

# EXERCISE AND FITNESS FOR AMPUTEES

## Amputations

An amputation does not prevent an individual from taking up or continuing to exercise and keep fit. When it comes to taking part in sport, physical activity and exercise, amputees and individuals with limb impairments have similar options as those without - although some modifications may need to be made to enable participation.

Here, we provide some advice for exercise and fitness for amputees to help you keep fit.

## WHY IS EXERCISE GOOD FOR YOU AFTER AN AMPUTATION?

If you are fitted with a prosthesis, your body will experience a negative force on the muscles and skeleton, which, if left uncontrolled, will eventually cause posture changes. This, in turn, affects how your muscles perform causing the following:

- Weakness and a strain on ligaments
- Loss of balance
- Aches and pains in the joints

Exercise helps you to stay more symmetrical, preventing your amputation side from becoming weak and inactive and forcing other parts of your body to overcompensate and become overused. The fitter you can be following an amputation, the better your body will cope with a prosthesis as you will have more control over your body. This will help to make daily tasks easier to accomplish.

Other benefits of exercising include:

- Improved well-being and reduced stress
- Lower cholesterol and blood pressure
- Reduced risk of obesity, diabetes and heart disease
- Weight management
- Better breathing
- Increased strength and endurance

- Improved range of movement and joint mobility
- Injury prevention



## MY FITNESS JOURNEY - JAMIE GANE

I have always loved sports, but due to my chronic pain condition, which started at the age of nine, I was unable to participate in sport with my peers. When I started looking at amputation as a viable option for my pain, I realised that I would need to be as fit and healthy as possible. I started to look at wheelchair racing, but then I found throwing sports.

Once my amputation was completed and I could walk, I couldn't stop myself from running, obstacle racing and getting back into Judo, which I had started at a very young age. I began competing on the international stage for Judo and obstacle racing, winning the silver medal at the World Judo Games, which placed me second in the world for my Judo category.

To keep up with Jamie's progress, take a look at his Instagram [here](#).  
Visit [jamiegane.com](http://jamiegane.com).



## BARRIERS TO EXERCISING WITH AN AMPUTATION

As an amputee, you may face a number of barriers to physical activity that can make becoming and staying active a real challenge. Here are a few common barriers and how you can try to overcome them:

# STARTING OUT IN EXERCISE OR SPORT AS AN AMPUTEE

If you are new to exercise as an amputee, or returning after a break, you should seek advice from your prosthetic centre or a healthcare professional, such as your GP or physiotherapist. They should be able to provide you with advice regarding how much physical exercise and activity is appropriate for you in the early stages. Be prepared to modify an activity or exercise if you need to, but remember, nothing is off limits.

Amputee and prosthetist Jim Ashworth-Beaumont said: “Previously I was a keen weightlifter, but now I’m focusing on different types of exercise than I did before. Likewise, I’ve now got into adaptive sport. You only have to look at the Paralympic events to see that sport is about ability, never about disability.”

Your prosthetist or physiotherapist should be able to help you create an initial exercise programme based on using and not using your prosthesis to give you a variety of starter activities.

Mark Smith said: “For many people, the hardest part of starting exercising is the aches and pains in the first few weeks, but once you start to see and feel benefits, it becomes addictive - in a good way!”

**“There’s a real sense of community within sport - whatever sport you may find.”**

**- Jamie Gane, Adaptive Athlete**

You will not need a sport-specific prosthetic to exercise as your everyday leg should cope with most activities. Once you are fit and exercising regularly, or taking part in sport more often, you may find that your prosthesis is holding you back, which is when you should speak to your prosthetist.

Jamie Gane said: “One of the hardest parts of keeping fit with an amputation is finding a prosthetic that works for you, as well as the fit. Once you have a good prosthetist and prosthetic, you’re away!”

It is important to remember that keeping fit is a marathon, not a sprint, so if you can only do five minutes at first, don’t worry. The great thing about exercise is that you can work your way up, meaning you can start slow and take into account your current ability level (i.e. strength, stamina and stability). A common mistake many people make when working out is being too aggressive in the early stages and burning out. Listen to your body and if it doesn’t feel right, stop what you’re doing immediately.



## MY FITNESS JOURNEY - MARK SMITH

My fitness journey started after losing my leg while serving in the British Army. Wanting to find a purpose and something challenging, I initially wanted to step on a bodybuilding stage, as a way to grow in confidence. If I could stand on stage missing a leg and be critiqued, then I could do anything.

I was very lucky to win several bodybuilding shows, my highlight was sharing a stage with Phil Heath in the States. To test myself further, I then stepped into disabled strongman competitions, winning Britain's Strongest Disabled Man twice in 2016 and 2017, winning the Arnold Classic twice in 2017 and 2018, and winning England's Strongest Disabled Man in 2018.

I always wanted to return to my first love of football at some point though, and, in January 2019, I started playing amputee football for Peterborough United Amputees, which was football played on crutches without the prosthetic leg.

It has been life-changing, particularly winning the national league title in my first season. I am now in my third season with Peterborough and I absolutely love it.

To keep up with Mark's latest updates, take a look at his Instagram [here](#).





## WHAT EXERCISE SHOULD I DO?

To maintain your health and fitness following an amputation, you need an exercise regime that you will enjoy and is convenient for you. Any exercise programme should contain elements that address strength, balance, posture, coordination and cardiovascular fitness.

Jamie Gane said: “Exercising with an amputated limb can be very similar to a biological limb. You find exercises that are tailored to the muscle groups that you do have. Just

bear in mind that you may have to lower the weights and really focus on those targeted muscle groups. Once you have settled with an amputation, there's really no type of exercise that isn't either accessible or able to be adapted."

Here, we take a look at some of the common types of exercise used by amputees:

## YOGA/PILATES

Try to do the exercises as normal, as prosthetic restrictions will be apparent. You should group together any positions that you may wish to remove your prosthesis to avoid taking it off and putting it on too much.

Be mindful of your posture throughout the exercise - use a mirror perhaps to ensure that you do not twist out of position.

## STRETCHING

Advice suggests you should perform a top-to-toe stretch twice a week, as well as any stretches given to you by your physiotherapist. Stretching helps to realign the skeleton and lengthen your muscles, which keeps you flexible. You may need to modify some stretches to accommodate a prosthesis.

## BALANCE AND COORDINATION

Exercises for balance and coordination should help you to 'feel' your prosthesis (i.e. sense where it is and how you are standing on it). Speaking about the differences between exercising with and without a prosthesis, Mark Smith said: "The differences can be balance when it comes to squats and deadlift, but core stability helps a lot."

## STRENGTHENING

There are a number of strengthening exercises that you can carry out in the gym and at home, including:

- Upper and lower limb weights
- Stair climbing leg over leg
- Wall sits



Most gym equipment, such as cycling and step machines, will be fine to use with the exception of hamstring curls and quadricep leg extensions if you're wearing a leg prosthesis. Mark Smith said: "Anything can be adapted for an amputee to train in the gym, some exercises may require improvising slightly, but on the whole, everything is still possible in the gym".

Strength sessions should be repeated twice a week.

## CARDIOVASCULAR

When it comes to cardiovascular fitness, you should aim to increase your heartbeat for about 30 minutes - this could be made up of a mixture of exercises. Swimming, cycling, treadmill walking, walking outdoors with walking poles, stepper machines and rowing are all good forms of cardiovascular exercise for amputees. Running is not the best way to keep fit following an amputation if there is an alternative.

Remember, high-impact exercise can cause trauma to the skin in your socket after a while, such as bruising and blisters, so make sure to monitor your capability.

Cardiovascular exercise should be carried out five times a week, but housework, dancing, shopping, dog walking, gardening and other daily activities could make up part of your routine.