



RESOURCEGUIDE

GYM



A Guide to Gym for Amputees and individuals with limb difference



This gym resource has been designed for amputees and individuals with limb impairments. You can exercise while wearing your prosthesis, without your prosthesis on or using a wheelchair. There are lots of ways you can exercise at home without having to attend a gym or leisure centre, although there are many benefits to going to a gym or leisure centre including meeting other people, learning from instructors and taking part in group activities. Going to the gym can be a daunting experience for individuals with a disability so LimbPower have created this resource to help you to take the first step towards developing an exercise habit for life and for building the confidence to attend a gym. Attending a gym can be a great motivator to exercise as you join exercise classes such as yoga and pilates or you can do stretching or circuits, it's not just about weights.

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“I use the gym as my training ground for life. I constantly test myself by challenging my perceived comfort zone, building myself stronger”

Jack Eyres, Above knee amputee and Personal Trainer

Why Exercise?

Many disabled people are not as active as they should be. According to Sport England's survey 4 out of 5 disabled people take little to no exercise. But that's not because they don't want to. The English Federation of Disability Sport (EFDS) research found that seven in ten disabled people want to increase how active they are.

1 Adults should aim to be active daily. Over a week, activity should add up to at least 150 minutes (2½ hours) of moderate intensity activity in bouts of 10 minutes or more. One way to approach this is to do 30 minutes at least 5 days a week. Anyone new to exercise should get clearance from their doctor prior to starting any exercise program. Exercising using the correct form and not locking your knee(s) or elbow(s) is very important and reduces the risk of injury.

2 Alternatively, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or combinations of moderate and vigorous intensity activity. This type of exercise should be introduced slowly once a good foundation has been developed at a moderate intensity.

3 Adults should also undertake physical activity to improve muscle strength and balance on at least two days a week.

4 All adults should minimise the amount of time spent being sedentary (sitting) for extended periods.

These are physical activity guidelines from the Chief Medical Officer. Follow this link for

the full report. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213740/dh_128145.pdf
An individual's physical and mental capabilities should be considered when interpreting the guidelines.

Physical Activity (PA) = any action or movement that requires you to contract your muscles. PA can be classed as many forms: exercise, sport, physical fitness and being active to name a few. Physical Activity for health requires you to raise your heart rate. Walking rather than taking the bus/car is a useful way to increase PA.

Exercise = a planned and purposeful action from which we aim to improve our fitness levels and our health. It usually involves changing clothing and engaging in planned activity.

Going to the gym and going to exercise classes are two of the top five physical activities enjoyed by amputees and individuals with limb impairments (according to Amputee Sport and Physical Activity Survey 2016). Being physically active is a lifestyle choice for many disabled people. Regular exercise is proven to provide social and personal benefits as well as improving physical and mental health. The aim should



be to develop safe and sustained PA and Exercise habits to experience the health benefits. Safe means injury and pain free and sustained means that the exercise becomes a life-long enjoyable habit.

Key Components of Exercise (fitness)

Flexibility

Improving your flexibility could reduce your risk of injury and you can start with just five minutes a week. The nature of modern life means we have become more immobile and inflexible. Being sat at a desk or inactive for prolonged periods can lead to muscle tightening. It's important to have a certain degree of flexibility to perform basic everyday activities without the risk of injury. It can also benefit your workout because you'll have an increased range of motion to perform certain exercises, particularly big compound movements such as squats or deadlifts, which are brilliant muscle toning exercises. Stretching regularly – even for five minutes twice a week – will improve your flexibility.



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→ Strength

Strength training, also called resistance training, is physical exercise specialising in the use of body weight, free weights or weight machines to get the muscles to contract to build the strength, definition and tone.

Remember that with strength training your muscles need time to recover. Muscles should never be worked if they are still sore. Always take some time to warm up and cool down after strength training.

Aerobic/Endurance

Aerobic exercise is physical exercise of low to high intensity. Aerobic means “relating to, involving, or requiring free oxygen”, and is exercise associated with increasing heart and lung function. How much aerobic exercise you can do will vary according to your impairment and how you can use the equipment (rowers, bikes and treadmill) in the gym. The best way to lose weight and improve your cardiovascular system (heart and lungs) is to incorporate some form of aerobic exercise into your training. This type of exercise can be completed outside by going for a brisk walk, cycle or run. Swimming is also a useful form of aerobic exercise.

You may sometimes face potential barriers to exercise but remember that many activities can be adapted to suit your needs; whether your arms and/or legs are affected. Most importantly, make it fun!

General Health Benefits:

Why is it important to exercise? It is now universally accepted that exercise is an effective treatment for many illnesses and diseases. Being physically active and reducing sedentary behaviours increases

both the length and quality of life.

Exercising means that the heart, lungs, and muscles will have to work harder and that the bones will experience greater forces and ranges of movement at the joints. If you feel dizzy or have any pain, you must stop and see a health professional. The muscles, bones and joints must get stronger to avoid injury and you must look after your skin to avoid blisters. Long-term damage to the joints in the form of osteoarthritis is common in lower-limb amputees, especially on the intact side as it takes more of the load of the body. Strengthening the core and the hip muscles on both sides can help to reduce this loading. Exercise must be introduced slowly and carefully to ensure that the muscles, bones and joints are strong enough to withstand the increased loading. Remember, too much aerobic exercise can make you lose lean muscle mass as it burns muscles, not body fat.

Where to go

Always check with your limb centre staff before embarking on any physical activity or attending a gym. They should be able to advise you on local options.

Exercising at home

LimbPower have created the Agility, Balance and Co-ordination Toolkit to support you (amputees and individuals with limb impairments), to improve your health and fitness and to support you as you engage in physical activity at home or in the gym. Visit the LimbPower website to download recommended exercises for use at home <http://limbpower.com/index.php/resources/exercise-videos>

Joining a Gym

Once you are ready to join a gym check whether there is an Inclusive Fitness Initiative accredited gym in your local area. The Inclusive Fitness Initiative (IFI) provides accessible physical activity for disabled people. There are facilities nationally, spread throughout the country, equipped with a range of IFI accredited fitness equipment with highly trained gym staff who are experts in providing advice on adapted physical activity. Follow this link to your nearest inclusive fitness gym: http://www.efds.co.uk/inclusive_fitness/ifi_gyms

To read more about the IFI fitness equipment follow this link: <http://www.efds.co.uk/how-we-help/programmes/ifi-fitness-equipment>

Before joining a gym, it is important to check that the gym and changing rooms are fully accessible. Consider the long-term accessibility too, if you have a set back and need to use crutches or a wheelchair you may not be able to attend the gym if it is not accessible.

Park Gyms

If you don't have an accessible gym close by, a park gym might be a great alternative and it's free! Visit <http://www.tgogc.com> to find out where your nearest park gym is.

If you feel self-conscious exercising in front of other people, park gyms can be a more relaxed option, but be aware that park gyms are not always monitored (some do offer induction training). Visit the TGOGC how to use page for videos on how to use each piece of equipment. <http://www.tgogc.com/How-To-Use/>



“The gym and physical activity has empowered me to live a strong and independent life. My confidence soared when I started and now it’s part of my everyday routine. Always be the best you can be”

Gemma Trotter, Personal Trainer &
Les Mills Instructor



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→ Who to talk to

There are a number of people who can help you with a list of exercises to do at home or at the gym. Here we outline who you can talk to and how they can help.

G.P.s

The Exercise Referral Scheme helps people aged 16 or over to make long-term lifestyle changes and increase their physical activity. If you have a pre-existing medical condition, or are recovering from an illness or an operation, you might be eligible for the Exercise Referral Scheme. Speak to your G.P. to find out more. If you are accepted you will be assessed, supported and given access to reduced rates to introduce you back into exercise including attending a gym.

<https://www.nice.org.uk/guidance/ph54>

<https://www.kenthealthandwellbeing.nhs.uk/exercise-referral>

Rehabilitation consultant

The rehabilitation consultant at your artificial limb centre holds the budget and makes the final decision on your prosthetic prescription, supervises your medical and surgical management, monitors your general health and plays an important role in diagnosing injuries and injury management. Some consultants will have exercise-specific knowledge. Do ask them because if they don't know, they will be able to direct you to another member of the multidisciplinary team who does and who can support you as you embark on your return to the gym journey.

Physiotherapist

The physiotherapist can develop and supervise a general fitness program for you,

Equipment within the gym...

If you choose to go to a gym, most machines can be operated whether you have an arm or leg amputation or impairment if you adjust the weight accordingly. If you go to an IFI gym, there will be adapted equipment designed for disabled people. Do ask your gym instructor if they have IFI accredited gym equipment you can use.

Alternatively, you can use free weights such as dumbbells, medicine balls or kettlebells. Perform exercises without any or with minimal weight when learning new techniques. Once you have mastered the technique (ideally under supervision) choose a weight that will produce a moderate amount of muscular fatigue during the number of repetitions you have

planned. Your chosen weight should allow you to complete a full set without stopping and you should be able to maintain good technique throughout.

There are usually floor mats and small weights for use in a gym and a combination of stretching and weights is ideal for the amputee who is unable to stand. Also if you are struggling to commit to exercising while at home, the act of going to a gym will ensure that you get some concentrated movement done. Some people find that going to the gym can be more focusing than being at home where it is easy to find distractions and excuses to not exercise.

including exercises to complete at the gym. The physiotherapist can help you develop your general strength, flexibility, stability and endurance and provide you with a basic education on appropriate gym specific exercises and adaptations. Through careful preparation with the physiotherapist, you can minimise the chance of developing an injury, joint pain and any long-term damage to your body. The physiotherapist should be satisfied with your physical health and condition before recommending that you return to the gym.

Gym Instructor/Personal trainer

Your next step is to work with a gym instructor or personal trainer. Ideally you can work with someone who has experience of rehabilitation work and working with amputees and individuals with limb impairments. Look for an IFI accredited gym with an instructor who has completed the Exercise and Disability (Award in Programming and Supervising Exercise with Disabled Clients) qualification. LimbPower work with a number of amputee gym instructors and personal trainers who can

offer you advice and support. Have a look at these websites run by amputees who are also personal trainers:

James Roberts: <http://fitamputee.co.uk>
Jack Eyres: <https://www.jackeyers.com>



...Out of the gym

Out of the gym, strength training can be done using a number of alternatives:

You can do some exercises simply using your own body weight such as press-ups, dips, squats or chin-ups.

Small wrist weights with Velcro straps can also be useful to increase the resistance during any type of exercise.

Elastic tubing (often called dyna bands, therabands or clini bands) are simply pieces of elastic which offer more resistance the greater you stretch them. Again these give you the freedom to mimic many of the movements that can be done in the gym.

Partner resisted strength exercises. You can still do the same movements

as you would on gym machines but with a partner resisting these movements rather than a weight. For exercises at home specific to amputees see the Ottobock Fitness app available from the Apple Store and on Android and LimbPower's ABC Toolkit.

Group Exercise classes and other group activities

Many gyms and local leisure centres will have a sports hall offering group exercise classes such as yoga, pilates and zumba, as well as activities such as badminton, table tennis and basketball. For some people the social aspect of fitness is just as important as exercising; responses from EFDS's recent lifestyle survey identified that the top five reasons people exercise are for fun (80%), to improve health (68%), to get fit (60%), for the challenge (59%) and to meet friends (43%). Ask your gym or leisure centre if they hold any specific classes for your impairment group, if they don't it is

worth asking if you can speak with the instructor of your chosen activity to discuss any issues or concerns you have.

Exercise classes for older people

Many gyms will host exercise classes designed for older people, which are lower impact and have a lower risk of injury. Examples of gentle low-impact activities are yoga, tai-chi, pilates and swimming. Also ask about exercise equipment specially designed to provide low-impact exercise.

Swimming is one of the safest ways to exercise as your body is supported up to

90% by the water. Perhaps that's why it's one of the most popular activities among people with a disability and among amputees and individuals with limb impairments. Also, because water is about 12 times as thick as the air, the water resistance maximises the benefit you get from your movements. This means that swimming is a little like jogging and lifting weights at the same time. Be sure to check out the poolside facilities. Is the swimming pool accessible for amputees and wheelchair users? Do they have a hoist and poolside wheelchairs or somewhere safe to sit and leave your prosthesis and/or crutches?

Getting started — Frequently asked questions

<p>I haven't been to the gym in years, how do I get started?</p>	<p>To be on the safe side, talk to your GP or Rehabilitation Consultant at your Limb Centre about your plans before you embark on any form of exercise.</p>
<p>What do I do once I get to the gym?</p>	<p>If you are attending a local leisure centre or gym, ask for an induction so that you can familiarise yourself with the equipment and environment. Most induction programs are generic workout programs appropriate to your exercise experience and to help to set goals, essentially the talk is about using the equipment safely. We recommend requesting a more thorough assessment with one of the gym instructors before really diving into your workouts: you should know that what you've been instructed to do is actually right for your body and aims. If the gym (fitness) instructor is unsure how to help, ask them to contact the physiotherapist at your Prosthetic Centre for advice.</p>
<p>I'm nervous about joining a gym</p>	<p>Don't be afraid to try new things. If you are nervous ask a friend or another amputee to go with you, so that you can motivate each other.</p>



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“Using the gym and exercise enables me to lead a full and active lifestyle and I wouldn't be the same without it”

James Roberts, Amputee Personal Trainer



<p>What if I am not fit enough?</p>	<p>Seek advice from your Rehabilitation Consultant, physiotherapist or GP (many GP surgeries now promote exercise programmes). They should provide you with further advice regarding the amount of physical activity and exercise that is appropriate for you in the early stages of rehabilitation.</p>
<p>Do I need a specialist prosthesis for using gym equipment?</p>	<p>You do not need a specialist prosthesis to go to the gym. Your everyday leg will be suitable for low level activity. As you become more experienced you will notice limitations with your prosthesis for certain exercises and equipment. The prosthesis and how it is used can affect the way you move. It is important to understand the different components and how to use them, and how to get them if appropriate. Discuss your needs and the limitations of your prosthesis with your prosthetist or rehabilitation consultant, who may be able to recommend more suitable alternatives. Remember an artificial leg can not replicate a real leg and there will always be limitations, well until a fully bionic arm or leg is developed!</p>
<p>What if I cannot do a particular exercise or use a piece of equipment?</p>	<p>As an amputee or individual with limb impairment you need to be prepared to modify any exercises that you cannot do, remember the modification still needs to exercise the same muscle or muscle groups. Ask your gym (fitness) instructor for ideas or talk to one of LimbPower's amputee gym instructors or personal trainers.</p> <p>You can exercise with or without your prosthesis on. You should group the exercises together so that you are not constantly taking your prosthesis off and on. Ask your physiotherapist or gym instructor for an exercise programme for wearing a prosthesis and an exercise programme without the prosthesis on.</p>
<p>Will exercising hurt?</p>	<p>If you feel any form of discomfort, dizziness or feel faint, stop immediately. You should feel no more than a burning sensation in your muscles.</p>
<p>Why am I so tired?</p>	<p>Amputees will find it more tiring than non-disabled people when they start to exercise. This is because it takes more energy to walk and run as a result of the reduced push-off by the prosthetic leg and energy loss moving from one foot to the other. This is not a barrier to exercising, but be aware that you will tire more easily than a non-disabled person when completing the same exercises, not because you are not fit, but because of the way you move with your prosthetic leg.</p>
<p>I've heard that as an amputee I put more strain on my intact limb</p>	<p>Amputees are prone to developing joint pain on the intact limbs due to the way that they load the leg. It is very important to prepare for activity by building up the strength and power of the muscles in order for them to be able to take the increased force on the intact limb associated with any movements.</p>



Do I have to protect my residual limb?

Amputees need to look after their residual limb (stump) to make sure that the skin stays healthy. It is enclosed in a plastic capsule which can result in sweat, blisters, ingrown hairs and pressure sores which, if left uncared for, can cause long term damage. For further information, read the *Practical Tips for Sport and High Activity* factsheet. You can find this on the LimbPower website www.limbpower.com/index.php/resources/info-sheets

I just don't have the time

Many people live hectic lifestyles that are busy with both work and family commitments. Not having sufficient time to exercise is a genuine concern. Difficulties with travel can make your trip to an exercise venue annoyingly long or expensive and so it is important to consider where else you might be able to exercise. Avoid a long commute to your local gym by doing your workout at your local park or even in your own home/garden. The amount of exercise you need to do to gain benefits is often overestimated too. As little as 30 minutes of moderate intensity activity a day, five times a week is enough to help you feel physically and mentally fit. Multiple bouts of at least 10 minutes are also just as good; how about before or after work and a short session during your lunch hour?

My local facility isn't accessible

Accessibility is a common issue faced by disabled people. However, you do not necessarily need a gym or leisure centre to become more active. You can do lots of exercises with minimal equipment in many different environments such as in your home or at the park. However, if you do fancy the gym, the Inclusive Fitness Initiative (IFI) has an application where you can find a local club that has accessible equipment for disabled people. Visit www.efds.co.uk/inclusivefitness/ifigyms

I feel too tired to exercise

If this sounds like you, then consider when it is that you are most tired. If it's in the evening after work, then try to exercise in the early morning or during your lunch break. If you feel most fatigued first thing in the morning, simply plan to do your exercise later in the day. These simple steps are common sense but will help you get started. It is also worth considering that regular exercise can actually reduce fatigue and help you sleep better. After a few weeks of regular physical activity you should notice your energy levels improve.

For more information, see Fit For Life, A guide for Adults with An Amputation, http://www.lboro.ac.uk/media/www/lboro.ac.uk/content/peterharrisoncentre/downloads/brochures/pdfs/Amputee%20guide_Fit_for_Life.pdf

**My balance isn't very good.
Will exercising improve my balance?**

Balance is an issue for amputees as you will have lost some of your feeling and corrective mechanisms and will have to develop alternative awareness and control. Being fit and strong will help to improve your balance. If you are concerned about your balance you can start exercising in a chair or a seated position.



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→ Common issues

Falling: Amputees share common issues such as an imbalance between the prosthetic and intact sides of the body, causing us to feel off balance or wobbly. With exercise you will get stronger and more agile, so your tendency to fall will reduce. Before you go to the gym, practice getting up from the floor.

Socket Fit: When the socket/s are not adjusted correctly or have become too loose or too tight for your hips to be at the same level then you may experience soreness in your hips and back. Exercise can help to strengthen the muscles, but you should speak to your prosthetist who can make any necessary adjustments or cast you for a new socket.

Residual Limb: Sweating can cause blisters, ingrowing hairs and pressure sores. Keep the skin clean and dry and inspect it after every session and going to bed at night. Dealing with a blister or follicle early will save discomfort in the long run.



What should you focus on?

New amputees:

Make sure that you work on the exercises were given by your physiotherapist. These flexibility, strength and movement exercises will build a good foundation for more dynamic work as you get stronger.

All Amputees:

Flexibility Focus

Focus on keeping the affected joints and muscles as supple as the non-affected joints.

Focus on maintaining 'normal' ranges of motion.

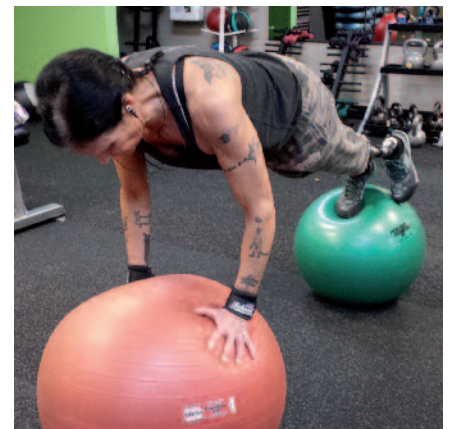
Focusing on stretching the muscles of your trunk, whether you have an arm or leg amputation will reduce the chance of back problems, aches and pains.

With leg amputations the muscles around the hip can become quite tight with an increase in the amount of sitting and/or a reduction in walking. These muscles often require more attention, especially your hip flexors, the muscles that move your thigh closer to your trunk. See Fit For Life, A guide for Adults with An Amputation, http://www.lboro.ac.uk/media/www/lboroacuk/content/peterharrisoncentre/downloads/brochures/pdfs/Amputee%20guide_Fit_for_Life.pdf

Strength Focus

Focus on strengthening your lower back, hips, and gluteal and core muscles. This will make a huge difference in how your body feels on a daily basis and it will help your balance.

If you exercise while seated, using a chair if you are a new amputee, you can still do core exercises, abduction & adduction



exercises, back extensions and pelvic tilts to strengthen the muscles, ligaments and tendons that help to support your skeletal structure. You can also do wheelchair exercises. See <http://www.personal-affects.com/>

All exercises should consist of 10-12 repetitions with two to three sets – more than three sets are unnecessary. Safety is always the first priority – be sure to breathe in and out and avoid holding your breath while exercising.

Remember, you don't need to be 'pumping tons of weight' to get stronger. You will be surprised how much better and stronger you will feel with relatively simple exercise moves using just your body or light weights as resistance.

Aerobic/Endurance Focus:

Try to go a little further or a little faster every week. You know you are exercising at the right level if you can still talk, but you are breathing deeply. If you know how, take your pulse rate, it should be raised to around 120-180 beats per minute. Ideally, you will break into a light sweat.

Additional Resources

Fit For Life Guide for Amputees

This resource can help you get Fit for Life. It starts with the basics and teaches how to lead a healthy, well-balanced and active lifestyle as an individual with an amputation and allows you to progress at your own pace. http://www.lboro.ac.uk/media/www/lboroacuk/content/peterharrisoncentre/downloads/brochures/pdfs/Amputee%20guide_Fit_for_Life.pdf

LimbPower exercise videos

Whether you are an above knee, below knee or double amputee, some exercises can be a challenge. Whether this be because you have recently suffered limb loss and you are unable to perform your previous exercise regime in its entirety, or whether you have mobility issues, we are committed to helping you maintain or improve fitness and conditioning, no matter what your current level of activity or confidence. <http://limbpower.com/index.php/exercise/toolkit-videos>

The InstructAbility Programme helps disabled people start a career in the fitness industry by providing disabled people with a path to employment
<http://www.instructability.org.uk>

The Inclusive Fitness Initiative (IFI) has been established for over 10 years, supporting leisure centres to become more welcoming and accessible environments to disabled people.
<http://www.efds.co.uk/get-active/inclusive-gyms>

Jack Eyers, Amputee and Personal Trainer
www.jackeyres.com

James Roberts, Amputee and Personal Trainer
www.fitamputee.co.uk

Cindy Asch Martin, Amputee and Personal Trainer
<http://www.personal-affects.com>

Amputee Yoga

Marsha T Danzig, Yoga Instructor
<https://www.yogaforamputees.com>



LimbPower would like to thank the English Federation of Disability Sport, InstructAbility, James Roberts Fitness, Jack Eyers, Gemma Trotter, Miranda Asher and Siobhan Strike for their contributions to this resource.





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LimbPower exists to engage amputees and individuals with limb impairments in regular and sustained participation in physical activity, sport and the arts to improve quality of life and to aid physical, social and psychological rehabilitation. To find out more about how we can help you, visit our website. LimbPower is a Limited Company No. 09513024 Charity No 1132829