health problems
- problems adapting to living as an amputee.

Phantom pain can be triggered by:

- stressful emotions, for example thinking about the amputation or seeing others in pain
- physical triggers
- changes in weather or temperature
- memories of what your limb felt like if it was painful before the amputation.

Phantom pain is complex and may include a wide variety of pain symptoms, for example tingling, stabbing, burning, aching and many more.

Anxiety, stress, anger and other feelings may make your symptoms worse, for example if you feel stressed from new situations like starting prosthetic rehabilitation or waiting to be discharged home.

What causes phantom limb pain?

Phantom pain is caused by a form of brain activity called cortical remapping or smudging.

Remapping happens all the time and is the normal way we learn and adapt. For example, when you first put on a ring you are very aware of it on your finger, but after a while you are no longer aware of it as it has been mapped onto your mind map - sensory homunculus.

All pain is in the brain. When danger is expected, one of the things your brain can do is make you feel pain so that you will do something about it. Sometimes this system can go wrong.

Because you are no longer getting any real feelings from your amputated limb, your brain may be wondering what is wrong and so makes it feel painful so you will do something about it. Your brain has misinterpreted the information as your phantom limb is not in danger.

Researchers have had different ideas to explain phantom limb pain. Three of the main ones are:

- 1) faulty remodelling of the neurons or nerves in the homunculus area of the brain
- 2) mismatched messages sent forwards and back between the brain and the missing limb
- 3) strong memories of where the limb used to be and what it felt like.

What treatments are available?

Phantom pain can settle over time, but if you are suffering from it please tell your doctor, prosthetist or therapist so they can refer you for treatment.

Treatment will help you understand more about what you are feeling and why, so you can:

- understand and explain your symptoms
- feel less threatened by your phantom
- solve misunderstandings
- problem solve and make changes to help with your pain.

Things your treating team can do are:

- review your medication to try to dampen down over-sensitive neurones
- review your prosthesis to make sure it fits well and is comfortable, to reduce any stress linked to it
- look at your lifestyle, for example in terms of stress, smoking, diet and exercise and advise on how these may affect your pain and how you can make changes
- advise on brain retraining to help make your phantom feel normal.

Is there anything I can do to help myself?

Understanding what is happening to you can help. Fear of the unknown is powerful, but so is knowledge. Just knowing this can help trigger change and help with the fear of the unknown.

The brain is constantly changing and evolving, which is how we learn and adapt. Try to think of something you have had to learn as an adult or an experience such as a tooth filling. At first you can keep feeling it with your tongue but then your brain adapts to it. Eventually you are no longer aware of it because your brain has learnt that your tooth is not in danger.

Because your brain is always changing and adapting, you have the power to change it and therefore the power to change how it interprets your phantom limb. It can be hard work and takes practice but with support and guidance you can learn to do this as you can learn other new skills.

Try to feel your phantom limb as a normal limb that can move and relax. You will then have power over it, for example if your phantom limb is in an awkward position, try to relax and imagine it in a normal position. Sometimes closing your eyes and mimicking the movement or position with your remaining arm can help.

If you can train your brain to feel your phantom limb in a normal way and in the right place, this can also help you with your prosthesis, as you will be able to feel where you are placing your hand when doing a task rather than having to look and see where you need to place it.

Everyone's pain experience is different so treatment will be personal to you. We will try to work out which type of treatment will be best by assessing and talking with you.

Please be aware that patience, perseverance, commitment and courage will be needed, but with our support treating your phantom can be achieved.

Useful sources of information

Explain Pain and the Explain Pain Handbook are brain-training books by David Butler and Lorimer Mosely, published by Noigroup www.noigroup.com

www.tamethebeast.org is a website with information about the role of the brain and mind in chronic pain.

www.flippinpain.co.uk is a website dedicated "to change the way we think about, talk about and treat persistent pain".

www.msk.org.au/pain-guide/ This is a useful A-Z guide with ideas to help manage your pain

Exercises for the upper limb

This leaflet offers more information about exercises for upper limb amputees / congenital limb loss. If you have any further questions or concerns, please speak to the staff member in charge of your care.

Why do exercises for your upper body?

Exercise for the shoulders and upper body are important for maintaining good posture. They also improve range of movement to enable you to perform everyday tasks, like washing under your arm. Exercises help to keep you pain free and help to prevent future joint problems. After an amputation, most people tend to want to protect and hold their residual limb hugged into their body. Try not to do this, as it can lead to muscle shortening, weakness and stiffness.

Is there anything I can do to help myself?

The sooner you start to move, touch and massage your arm the better it will start to feel. It is normal to feel stiff first thing in the morning, but this will ease with exercise and movement.

During the early stages of your recovery, it's important that you maintain the correct body posture so that your muscles and joints do not shorten or stiffen. While most people like to assume a comfortable, pain-free position, this does not always help in the long run. In fact, your arms should be moved regularly and as normally as possible.

As your confidence grows, try to swing both your arms when you walk. This is not only good for your shoulders, but it also looks more natural.

Some of the exercises are based on Pilates. This has become a popular method for improving and maintaining good posture and well controlled limb movements. It also improves stability of your spine and shoulders to decrease the risk of injury.

The following exercises should all be performed starting with good posture. Please see the next page on how to achieve this.

All these exercises can be adapted to be easier or harder depending on your need. Pain and swelling can be a guide to whether you are doing too much or too little. If you get more pain and swelling, you need to cut back on your activity a little. If it feels comfortable, then you can try to do a little more next time. You should aim to gradually increase your activity each day. Your Physiotherapist will guide and advise you on this.

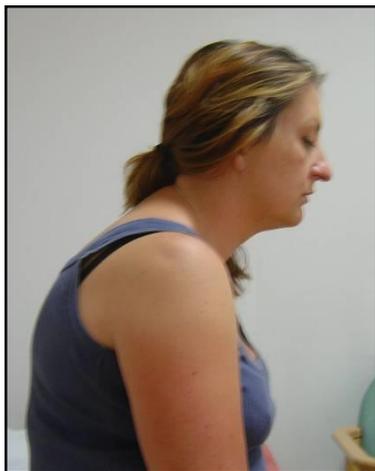
Exercises to reduce swelling

To help with swelling you can gently try to move your phantom limb. This will activate the muscles within your residuum which will help to increase circulation and help to pump out any excess fluid / oedema. Movements to try are:

- Below elbow limb loss:
 - open and close your hand
 - bend your wrist up and down
- Above elbow limb loss:
 - Bend and straighten your elbow

Finding your correct posture

Most people tend to have a slumped posture. This can lead to headaches, neck and back stiffness and pain.



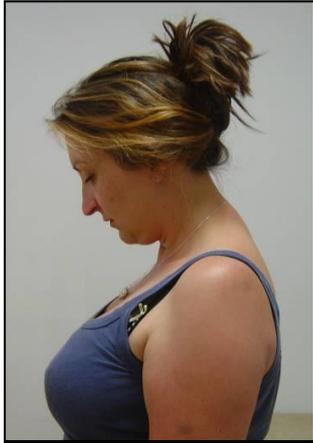
Sit up tall and imagine a string attached to the crown of your head. Picture your entire spine being pulled or lengthened as the string is pulled upwards. You should feel a lengthening of the back your neck. The action should be gentle, so don't overdo it.



- To find the neutral position of your shoulder blades:
- Shrug your shoulders up towards your ears first,
- Then draw your shoulders downwards and inwards in the shape of a “V”.
- You should feel your collarbones widen across your chest.

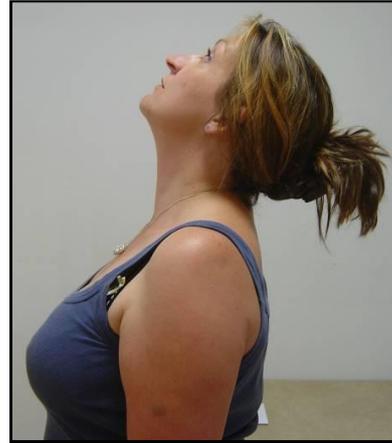
Start all your exercises in the correct posture as described previously.

Neck Exercises



Neck flexion

Gently roll your chin down towards your chest and hold for five seconds.



Neck extension

Gently look up towards the ceiling and bring back to the starting position.



Left and right rotation

- Turn your head to look over each shoulder.
- Imagine you are following a line drawn horizontally on the wall.
- Hold for five seconds



Side Flexion

- Take your ear towards your shoulder.
- Try to not lift your shoulder up to your ear.
- Hold for five seconds.

Arm Exercises

Shoulder Flexion

- Leading with your thumb, raise your arms up as high as you can without lifting your shoulders.
- You can also perform this exercise while lying.
- Repeat __ times.



An alternative to the above exercise is to slide your arms on a table.

Imagine you are polishing the table forwards and back, side to side and round in big circles in both directions.



Shoulder External rotation

- With your elbows bent and tucked into your side, roll your arms outwards and hold for five seconds.
- Keep your elbows tucked into your side at all times.
- Repeat ___ times.



Shoulder Abduction

- With your arms by your side, lift your arms up and out to the side with your palms facing up.
- Try to go as high as you can.
- Make sure you don't shrug up your shoulders as you do this exercise.
- Repeat ___ times.



Elbow Flexion

- Bend and straighten your elbows.
- Repeat __ times.



Upper Back Exercises

Lower Trapezius and Deep Neck Flexors

- Lie on your front with your forehead resting on a small pillow or folded towel.
- Back of your neck long.
- Arms resting long beside your body with palms facing inwards.



- Slide your shoulder blades gently downwards away from your ears.
- Reach from the shoulder blades to the fingertips towards your feet and allow your arms to hover one to two inches off the mat. Keep the palms facing inwards.
- Your head remains down with your neck long.
- Relax the shoulder blades and allow the arms to lower.
- Repeat __ times.



Upper Back Rotations

- Sitting up against the back of the chair.
- Twist round by using your arms on the chair to pull you round.
- Make sure your hips remain square to the back of the chair.
- Hold for 20 to 30 seconds
- Repeat ___ times.



One Arm Opening

- Lie on your side with your head supported on a small pillow.
- Arms reaching in front of your body and resting on top of one another.
- Have your hips bent up to about 45° and your knees to about 90°.
- Have your shoulders and hips stacked on top of one another.
- Draw your top hip away from the top shoulder to create a small space between your waist
- Reach your upper arm towards the ceiling. Continue to reach your upper arm out to the side. Allow your torso to rotate and your chest to open out towards the ceiling, but keep your hips stacked.
- Your head should follow the movement of your arm.
- Hold for two to three seconds, then rotate the body and draw your arm back on top of your lower arm.
- Repeat ___ times.



Superman – Below elbow amputees / limb loss

- Start by kneeling on your knees and elbows. Make sure your knees are under your hips and your elbows are under your shoulders. Don't let your chest sink down.
- Find your neutral back position by rounding up and then arching down your back. Stop halfway in-between.
- You need to maintain this position with level hips and shoulders by using your core muscles for the following exercises:



- Keeping your shoulders and hips level, slowly lift one arm out in front of you. Hold up for five seconds and then slowly lower. Repeat with the other arm.



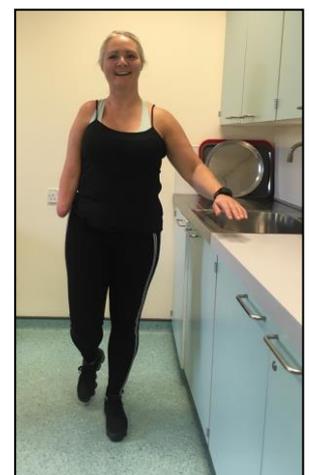
- You can also do this exercise by just straightening one leg out behind you and staying on both elbows.
- Repeat ___ times.

Balance Exercises

Losing part of your arm will result in a different weight distribution which can affect your balance and posture. This is a bit like carrying a heavy bag. A stable balanced torso will not only help with your balance, back comfort and reduce risk of you falling, it can also help you to control a prosthesis.

Please speak to your physiotherapist for personalised exercises to improve your balance and core strength.

If you experience any pain, please stop doing the exercise and consult with your physiotherapist.



Which Socks to use with your prosthesis

This information explains how you use the prosthetic socks to make sure your prosthesis fits properly and is comfortable. If you have any further questions, please speak to the prosthetist or therapist who is caring for you.

Why do I need to wear a sock at all?

Socks and liners are an important part of wearing your prosthesis and help with the comfort as well as the fit. When used properly they:

- Provide a cushioning effect with the socket
- Help to stop friction between the skin and the socket
- Provide even pressure within the socket.



Why do I need to vary my socks?

Your residual limb (stump) will continue to change in shape and size throughout the day for several months after your amputation. In order that you have a good fit between your residual limb and your prosthesis, you may need to vary the number of socks you wear during the day.

How will I know when to vary my socks?

You will learn to do this during your rehabilitation. As you progress each day you will find out what fits best in the morning and how your residual limb changes during the day or from day to day.

Your prosthetist and therapist will help you with this.

What happens if my residual limb gets smaller?

You may experience the following:

- The prosthesis feels loose and your residual limb may move around inside the socket when you are using your prosthesis.

What do I do if my residual limb has got smaller?

As a guide three thin socks are the same as wearing one thick sock.

- If you are wearing one thin sock, you need to add another thin sock.
- If you are wearing two thin socks, you need to replace these with one thick sock.
- If you are wearing one thick sock and one thin sock, you need to add another thin sock.
- If you are wearing one thick sock and two thin socks, you need to replace these with two thick socks.

This sequence continues until you reach the stage of wearing three thick socks on a regular basis.

When this happens, you need to contact the centre for a review appointment.

What happens if my residual limb gets bigger?

You may experience the following:

- your residual limb does not fit into the inner liner / socket
- your liner / socket feels tight
- your prosthesis feels too long.

What do I do if I think my prosthesis is too tight?

- Reduce the number of socks you are wearing – for example take off either a thin or thick sock.
- Make sure the stump is elevated where possible and do your muscle pump exercises to help reduce swelling when you are not using the prosthesis.
- If you are only wearing one thin sock, you will need to contact the centre for some advice.

How do I care for my socks?

- You will be given a set of socks to take home to allow you to wear a clean set of socks every day.
- Use clean prosthetic socks every day and in hot weather you may need to change them during the day.
- Wash your socks on a maximum 50° wash. You can tumble dry the white cotton socks.
- The thin nylon sock is used to help slide your residual limb into your liner / socket and to help stop friction on your residual limb

Future Management

This is information and guidance about some of the most common queries and concerns once you have been discharged from rehab. Its content includes making and attending review appointments and other outpatient appointments, general frequently asked questions and key contact information.

Follow up appointments will be tailored to your individual needs.

Booking Appointments

Who should I contact for an appointment?

When I arrive for an appointment, where should I go?

For a Prosthetic-only Appointment:

Prosthetic Reception 020 8487 6045
Enter the Douglas Bader Rehabilitation Centre, head down the corridor to the left of the Main Reception desk, continue to the end of the corridor where the Prosthetic Main Reception is on your left.



For any other Appointment/s:

Review, OT, Physiotherapy, Doctor, multiple department appointments.

Douglas Bader Reception
020 8487 6001 / 6002 / 6003

Enter the Douglas Bader Rehabilitation Centre, the desk is straight ahead of you to the left.



What should I do if I cannot attend my appointment or am running late for my appointment?

- **Always** contact the main reception or prosthetic reception to inform them or to let them know if you want to alter/cancel an appointment.

A missed appointment typically costs the Douglas Bader Centre £150 per amputee or prosthetic rehabilitation appointment.

You cannot turn up for a prosthesis repair without an appointment.

Important: Patient transport is not automatically provided for any appointments. You may need to arrange your own transport to and from the rehabilitation hospital. If you are unsure, please contact the Douglas Bader reception for more information.

Frequently asked questions in relative departments

Prosthetist – specialises in the prosthetic arm

My prosthesis doesn't fit... Please refer to "Which socks to use with my prosthesis" section above.

My prosthesis is making funny noises and/or is broken...

Stop using the prosthesis immediately. Contact the Prosthetic Reception as soon as possible and ask for an emergency repair appointment.

You cannot turn up for a prosthesis repair without an appointment.

I don't need my prosthesis anymore...

Contact the Prosthetic Reception to arrange bringing the prosthesis back to the hospital. They cannot be re-used, but they can be given to charity.

I am not making physical progress with my prosthesis...

Try to identify the reason for this and contact the relevant department. If you feel pain or discomfort, contact Prosthetic Reception. If you feel your muscles are weaker, you are getting stiff or you've lost confidence contact the Occupational Therapist for advice.

Doctor – specialises in my health related to my amputation

I don't know whether to go to the doctor or my GP...

Doctor at the Douglas Bader Centre: Contact the doctor through the Douglas Bader reception for any advice or appointments concerning a sore/painful stump, any related skin conditions, phantom pain and pain medication and any issues with your remaining arm.

Your GP: Contact your GP for any other medication issues or continuing medical conditions

Physiotherapist – specialises in exercise, balance and phantom pain

I am struggling with pain OR I'm having problems with my balance ... If you are having problems with any of these things, it is best to be reviewed by the doctor at the Douglas Bader Centre first and then a follow up appointment will be arranged with the physiotherapist to make a treatment plan.

Occupational Therapist – specialises in helping me with everyday life

I am struggling with doing my day to day tasks... Contact the Occupational Therapist to discuss or arrange an appointment for further practice. This can include changes in life circumstances, such as becoming a parent.

Psychologist – specialises in my emotional and psychological wellbeing

I'm becoming concerned about my mood... It is normal for your mood to fluctuate when settling back into everyday life, however if you have any concerns contact the Main Reception and ask to speak to the Clinic Psychologist

Contact Us

If you have any questions or concerns about upper limb amputee rehabilitation, please use the following contact details (Monday to Friday, 9.00am to 4.00pm). Out of hours, please leave a message on the answer phone of the relevant department.

Douglas Bader Reception - 020 8487 6001 / 02 / 03 **Monday to Friday 9.00am to 5.00pm**

Prosthetist Reception - 020 8487 6045 **Monday to Thursday 7.00am to 4.00pm
/ Friday 7.00am – 3.00pm**

Rehab Gym (Physiotherapists) - 020 8487 6041 /2 **Monday to Friday 9.00am to 4.00pm**

Occupational Therapy - 020 8487 6139 **Monday to Thursday 9.00am to 4.00pm**

Vitali Clinic (Nurses) - 020 8487 6030 **Monday to Thursday 9.00am to 4.00pm**

Useful sources of information for peer support

Frimley Limb-Impaired and Amputee Group (FLAG)

The group aims to bring amputees, the limb-impaired, their families, friends and carers together to provide support, share information, advise on benefits and daily life and provide social activities. The group meets at Frimley Park Hospital.

For more information contact - Tracey Craig – Vascular Clinical Nurse Specialist

Tel: 01276 526302 Email: Tracey.craig@nhs.net

Limbless Association

Limbless Association is a charity which “aims to support amputees, pre and post amputation, to navigate the associated complexities with advice, information and signposting to empower individuals and their families to optimise their recovery and rehabilitation”.

Tel: 0800 6440185 Email: enquiries@limbless-association.org

Website: www.limbless-association.org

LimbCare

LimbCare is a charity offering “advice and peer support for amputee / limb impaired individuals, communities, families and others impacted around them”.

Tel: 0800 0521174 Email: info@limbcare.org Website: www.limbcare.org

LimbPower

LimbPower is a charity to “engage amputees and individuals with limb impairments in physical activity, sport and the arts to improve quality of life and to aid lifelong rehabilitation”.

Tel: 07502 276858 Email: info@limbpower.com Website: www.limbpower.com

REACH

REACH is a charity “Helping children with upper limb differences to live life without limits”. It provides help and advice through all stages of childhood, organises families to meet and share experiences including days out and activities. Branches cover the whole of the UK and Ireland. REACH is run by volunteers.

Tel: 0845 1306225 / 020 3478 0100 Email: reach@reach.org.uk Website: www.reach.org.uk

Roehampton Limb User Group (RLUG)

RLUG is a recognised limb patient user group run by the service users and partners. We welcome limb inpatients and outpatients to our bimonthly meetings with expert speakers and social events. This makes for a relaxed way to meet and to be better informed on living life with limb loss and gives you a voice on the issues that affect the NHS service that we receive on our prosthetics and orthotics. Look for our dates on our posters and website.

Tel: 07713 357410 Email: secretary@rlug.org.uk

Other Organisations

Driving Mobility

Driving Mobility is a charity which provides assessment and advice on car adaptations, wheelchair and scooter transportation and on use of public transport. Driving Mobility has centres across the UK.

Tel: 0800 559 3636 Email: info@drivingmobility.org.uk Website: www.drivingmobility.org.uk

Queen Elizabeth Foundation, Mobility Centre

For any advice on driving, adaptations to cars and purchase of outdoor electric buggies and wheelchairs based at Carshalton and Worthing.

Tel: 020 8770 1151 Website: QEF Mobility Services | QEF

REMAP

REMAP is a charity “that helps disabled people of all ages to live more independent lives. Our network of skilled volunteers designs and custom makes equipment”.

Tel: 01732 760209 Email: data@remap.org.uk Website: www.remap.org.uk

For information on specific national organisations please talk to your treating therapist.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111

AccessAble

You can download accessibility guides for all our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



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