Limb POWER

Life after limb loss

LIMBPOWER SPORT 2012

40 PAGE GUIDE TO SPORT FOR THE AMPUTEE AND AMBULANT DISABLED • FEATURING THE LATEST IN PROSTHETIC SPORTING TECHNOLOGY • INCREASE YOUR ENERGY • AMPUTEE GAMES PROGRAMME

COVER PRICE
£3.00

Welcome

We all want to live a longer, healthier and happier life. As amputees we are prone to live a more sedentary life than our able-bodied friends, which takes its toll on our health.

I read recently that 30 years ago above knee amputees were believed to have an increased mortality rate of 1.4 time that of a non-amputee. Things have changed greatly in the last 30 years with enhanced prosthetic technology, a better understanding of the importance of good nutrition and a healthy lifestyle and improved access to sports through events like the Amputee Games and Junior Games.

Not all of us have the potential to become Paralympic athletes but we all have the potential to live healthier lives by increasing our fitness, energy and health.

Regular exercise increases our physical well-being through improved physical strength, cardiovascular performance, muscle tone, balance and coordination. There is a plethora of research which suggests that participation in sport also improves our psychological well-being

through better coping mechanisms, improved cognitive abilities, enhanced mood, increased self-confidence and self-esteem.

We hope that the articles in this magazine provide you with the information you need to take the first steps into leading a more active and fulfilled life. If you can't find what you are looking for within these pages you are welcome to contact LimbPower directly.

Kiera
Editor

Contents

The opinions expressed within this magazine are those of the authors and do not necessarily reflect LimbPower policy. We recommend that you do not engage in any physical activity without consulting your G.P. or rehabilitation consultant. We would like to thank everyone who contributed articles, advertising, research and proof reading skills to the magazine. I would personally like to thank John Berbuto for designing the magazine.

Editor: Kiera Roche **Designer:** John Berbuto

About us

LimbPower – The British Ambulant Disabled Sports and Arts Foundation was formed in November 2009, with the objective to provide amputees and the ambulant disabled with opportunities to participate in sport and the arts to aid the physical, social and psychological rehabilitation.

As a charity created by amputees and friends of amputees we are passionate about helping new and existing amputees and the ambulant disabled in their personal quests to live healthier, happier and more fulfilled lives.

Our focus is on organising events and activities where participants can learn new skills, develop existing skills, meet with other amputees and ambulant disabled people already taking part, learn from each others experiences and share ideas to inspire each other to achieve more.

We are the organisers of the Amputee Games, where 80-100 amputees of all ages and all abilities participate in 14 Paralympic Sports over a long weekend, providing them with a pathway to participation in sport at a local, regional or national level. Whilst this event is aimed at primary amputees wanting to get back into sport or try a new sport we are incredibly proud that a number or participants have gone on to join national squads in sitting volleyball, basketball weight-lifting, badminton and shooting and will hopefully be representing Great Britain in the Paralympics.

We have recently launched the Junior Games, replicating the Amputee Games for children between the ages of five and eighteen. The inaugural Junior Games will take place 15th – 16th September 2012.

We also organise Cycling Clinics and Running Clinics where amputee athletes and physiotherapists teach participants the skills they need to run or get back on a bike. We are working with a number of sports governing bodies to promote their events and to organise open-days for amputees and the ambulant disabled new to sport.

In the autumn we will be producing a LimbPower Arts Magazine, focusing on access to the arts for the ambulant disabled.

To find out more about our work please visit our website at **www. limbpower.com**

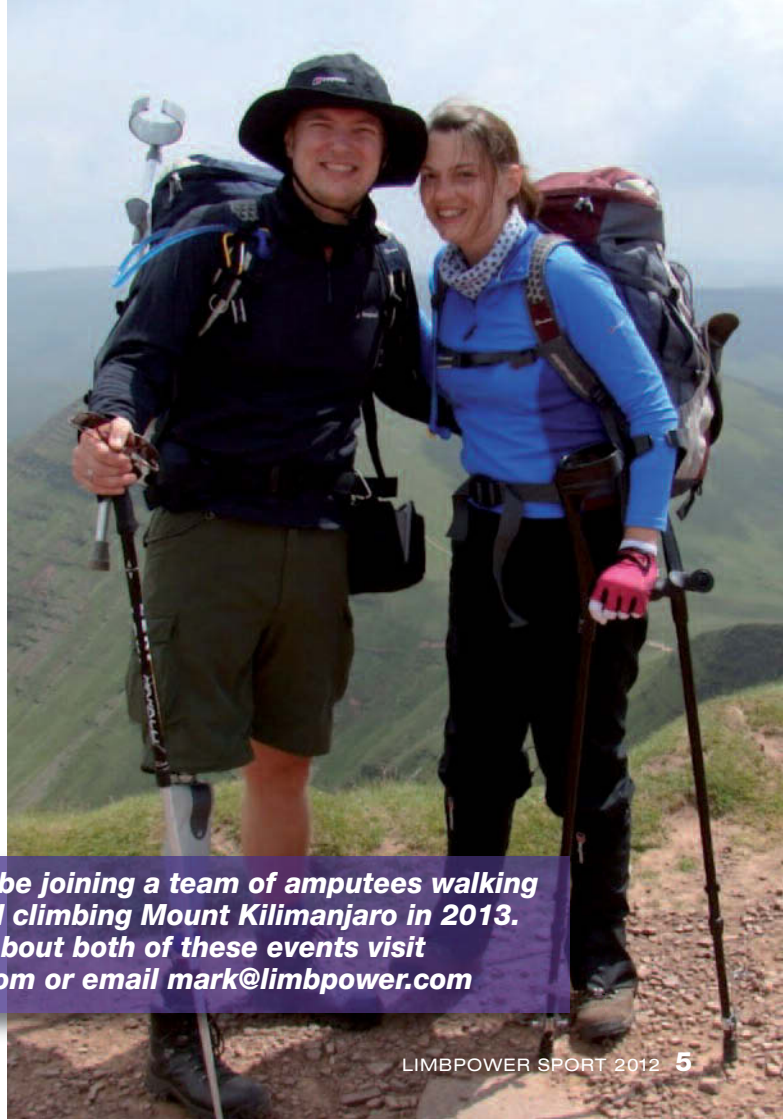
Walking with Mark O'Leary

As an able-bodied person I enjoyed hill walking and multi-day trekking but after losing my leg in a motorbike accident that all came to an end. Although I achieved a good recovery with a well-fitting prosthesis I had simply lost the habit of walking for pleasure and thought any 'serious' walking was beyond me.

In late 2008 I was fortunate enough to receive an implant in my stump bone that allows fixation of my prostheses, removing the need for a socket. I hoped this would open up a wealth of physical possibilities and in 2009 I was asked if I would like to participate in a trek to the summit of Kilimanjaro along with other amputees, prosthetists and physiotherapists.

After training hard and successfully summitting Kili a core of the trekking group, including myself and several other amputees, continued to walk regularly and this led to a more adventurous trip into the snowy Moroccan Atlas mountains in winter to climb Toubkal (northern Africa's highest mountain) using crampons and an ice axe.

Walking regularly not only keeps me fit but has shown me that with the right attitude, preparation and some determination, ordinary disabled people can achieve extraordinary feats. Walking doesn't have to be about getting to the top of mountains though, there's nothing quite like a gentle walk in the British countryside, come with me sometime and I'll show you!



Mark O'Leary will be joining a team of amputees walking Hadrian's Wall and climbing Mount Kilimanjaro in 2013. To find out more about both of these events visit www.limbpower.com or email mark@limbpower.com

Neil Heritage's Row2Recovery challenge

"When the opportunity arose to row the 3000 miles across the Atlantic ocean as part of the Row2Recovery effort to raise £1M for charity, I knew I had to take part" said Neil Heritage from Poole. Double amputee Neil was one of six men on the 29ft boat who rowed from the Canary Islands to Barbados. The team spent an epic 51 days at sea and his team crossed the line in 7th place.

Neil, who lost both his legs in a suicide bomb attack in Iraq in 2004, completed the race without his prosthetic limbs and used a seat that was specially made by Dorset Orthopaedic. "Right from the outset, it was clear that I needed a system that would allow me to row without prosthetics. Knowing that the race would take up to 80 days, 12 hours a day, I talked to my prosthetist Bob Watts at Dorset Orthopaedic to help find a solution". Bob manufactured a custom seat that was made of carbon fibre and custom-moulded to fit me exactly. It had a non-porous foam lining so I could wipe it dry when I finished my shift. The great fit meant there was no rubbing and no sores. The only parts that did chafe a bit were the straps holding me into the seat when they became soaked in seawater.

Neil's team received a number of set backs on the challenge. The crew's de-salinator broke down on Christmas Day, so they had to ration water until they received assistance. The crew's ration was two litres of water a day. They rowed at night and slept during the day to combat the overbearing heat. Neil lost an incredible two stone during the 51 day Atlantic Challenge. Speaking of the challenge Neil said: "It was incredible and it was terrible". "I am really glad I did it because it was an incredible experience but I would never do it again."

On arriving back in the UK Neil had the task of relearning to walk ahead of him after such a long time at sea. "Fortunately Bob made me a great new pair of Sabolich-type sockets with flexible inners supported by lightweight carbon frames. This new socket shape gives me far more control of the legs and the flexible sockets are really comfortable to wear. I am always amazed at how easy Dorset Orthopaedic make it look and get it perfect every time", he said.

dorset
orthopaedic

- Prosthetics
- Silicone Skin
- Orthotics
- Rehabilitation
- Expert Witness

Delivered across the UK through a caring, supportive clinical service.

Call us now on
01425 481740
or visit
www.dorset-ortho.com

Ringwood | Burton | London
Leeds | Taunton | Newcastle

Life without limits....

Dietary tips to increase your

Keeping your energy levels up is essential for any sport. Having plenty of energy enables you to perform at the best of your ability. However, this isn't easy. It doesn't just happen. High energy levels result from eating the best foods at the right time, training hard and getting plenty of rest. The foods you eat affect how much energy you have and how well you perform.

By Simon C. Dyall PhD RNutr
Health Sciences Research Centre
Department of Life Sciences,
Roehampton University
Simon.Dyall@roehampton.ac.uk

Of course, we get "energy" from eating any food, but there are certain foods that can increase our energy levels and others that are best avoided. The most important thing is to have an excellent foundation to your diet, with a wide variety of nutritious foods containing a good mix of carbohydrates (potatoes, nuts, vegetables, fruit and berries), proteins (eggs and lean meat) and of course essential "healthy" fatty acids (fish). These foods will provide your body with all the nutrients it needs to function at an optimum level.

Carbohydrates are a readily available source of energy and therefore eating the right type is essential. Many athletes mistakenly believe that high-sugar foods will give them a quick energy boost. However, these high sugar (and often high fat) foods, such as sweets and chocolates, should be avoided, as they can cause rapid swings

energy levels

in blood sugar, which may ultimately leave you feeling tired, or even worse, decrease your performance. So when considering the best source of carbohydrates always aim for unrefined carbohydrates (wholegrain rice and beans), as these increase blood sugar levels more slowly than refined carbohydrates (white sugar or white flour products). Eating this way will help keep your blood sugar levels stable and your energy levels high.

When eating for health or energy, as well as eating unrefined foods, eat plenty of vegetables. Vegetables are a great source of carbohydrates, vitamins and minerals, and broccoli, spinach and asparagus should be included in the diet. Another great addition, full of carbohydrates, proteins and useful fats are nuts and seeds, such as walnuts, Brazil nuts and pumpkin seeds. A really great snack is a "trail mix", made up of dried fruit, nuts and seeds. This makes a very nutritious and healthy "high energy" snack. Eggs are an excellent source of protein, and beans and lentils provide really good carbo-hydrates and protein. So, kidney beans, lentils, and even baked beans are a good dietary addition.

As a final comment, there are a huge variety of energy and high protein bars available and these can be a great supplement to a varied diet, but always check the labels, as they can often have a high sugar content.

Limb POWER
Life after limb loss

10 "Golden Rules" to increase your energy

1. *Always start the day with a healthy breakfast*
2. *Avoid junk food, such as crisps and sweets*
3. *Graze on nuts, seeds and fruit*
4. *Limit alcohol*
5. *Replace coffee with green tea*
6. *Drink plenty of water*
7. *Have a "power snack" of trail mix*
8. *Eat "healthy" fats, such as those found in fish*
9. *Eat a varied a diet with plenty of fresh (organic) fruit and vegetables to maximise your vitamin and mineral intake*
10. *Get enough sleep*

Competitive skiing Prosthesis: Our experience with athlete HEATHER MILLS

Heather took up ski race training a year ago after being spotted on the slopes. She raced for the British Disabled Ski Team (BDST) for the first time on January 19th 2012. Competing for the BDST in February 2012, Heather won two Super G ski speed races and two downhill events at the US Paralympics Adaptive Alpine Speed National and North American Championships on the formidable Tiehack speed course. She went on to win four gold medals on the slopes of Aspen in March 2012, and brought her dream of competing at the 2014 Paralympic Games in Russia a step closer.

Abdo Sleiman Haidar,
SRPros/Orth, MBAPO, MISPO
Consultant Prosthetist and
Clinical Director,
The London Prosthetic Centre

In the last 12 months, Heather has had five high-speed skiing accidents, all of which led to her being hospitalised. These accidents included fracturing her left shoulder twice, snapping her anterior cruciate ligament once and smashing her scapula into five pieces. Heather had to be airlifted off the slope on one occasion.

Heather uses a bespoke skiing leg designed and fitted by The London Prosthetic Centre.

Competition at the Paralympics is at a very high standard and therefore the devices the amputee athletes uses must also be to a very high standard. Skiing biomechanics is complicated when trying to analyse able bodied turning, edging, and pressuring the ski, and more so when trying to analyse amputee skiing. A below knee amputee has suffered the loss of the ankle joint, reduced knee control and lack of proprioception; therefore a skiing prosthesis must be designed to compensate for this. The aim is to achieve symmetry for both the lower limbs. To achieve this the prosthesis must be well suspended to the user and not hinder the user's range of movement.

The difficulty we faced when designing a prosthesis for Heather was finding a design that would enable her to ski more freely with improved stability. Time, attention to details and good

THE London Prosthetic Centre

SCIENCE, ART & INNOVATIONS

we listen, we care

Providing exclusive, cutting-edge prosthetic care within a private setting equipped with state-of-the-art workshop and silicone facilities

individual care

We understand that every patient is different. Out specialised prosthetic service ensures that your clinical care package is created to complement your lifestyle and to help you enjoy life.

experience

Out highly trained and experiencd clinicians can customise the most functional, comfortable, lightest and cosmetic prosthesis available within days of assessment.

values

We have an honest and caring relationship with our clients, offering them and their families support, evidence-based, cost effective interventions and continuity of care. Our patients are never rushed into making decisions.

specialities

- Prosthetics
- Orthotics
- Custom Silicone Cosmesis
- Medico-Legal Reports

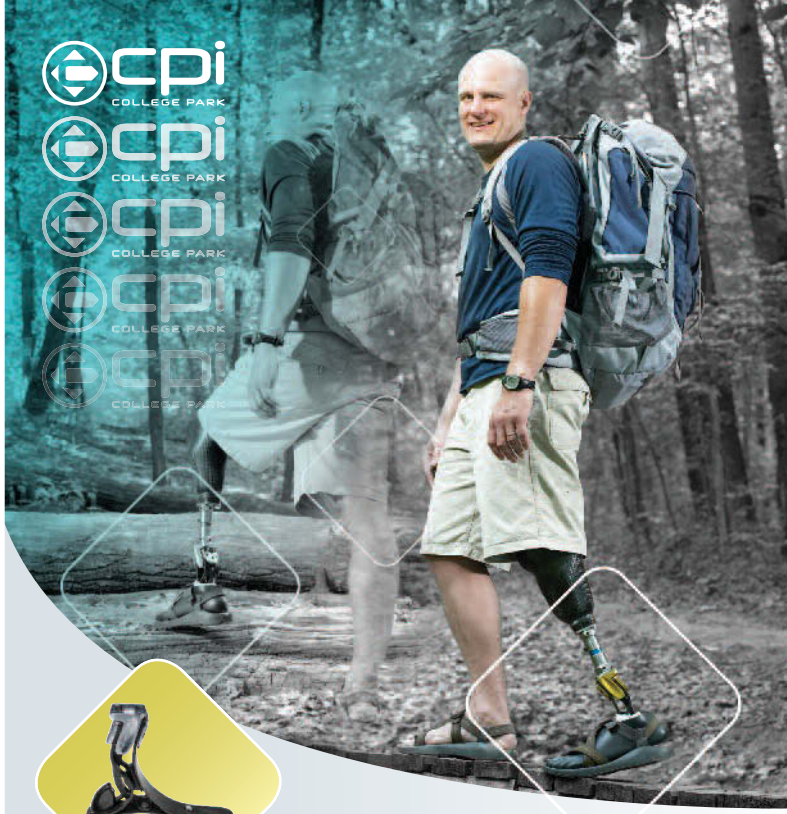
Contact us for a free consultation on

0208 789 6566 or **07752 686 439**

www.thelondonprosthetics.com

The London Prosthetic Centre
10 Harley Street,
London, W1G9PF

The Silicone Clinic
Unit 20, Kingsmill Business Park,
Kingston Upon Thames, Surrey, KT1 3GX



An innovative multiple spring design produces natural movement, smooth transition and superior range of motion.

Involving the entire foot in absorbing and returning energy, the Soleus provides unsurpassed comfort for active lifestyles.

salesdesk@rslsteeper.com | 0870 240 4133
www.rslsteeper.com

RSL STEEPER
Improving people's lives

The London Prosthetic Centre designed skiing leg for Heather Mills – *Improvement to Heather's latest prosthesis can still be made and this is work in progress.* ***The prosthesis discussed in this article is designed for the purpose of skiing only and is not designed to be used for walking.***

HEATHER MILLS

communication with Heather and her coach were very important in finding the ideal solution. The key was to provide maximum control and manoeuvrability, to enable Heather to take corners close to the ground and really attack them with complete confidence. To achieve this we designed and fitted the socket in a way that considerably reduced residual limb and socket movement and enhanced control and focus.

Following many trials, research and a visit to the ski slopes the following prosthesis was designed:

- Lightweight carbon fibre exoskeletal prosthesis.
- Winding clutch locking system: Elongation of the excessive residual soft tissue on the residual limb was necessary to obtain a secure fit with minimal pistoning.
- Silicone liner with a sturdy matrix: This is necessary to achieve reduced soft tissue displacement distally.
- Polycentric external knee joint side steels system: This design also improves the retention of the residual limb in the socket during knee flexion.
- Custom made carbon fibre semi flexible corset brace with the lateral and medial walls lowered: The corset proximal walls were lowered to improve the manoeuvrability around bends when skiing.
- Dynamic SACH foot: The foot/ankle joint was dorsiflexed to approximately 25 degrees.

LimbPower meets Danny Crates as he prepares for the London Marathon

Paralympian Danny Crates, is a former Paralympic gold medallist, World champion, European champion, Paralympic World Cup winner and world record holder and is currently preparing to tackle the London marathon.

After retiring from athletics what made you decide to run the London Marathon?
"It's another challenge. Being a runner it was the obvious choice. It was another thing I wanted to achieve."

How proud were you to carry the British flag at the Paralympics?
"Massively, every time I put the British vest on I knew what it represented, so to be chosen to carry the flag at the opening ceremony was my proudest moment".

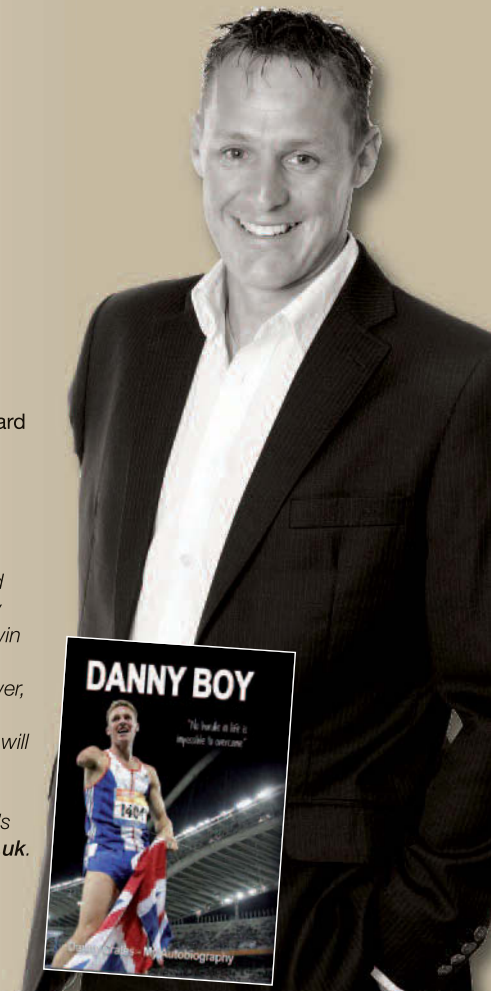
How disappointed were you to miss your race due to injury at the same Paralympics?
"It was less than 24 hours after carrying the flag that I tore my calf muscle. I was given an anaesthetic straight into the calf to see if I could run through the pain. It was incredibly disappointing.

What was the highlight of your career?
"The highlight was winning the gold medal in Athens, but the pinnacle of my career was carrying the British flag at the Beijing opening ceremony in 2008".

Did you have any superstitions, habits or rituals?
I used to wear a lucky Dolphin necklace for competitions. I had three just in case I lost one! I listened to the same music before every race, Anxiety by the Black Eyes Peas because it's about overcoming your enemies.

Who is your Paralympic hero?
"I don't have heroes as such. I admire anyone who works hard in life, even if they don't win. I like people who try to be the best that they can be."

***LimbPower** have a free-signed copy of Danny's autobiography "Danny Boy" to give away. To win this book please send in your name and address to LimbPower, Whitecroft, Tandridge Lane, Lingfield, Surrey, RH7 6LL. We will draw the competition on 17th November 2012. You can read the first paragraph from Danny's book at **www.dannycrates.co.uk**. I've just read it and bought the book, which you can do through the website.*



Lets meet the inspirational Jody Cundy...

LimbPower ambassador and five time Paralympic gold medallist Jody Cundy is training hard for the London 2012 Paralympics.

Jody, how much training are you doing at the moment?

"Training at the moment is 6 days a week, but 3 of those days are double sessions, mixed between Road, Track, Gym and Turbo Intervals".

At the age of five Jody underwent surgery to become an amputee, and had his first swimming lesson.

Jody, why swimming?

"I learnt to swim after I almost drowned in my first school lesson. I picked up the bug for it and worked my way through the swimming club until I was selected to race in my first galas. Shortly after I found out about the Paralympics, and had a goal to represent my country. Thankfully I was actually quite good in the pool, and loved training and competition and in the end spent 11 years on the GB swimming team".

At the age of 16 Jody represented Great Britain in the World Swimming Championships where he won a gold medal in the 100m Butterfly. During his 11 year swimming career Jody won an incredible 14 gold medals.

Jody, why the switch to cycling?

"I had come to the end of my swimming career, I'd won and done everything in the sport and found motivation waning, and it getting harder to improve. I attended a disability open day at the Newport velodrome. I loved the experience and was told by the coach I was a natural even though I'd never been on a track

Vari-Flex XC combines Flex-Foot® dynamics, shock absorption and comfort for a wide range of activities.

The impact reduction and smooth roll-over offered by the Vari-Flex XC are designed to accommodate hiking, jogging and cycling, as well as level ground walking – ideal for active people who want to use a single lightweight foot.

VARI-FLEX® XC - HIGH PERFORMANCE AND LIGHTWEIGHT FOOT FOR FOR A WIDE RANGE OF ACTIVITIES

www.ossur.co.uk

FOLLOW ÖSSUR ON

ÖSSUR

Life Without Limitations®

Jody Cundy

before. I explored this further by having another session on the track in Manchester, after which I was persuaded to enter the National championships, so I got myself a racing license and signed up. First race I did I broke the British Record in the flying 200m and was also close to doing the same on the Kilo and the Pursuit. I started to add a track cycling session to my training, and before long I was offered a trial for the GB team. I made the team and my first race in a GB skin suit I was part of the team sprint team and we broke the WR in the Paralympic world cup. After I was offered a full time place on the team, which I took and retired from swimming."

At the Para-Cycling World Championships in 2012 Jody took gold in the C4 1km time trial, silver in the team sprint and bronze in the C4 4km Pursuit.

Jody, after 18 years in competitive sport what motivates you to keep winning?

"Having a home Paralympic games only a few months away is a massive motivation, especially as I will be going into it as reigning champion. But I love my sport, and love everything that goes into it, so that helps me stay motivated".

So tell us about the leg…

Jody is working with Össur, to create the ultimate cycling leg. His current leg is painted white, with World Championship stripes circling what would have been the calf muscle. The chrome look it had in LA was vinyl. This masterpiece is made entirely of carbon fibre, it fits snugly to the leg and doesn't piston.

Jody what can you tell us about your new cycling leg?

"Basically it's a prototype at the moment, but is an improvement on the design we used for Beijing. It has a better fit and alignment, a new style of seal in liner, and is shaped to be more aerodynamic than the previous version".

Jody's liner is a new design of Seal-In liner from Össur, which suspends the leg with no pistoning enabling Jody to transmit power on the up and down stroke of the pedal. The alignment has been optimised over months of trials to ensure its perfect for Jody. Össur, used a different lamination method in order to make the leg as light and strong as possible and changed the shape of the leg to make it more aerodynamic.

In 2011, Jody launched his own cycling team, the Para-T Cycling Team, of elite para-cyclists to promote disability sport and became an ambassador for LimbPower. Jody hopes that the 2012 Paralympics will inspire a new generation of disabled athletes.

Five Steps to increase your fitness

Anyone can improve his or her fitness. Research suggests that exercise in older people 63 – 88 years can produce the same increase in flexibility as in 15 – 19 year olds, so it would seem that age is not a barrier to fitness. Getting back to fitness after injury or illness can seem impossible but it isn't; it just takes determination and patience. In addition to the loss of your limb/limbs your body will have changed; it will have become used to being sedentary from your hospital stay and to begin with you will have to make the effort to improve your fitness.

Step One. Consult your G.P. and rehabilitation consultant before you embark on any change in your physical activity. Find out whether your injuries have consolidated and what type and level of fitness is best suited to you physical ability. Your physiotherapist will give you a basic exercise programme, but you may need to ask for a programme or guidelines for moderate-intensity aerobic activity.

Step Two. Start walking. It is harder for an amputee to walk than an able-bodied person, which is why so many amputees lead a more sedentary life, which results in a greater risk of heart disease, high blood pressure and diabetes. It takes more energy to walk no matter what type of prostheses you use because walking with a prosthesis is less efficient. The good news is that amputees do not need to take as many steps

The World Health Organisation recommend that:

- **Children and young people aged 5 – 17 years old should accumulate at least 60 minutes of moderate to vigorous-intensity physical activity daily.**
- **Adults aged 18+ should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week, or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of moderate and vigorous-intensity activity.**
- **Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure.**
- **Regular moderate intensity physical activity – such as walking, cycling, or participating in sports – has significant benefits for health. For instance, it can reduce the risk of cardiovascular diseases, diabetes, colon and breast cancer, and depression. Moreover adequate levels of physical activity will decrease the risk of a hip or vertebral fracture and help control weight.**

Source: Global recommendations on physical activity for health, WHO

Use the *Prosthetic Conversion Factor to compare your activity to an able-bodied person.

STEP GOALS FOR AMPUTEES

Type of Amputation	Additional Energy Cost of Walking	Prosthetic Conversion Factor
Single below knee		
Long residual limb	25%	1.25
Short residual limb	40%	1.4
Above knee amputee	65%	1.65
Double below knee amputee	80-100%	2
Double above knee amputee	280%	4

** Taken from "Stepping Up to Health: using a pedometer for amputee fitness. Amputee Coalition of America.To convert your steps to the able-bodied equivalent multiply your steps by the appropriate conversion factor.*

Fitness experts use the following measures to check an individual's improvement in fitness.

1. Frequency (how often a task is undertaken)
2. Intensity (how strenuous the activity is)
3. Duration (how long the task is performed for)

Improvements in performance are measured by increasing the frequency, intensity and duration of an activity. To avoid over exertion never increase more than one of these at a time.

as able-bodied people to get the same fitness benefits.

Use a pedometer, step counter or keep a written record of your activity, you might surprise yourself with how much you are already doing.

Step three. Incorporate physical activity into your daily routine. Walk or cycle to work or school, use the stairs not the lift, walk rather than drive to carry out errands. Try not to let other people do everything for you, as this will not only increase your dependency, but it will reduce your level of activity. There are many other ways to improve your fitness including housework, gardening, swimming, dancing and playing golf. If you find walking too uncomfortable, you could try swimming or cycling for moderate-intensity aerobic activity.

Step Four. Increase the amount of activity you do gradually. It is important to get the balance right between increasing activity and not exhausting yourself or injuring yourself.

THE TALK TEST
If you can talk during an activity, but cannot sing, you are exercising at the right level. If you can't talk you are over-exerting yourself.

Another way to check your exertion is to monitor your heart rate. Your maximum heart rate (MHR) is calculated by subtracting your age from 220. Changes in your heart rate during activity will indicate whether your fitness is increasing. As you get fitter you should be able to do the same activity with a lower heart rate.

Step Five. Plan your activities. Make time to carry out your activities. Don't worry if you can't do a twenty-minute walk every day. Try doing some smaller ten-minute walks. Set realistic targets and stick to them. Keep a record of your activity and reward yourself when you achieve your targets.

Improving your fitness will enable you to perform daily tasks, you will feel better and have more energy to do the things you enjoy. Fit people burn more calories, event at rest and can do more without feeling exhausted. Other benefits of being fit are better weight control, reduced risk of heart failure, diabetes, high blood pressure, reduced stress, increased mental health and better sleeping patterns. If you are diabetic getting and staying fit will help you control the health problems associated with diabetes.

AMPUTEE GAMES 2012

"The best weekend of my amputee life"
Russ Young, previous participant

12th-13th May 2012

The Amputee Games takes place over two days, where participants are invited to take part in 14 Paralympic sports and meet staff and coaches from other sports governing bodies and associations. There will also be an opportunity to meet the team from Blatchford to learn about sporting and high activity prostheses, talk to staff from the Stewarts Law "Advice Clinic" and attend a Belly dancing class to help with core stability.

Participants at this years amputee games will be allocated to a group, with a group mentor. The group mentor will be an amputee who has previously attended the event. They will be available to help and encourage their group, offering advice and support throughout the event.

How the games work

- The programme has been streamed, so that each group has an opportunity to take part in all of the sports.
- Each group will be given a set programme to follow, with different sport choices for each session.
- Participants are required to participate in all four of the competitive sports and can participate in the "have-a-go" sessions highlighted in the programme. Points will be awarded to competitors finishing in the top three places for each of the competition sport.
- The competition sports are; archery, shooting, swimming, and table tennis. There are no restrictions on the "have-a-go" sessions, but bonus points are awarded for taking part in the "have-a-go" sessions.
- Competitors will be given a score sheet on which to record the "have-a-go" sessions. The onus is on the participants to ask the sport officials to sign the score sheet for all of the "have-a-go" sessions as a record of participation.

POINT SCORING SYSTEM

FIRST PLACE will receive 5 points,
SECOND PLACE will receive 4 points,
THIRD PLACE will receive 3 points

Limb POWER
Life after limb loss

All competitors will receive 1 point for taking part.

The Games finish at 4 pm on Sunday after the awards ceremony.

Weekend Programme

Saturday 12th May

	Blue – Damian	Purple – Gemma	Pink – Gary	Green – Kelvin	Yellow – Mary	Orange – Russ
9.00 – 9.45	Cycling/Rowing/ Fencing	Shooting/Athletics/ Tennis	Powerlifting/Basketball/ Archery	Cycling/Rowing/ Fencing	Shooting/Athletics/ Tennis	Powerlifting/Basketball/ Archery
10. 00 – 10.45	Powerlifting/Basketball/ Archery	Cycling/Rowing/ Fencing	Shooting/Athletics/ Tennis	Powerlifting/Basketball/ Archery	Cycling/Rowing/ Fencing	Shooting/Athletics/ Tennis
10.45 – 11.15	Tea & Coffee	Tea & Coffee	Tea & Coffee	Tea & Coffee	Tea & Coffee	Tea & Coffee
11.15 – 12.00	Shooting/Athletics/Tennis Archery	Powerlifting/Basketball/ Fencing	Cycling/Rowing/ Tennis	Shooting/Athletics/ Archery	Powerlifting/Basketball/	Cycling/Rowing/ Fencing
12.15 – 13.00	Cycling/Rowing/ Fencing	Shooting/Athletics/ Tennis	Powerlifting/Basketball/ Archery	Cycling/Rowing/ Fencing	Shooting/Athletics/ Tennis	Powerlifting/Basketball/ Archery
13.00 – 14.00	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
14.00 – 14.45	Powerlifting/Basketball/ Archery	Cycling/Rowing/ Fencing	Shooting/Athletics/ Tennis	Powerlifting/Basketball/ Archery	Cycling/Rowing/ Fencing	Shooting/Athletics/ Tennis
15.00– 15.45	Shooting/Athletics/ Tennis	Powerlifting/Basketball/ Archery	Cycling/Rowing/ Fencing	Shooting/Athletics/ Tennis	Powerlifting/Basketball/ Archery	Cycling/Rowing/ Fencing
15.45 – 16.15	Afternoon Tea	Afternoon Tea	Afternoon Tea	Afternoon Tea	Afternoon Tea	Afternoon Tea
16.15 – 17.00	Free Sport & Competition	Free Sport & Competition	Free Sport & Competition	Free Sport & Competition	Free Sport & Competition	Free Sport & Competition
17.15 – 18.00	Free Sport & Competition	Free Sport & Competition	Free Sport & Competition	Free Sport & Competition	Free Sport & Competition	Free Sport & Competition

16.30 Road bike ride beginners & road bike ride intermediates (1 hour)
17.00 – 18.00 Archery Competition
15.00 –18.00 Swimming Competition

For the 2012 Amputee Games we are putting the participants into colour coded groups where they will have a group mentor who will meet with them on the Friday evening or Saturday morning and who will be available to help them with the programme or any questions they have about the event. Each group will have a personalised programme of events to encourage participants to take part in all of the sports on offer. For each session there will be a choice of sports to ensure that participants taking part in the competition sports don't miss out. All sports are repeated to give participants a chance to try everything.

Sunday 13th May

	Blue – Damian	Purple – Gemma	Pink – Gary	Green – Kelvin	Yellow – Mary (Swimming competition)	Orange – Russ (Swimming competition)
9.00 – 9.45	Table Tennis/Cycling/ Rowing	Football/Athletics/ Shooting	Volleyball/Powerlifting/ Badminton	Table Tennis/Cycling/ Rowing	Volleyball/Powerlifting/ Badminton	Football/Athletics/ Shooting
10.00 – 10.45	Rugby/Athletics/ Shooting	Table Tennis/Cycling/ Rowing	Rugby/Athletics/ Shooting	Volleyball/Powerlifting/ Badminton	Table Tennis/Cycling/ Rowing	Volleyball/Powerlifting/ Badminton
10.45 - 11.15	Tea & Coffee	Tea & Coffee	Tea & Coffee	Tea & Coffee	Tea & Coffee	Tea & Coffee
11.15 – 12.00	Volleyball/Powerlifting/ Badminton	Football/Athletics/ Shooting	Table Tennis/Cycling/ Rowing	Football/Athletics/ Shooting	Volleyball/Powerlifting Badminton	Table Tennis/Cycling/ Rowing
12.15 – 13.00	Table Tennis/Cycling/ Rowing	Volleyball/Powerlifting/ Badminton	Rugby/Athletics/ Shooting	Table Tennis/Cycling/ Rowing	Rugby/Athletics/ Shooting	Volleyball/Powerlifting
13.00 – 14.00	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
14.00 – 14.45	Volleyball/Powerlifting	Table Tennis/Cycling/ Rowing	Volleyball/Powerlifting	Football/Athletics/ Shooting	Table Tennis/Cycling/ Rowing	Football/Athletics/ Shooting
15.00 – 15.45	Rugby/Athletics/ Shooting	Volleyball/Powerlifting	Table Tennis/Cycling/ Rowing	Volleyball/Powerlifting	Rugby/Athletics/ Shooting	Table Tennis/Cycling/ Rowing

12.15 – 15.45 Table Tennis Competition
All day Shooting Competition

This programme is subject to change. Please check the website for updates

Five Steps to Cycling

By **Kiera Roche**
Amateur amputee cyclist

Cycling is a perfect exercise for lower limb amputees and the ambulant disabled because it is a non-impact sports.

Step One

Before embarking on any form of exercise consult with your Rehabilitation Consultant and GP to ensure you are fit enough to take on the activity and to ensure you are given the right advice on exercises to build muscle strength and the right prosthetic set up. Most amputees can cycle whether it be a bicycle, a tricycle or a hand bike. If you would like some advice before getting started you can join LimbPower at one of our Cycling Clinics.

Step Two

Now you have been given the all clear to cycle it's time to build your confidence and fitness. I started cycling in the gym on a static bike and when I felt confident I could cycle without getting out of breath I moved on to rollers (used by professional cyclists where the bike is placed on a stand). You can build your fitness gradually while getting used to the bike you will be cycling on outdoors and you can make the necessary adjustments for safety and comfort. Some people prefer to get straight on a bike, but it is important to have the right set-up.

Step Three

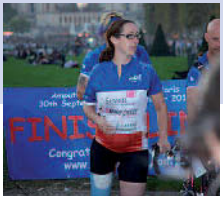
If you are planning to do more than the odd bit of recreational cycling your prosthesis will need some adjustments.

BELOW KNEE AMPUTEE

Consider adjustments to the back of the socket brim to allow full knee flexion. Lowering the socket brim will make walking more difficult, but will improve cycling performance. Some prosthetists have designed a removable brim, which can be taken off for cycling and replaced for walking. Also consider replacing suspension systems that cross the knee, such as suction


pace
rehabilitation
www.pacerehab.com
CONVERTING PATIENTS
INTO PEOPLE
Rehabilitation Services
Prosthetics | Orthotics
Physiotherapy | Counselling
Occupational Therapy
Immediate Needs Assessments
Expert Witness Services
Quantum Reports
Above the knee amputee
returns to mountain biking
Back to life –
in the saddle
National Referral Centre
Tel: 0845 450 7357
Email: info@pacerehab.com
PACE Rehabilitation
36 Brook Street, Cheadle,
Cheshire, SK8 2BX
Unit 1, Anglo Business Park, Asheridge Road,
Chesham, Bucks HP5 2QA

Cycling



sockets with the distal pin-and-lock system. Some amputees cycle with the suspension system, but I prefer the pin-and-lock system.

ABOVE KNEE AMPUTEE

You need adequate clearance between the saddle and the socket brim to avoid the socket catching the saddle. The brim of my cycling socket made by Richard Nieveen at ProActive Prosthetic has been lowered to allow this clearance, but is not suitable for walking long distance. For road cycling a knee that allows free motion on the bike will be easier to use. Choose a knee that is safe to walk on in a free swing mode. For mountain biking there is a specialist knee, the Bartlett Tendon. (see the Pace Rehabilition Ad). This unique system enables the amputated leg to provide power back to the bike, as well as enabling the user to stand and sprint out of the saddle.

Step Four

Ensure your bike is the right frame size and has a comfortable 'reach' to the handlebars. The distance between your crotch and the top tube determines the frame size of your bike. The right sized frame should have at least 6cm clearance.

BIKE ADJUSTMENTS

Make sure your saddle is at the correct height. With the balls of your feet on the pedals, your knee should be very slightly bent at the bottom of the pedal stroke. Above knee amputees will find that having a good saddle height will increase the clearance of the socket and reduce discomfort. There is a trade off between being able to stop and put your feet on the floor for balance and the efficiency of having a higher saddle.

Cycling requires a smooth cadence. Amputees often find there is not enough clearance between the foot and the knee when pedalling. Having a shorter crank on the side of the artificial limb can overcome this.

Secure the artificial foot to the pedal for safety. Options are:

1.Toe-clips with straps, which you can buy from most bike shops.

2. Clipless pedals, which have mechanisms that clip your cycling specific shoe directly onto the pedal. I use mountain bike shoes and spd clips as they enable me to walk without too much discomfort, where as road-bike shoes are difficult to walk in.

Step Five

For building up fitness and putting the miles in, comfort is of paramount importance. Here are some techniques to help you.

RULE OF THIRDS

Distribute your body weight evenly between your hands, feet and your seat. You'll probably find yourself leaning forwards at an angle of 30 to 45 degrees – halfway between an upright position and a low, crouching position. With your weight evenly distributed you are less likely to feel pressure on your back or stomach.

CADENCE

Cadence is the rate at which the cyclists pedal. You should be looking at 85-100 rpm for a smooth and efficient pace. Over-gearing is unnesessary and wastes energy.

As you don't have as much strength in your residual limb hill climbing is more difficult. You can combat this with training and tackling the hills in a lower gear and a higher cadence. Make sure your bike has lots of gears. I have a road bike, with mountain bike gears at the rear.

A Nike accessory for the new age of Paralympic glamour

By **Stuart Hughes** *BBC News*

Fashionable brands have long dominated the sportswear market, but up to now few have specifically targeted disability sports. Nike has now become the first to produce a sole for a blade used by amputee runners. Has the era of Paralympic chic dawned?

It's one of the most widely recognised, and lucrative, brands in the world. The distinctive Nike swoosh logo has adorned the kit of sporting greats and helped to sell billions of pounds of sportswear around the globe.

Many of the sportsmen and women Nike sponsors embody not just outstanding sporting achievement but also an ideal of physical perfection.

But for one of its newest products, Nike has teamed up with an athlete whose sporting prowess is based on her physical difference from her rivals.

Sarah Reinertsen is a record-breaking sprinter, marathon runner, triathlete and Ironman competitor. She also happens to be an above-knee amputee.

Born with a bone-growth disorder, Reinertsen underwent an amputation at the age of seven. She has collaborated with Nike in the design of a new lightweight sole, emblazoned with the famous swoosh logo, which clips on to a carbon-fibre running blade.

Reinertsen admits that a partnership with the world's biggest sportswear firm is a far cry from her early days as a competitive athlete.

"For many years I didn't have any sponsors," she told BBC News.

"We'd do little local fundraisers in my town to try to raise some money just so I could compete."

The big money deals are still enjoyed by only a few Para-lympians – but marketing

Paralympic glamour

experts say there are clear signs that perceptions are changing.

Athletes like South African double amputee sprinter Oscar Pistorius are helping to lend some Olympic glamour to Paralympic sports, says Steve Sutherland, a sports marketing consultant.

"I'm not surprised that huge brands are becoming more involved. There's a higher level of awareness of the Paralympics and the competitors are no longer being patronised – they're being taken seriously and seen as athletes in their own right, as they should be," he says.

The reason for the growing attraction of the Paralympics may lie in its position as what advertisers call a "challenger brand" – a smaller but potentially more nimble player in the marketplace.

It offers firms a chance to bask in the glow of the Olympic flame for a fraction of what it would cost to be involved in the able-bodied Games.

But one leading figure in the prosthetics industry is uneasy about the entry of "fashion" into this area. "Young amputees, such as soldiers who have been injured in Afghanistan, are aspirational. Fashion is important to them because of their age," says Saeed Zahedi, visiting professor in prosthetics at the University of Surrey. "Companies will do anything to increase their sales but these are medical devices.

"I'm sceptical about using fashion and branding to sell prosthetics unless there's clinical evidence to back it up."

Some fear the current wave of interest may be little more than a passing fad – but elite athlete Sarah Reinertsen believes disability sport is here to stay.

"I think this is only just the beginning," she predicts.

"Disability may be the 'new cool' right now – but I think this trend is just going to continue to grow.

"Disabled people are not going to go away and neither is the Paralympics."

A longer version of this article first appeared on the BBC News website

Five Steps to Running

By **Robert Gailey,** *PhD, PT*

Learning how to run with a prosthesis can be very challenging, yet, when simplified into series of relatively basic elements, it can be much easier to learn. The following are the five easy steps that have made it possible for me to teach hundreds of people to relearn the skill of running, and enabled them to benefit from the ability to move fast when necessary. Initially, for safety reasons, I strongly suggested that skilled clinicians work with their clients and use a gait belt.

Figure 1. Prosthetic Thrust—reaching out with the prosthetic limb and knowing it will be there

Step 1: Prosthetic Trust

Step One requires gaining trust in the prosthesis, or instilling the confidence of knowing that the prosthetic limb is going to be there and not collapse when the amputee's prosthetic limb strikes the ground. This is accomplished by reaching out with the prosthetic limb and landing squarely on the foot. The runner should ignore everything else and know that the prosthetic limb will be there.

Step 2: Backward Extension

Step Two, the runner reaches out with the prosthetic foot during swing. Just prior to striking the ground, the prosthetic leg pulls back forcefully creating a backward force. As a result, the ground will produce a forward force accelerating the body forward. This movement has two effects: First, it will accelerate the body forward causing an increase in speed and, second, this movement will give you the power to shift your body weight over the prosthesis and fully load your prosthetic foot resulting in maximum prosthetic foot performance as you load the forefoot.

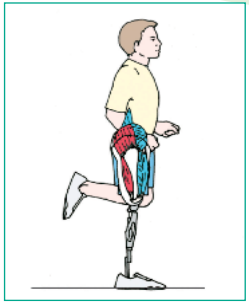


Figure 2. Backward Extension – pushing back against the socket wall exerting a forward force

Step 3: Sound Limb Stride

During Step Three, the focus now shifts to the sound limb. The runner should concentrate on taking a longer stride with the sound limb. This can be easily accomplished by continuing to pull down and back through the prosthetic limb. Pulling back

Running

Robert Gailey, *PhD, PT is a Professor at the University of Miami Miller School of Medicine where he continues to perform research and publish on prosthetic and amputee rehabilitation.*

Figure 3. Sound Limb Stride – reaching out with sound limb for an equal stride length

Figure 4. Arm Carriage – moving the arms in opposition to the movement of the legs

during the prosthetic foot's initial contact with the ground initiates the movement pattern. The runner should continue to extend the hip by pulling down and back into the socket. This will generate more power and a stronger push off with the prosthetic limb, which will, in turn, enable the sound limb to reach out to complete a full stride.

Step 4: Stride Symmetry

Step Four is really a phase designed to decrease the enormous effort that is being exerted and to simply relax and jog a little. Therefore, the runner should choose a comfortable jogging pace that produces an equal stride length for both limbs. There should not be any concern for the arms, concentration should be focused on maintaining stability over the prosthetic limb using the muscles of the hips to create equal and relaxed strides.

Step 5: Arm Carriage

Finally, Step Five is focused on arm swing. The arms and legs move in opposition to each other, so, as the right leg moves forward, so will the left arm. The elbows should flex to about 90 degrees and the hands should be loosely closed and rise to just below chin level when brought forward. Just as in walking, arm swing is really the result of trunk rotation, as the trunk and pelvis rotate in opposition to each other for balance, momentum and economy of effort.

Putting It All Together

Finally, the runner should be ready to put all the individual elements of running together. The runner should relax and think about only a couple of elements of running with each pass. Many long distance runners augment their endurance training program by utilizing low impact activities such as swimming, stationary biking or stair climbing machines. In time, the runner will develop his/her own comfortable running style, depending on the sports or recreational activities chosen for participation.

Learning to run can take place on just about any type of prosthesis, and initially the prosthetic foot is not critical. However, if the amputee decides that running is going to be a part of his active lifestyle they should discuss with their prosthetist the various available prosthetic options. Classically, the Flex-Foot has been considered the foot of choice for higher level activities, with the Flex-Sprint foot worn by most competitive athletes. Currently, there is also a relatively new design, the Flex-Run, which is engineered for recreational jogging and longer distance training. The same principles of running apply regardless of the prosthetic foot; however, prosthetic feet designed for running can reduce the effort and improve performance.

To learn more about gait training, exercise and basic running techniques, visit www.advancedrehabtherapy.com for the Functional Training Series book and DVD collection.

Prosthetics Technology and Sport

by **Carl Elliott**, *Prosthetist and Clinical Manager Seacroft Hospital, RSLSteeper Leeds*

Within the last four decades rapid advances have been made in the field of prosthetic provision and component development.

From the use of wood, leather and metal for the manufacture of prostheses to prostheses and components manufactured from plastics, titanium, carbon fibre and silicone. From feet and knees that were nothing more than simple single axis pivots and hinges to "intelligent" microprocessor controlled units containing pneumatic and hydraulic cylinders. Indeed many of the recent innovations developed within the last ten years lend much of their design and concept to innovations within aeronautics development and design.

With the ever increasing profile of amputee athletes competing at elite level prosthetic component suppliers have focused much of this strive for innovation on the development of sports specific components.

Sockets and CAD.

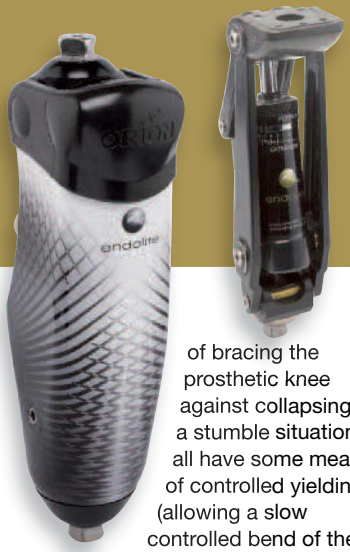
In simple terms the socket is the "cup" into which the residuum (or "stump") inserts and is therefore the crucial interface between the natural remaining anatomy and the artificial limb. Companies and training institutions have developed designs in socket shape that improve both comfort and control of the prosthesis. The most significant development has been in the application of silicone, polymer gel and urethane liners that roll onto the residuum. These liners act as an interface between the skin and the socket reducing shear and impact forces whilst improving limb suspension with the application of a connecting pin or valve/air expulsion system. The result is greater control over the prosthesis and enhanced confidence and comfort for the athlete.

The application of CAD (computer aided design) in systems such as the Bio Sculptor now mean that the Prosthetist is able to scan the residuum and produce a "virtual" model on a P.C. which can be used to produce an accurate 3D model from which a socket can be manufactured.

Feet

In broad terms feet are either designed to be compliant or bio mechanically efficient (– returning much of the energy put into walking/running back to the amputee as a force driving the leg forward).

At the top end of the energy efficiency are specialised sports specific feet made purely from carbon fibre designed as energy



storing distortable “J” or “C” shapes. Other prosthetic feet can be compliant to uneven terrain or designed to allow the wearer to adjust the foot according to heel height and activity undertaken.

Knees

A number of companies have developed Microprocessor knees that are programmed to the gait needs of the individual and can have sports specific settings stored within them (for example locking the knee at a predetermined angle of flexion for golf). Each of these knees varies slightly in design and concept but some common themes remain. Each adapts the speed at which the knee swings according to the speed at which the amputee is walking. Most have some means of bracing the prosthetic knee against collapsing in a stumble situation and all have some means of controlled yielding (allowing a slow controlled bend of the knee permitting ease of descent of stairs and ramps).

Microprocessor knee however are not appropriate for many high impact sporting activities or events in which the participant will be running. Prosthetic knees have therefore been developed that are more robust in design and will permit the knee to swing freely during swing and extension with some having the option of disengaging the knee mechanism for scenarios in which minimal resistance is required. (e.g. cycling).

stewartslaw

LEGAL SERVICE, AMPUTEE GAMES 2012

Following a serious injury, a number of legal and financial issues can arise. On the 12th and 13th May 2012, Stewarts Law will hold a free legal service for all participants of the Amputee Games where advice can be provided on a range of issues, for example;

- **WELFARE BENEFITS**
- **DEBT**
- **INSURANCE**
- **EMPLOYMENT**
- **HOUSING AND ADAPTATIONS**
- **CARE ARRANGEMENTS**
- **POWERS OF ATTORNEY**
- **COMPENSATION**

In the event that we identify a claim for compensation, we will provide you with preliminary advice and an explanation of the law, so that you understand your legal rights. We will also provide you with a list of alternative law firms. Stewarts Law are included on the list, but there is no obligation to instruct us in relation to the Compensation claim. We would encourage you to evaluate a number of law firms, as it is an important decision.

If, during the course of the meeting, other legal issues are identified that are not compensation related, for example, benefits, housing and insurance, then Stewarts Law will be willing to assist you with those issues free of charge. It is the type of legal work for which you would not ordinarily be able to secure legal representation and is the work traditionally done by the Citizens Advice Bureau and Disability Rights UK. Stewarts Law will provide you with all of the assistance that you require.

Examples of the pro-bono work that Stewarts Law have undertaken:

Patient A sustained a brain injury as a result of brain haemorrhage. This patient had concerned about securing the payment from a critical illness policy following her sub-arachnoid haemorrhage. The Insurers were unwilling to make payment to Patient A, stating that a haemorrhage did not fall within their definition of a critical illness. We analysed the policy documents and noted that a sub-arachnoid haemorrhage could fall within a definition of a stroke. We obtained written confirmation from a Consultant at the Hospital and as a result the patient received full payment under the policy.

Patient B sustained a spinal cord injury as a result of a road traffic accident. Whilst his particular patient was in Hospital, the Company that he was employed by for 25 years went into liquidation without giving the patient any notice or redundancy payment. We advised the patient that he could claim redundancy payment from the Insolvency service. The patient subsequently received £11,000.00. The patient also had no-fault critical illness cover through his Employer. As his Employer was in liquidation he did not think that he would be entitled to any payment and therefore did not submit a claim. We advised that he would be

entitled to claim as the insurance was in place when the accident occurred. We subsequently assisted the patient with the claim form for critical illness cover.

Patient E sustained a spinal cord injury after a domestic fall. The patient had concerns regarding her finances and wished to execute a power of attorney. After several discussions with the patient and the family we advised that a limited power of attorney which was limited in scope and time and would allow her to concentrate on her rehabilitation whilst she was in Hospital. Once discharged from Hospital, she would be able to take full control of her finances again.

Stewarts Law are committed to supporting LimbPower and have been proud sponsors of the Amputee Games for many years.

Please feel free to visit one of our representatives at our stand in the sports hall today

Alternatively, please contact:

Kara Smith
ksmith@stewartslaw.com
Mobile: 07717 878 131

Sepie Nourouzi
snourouzi@stewartslaw.com
Mobile: 07769 142 262

About Us

Stewarts Law is the largest litigation only Law firm in the UK. The firm is top-ranked in both the Legal 500 and Chambers, the two leading guides to the legal profession in the United Kingdom.

The firm is a leading Personal Injury Law firm, specialising in pursuing high value and complex personal injury claims with expertise in compensation claims following traumatic amputation and limb loss.

The firm is proud of the Stewarts Law Foundation, which is committed to supporting a wide range of charitable causes, and of its ongoing commitment to completing pro-bono work.

SPORTS Contacts

ARCHERY

Archery is a test of accuracy, strength and concentration. It is open to men and women with a physical disability. There are three classifications in Archery: Standing, Wheelchair One and Wheelchair Two. Paralympic disciplines comprise Compound or Recurve Bows.

Archery GB
Helen George
Tel: 01952 677888
Email: helen.pipedream@talktalk.net
Web: www.archerygb.org

ALPINE SKIING

Alpine skiing is the sport of sliding down snow-covered hills on skis with fixed-heel bindings, also known as downhill skiing .There are 4 disciplines Downhill, Slalom, Giant Slalom and Super Giant Slalom.

Disability Snowsport
Rachel Easton – Development Officer
Email: rachel@disabilitysnowsport.org.uk
Web: www.disabilitysnowsport.org.uk

ATHLETICS

Amputees can take part in a variety of track and road events ranging from the 100 m to the Marathon. They can also compete in Field events such as the Long Jump and the Javelin. LimbPower work with UK Athletics and England Athletics to deliver Introduction Days to amputees. The running AVIVA Parallel Success Coach and Athlete Talent Introduction Days will take place between November and March 2012/2013.

UK Athletics
Katie Jones – Senior Co-ordinator – Paralympic Talent
Tel: 0121 713 8462
Email: info@uka.org.uk
Web: www.uka.org.uk

England Athletics
Shelley Holroyd (North)
Tel: 07912070625
sholroyd@englandathletics.org
Job King (Midlands and South West)
Tel: 07841 504311
jking@englandathletics.org
Liz Purbrick (South)
Tel: 07850 514936
lpurbrick@englandathletics.org
www.englandatheltics.org/disabilityathletics

ADAPTIVE ROWING

Adaptive rowing is about removing barriers to participation in the sport for anyone with a disability. It best suits those with spinal cord injuries, visual impairments, lower limb amputations or restricted movement in a lower limb or wrist.

British Rowing
Madeleine Millichap – British Rowing Adaptive Development Officer
Helen Blamey – GB Rowing Talent Coach
Tel: 0870 0607100
Email: madeleine.millichap@britishrowing.org
Email: Helen.Blamey@gbrowingteam.org.uk
Web: www.britishrowing.org/adaptive

BADMINTON

Parabadminton caters for most disabilities, if you can pick up a racket, you can still play badminton. Parabadminton has provided players of different disabilities and backgrounds an opportunity to interact under a common purpose.

Playing badminton with a disability requires both physical and mental strength.

Tom Webster
Disability Manager, Badminton England
Tel: 01908 268 400
email: TomWebster@badmintonengland.co.uk

CANOEING

Canoeing allows family and friends to experience exercise that is therapeutic for both mind and body. The sport is so diverse that there is literally something for everyone, regardless of your age or ability. More importantly, canoeing is pleasurable, fun and a great way of accessing the outdoors; exercising and gaining independence. Together, able bodied and disabled can share all aspects of the sport.

Canoe England PaddleAbility
Clarisse Smith, Disability Officer,
Tel: 07702 954949.
Email: clarisse.smith@canoe-england.org.uk
Web: www.canoe-england.org.uk/our-sport/paddleability

CYCLING

Cycling is open to both men and women with a physical or visual disability. For competition athletes with cerebral palsy and locomotive disabilities are classified together in 5 divisions.

British Cycling
Paul West – Paracycling Development Officer
Tel: 061 274 2021/07507 641267
Email: paulwest@britishcycling.org.uk
Web: www.britishcycling.org.uk

GOLF

The Disabled Golf Society aim is to bring together all disabled golfers, irrespective of gender, age or ability, and help them enjoy golf on a level playing field, or in our case a level golf course!

Disabled Golf Society
Graeme Robertson, national co-ordinator
Tel: 0118 979 0193 / 07932 061680
Email: Graeme.Robertson@disabledgolf society.com
Web: www.disabledgolfsociety.com

PARA-EQUESTRIAN

Para-Equestrian Dressage has been steadily developing for the past 25 years and riders with a wide variety of disabilities participate in the sport. Equestrian is one of the few sports where men and women compete against each other. It is a sport open to anyone with a physical disability. Its classification system puts riders into four grades.

British Dressage Ltd
Amy Cullen – Para Officer
Tel: 024 76 698830
Web: www.britishdressage.co.uk

FOOTBALL

Football for amputees and the ambulant disabled is available across the country at local club level within the pan (or multi)

disabled set up. This can be played as 5 or 7 a-side for fun or in a competitive league run by the EAFA.

The 7-a-side version of the game is open to male athletes with Cerebral Palsy who are classified in ambulant classes five, six, seven and eight, of which class five players have the highest level of impairment. Teams must include at least one player from either class five or six.

English Amputee Football Association
Steve Johnson - Chairman.
Tel:07906477647
Dave Tweed – Football development officer
Tel: 07974118717
Email: chairman@theEAFA.co.uk
Email: fdo@theEAFA.co.uk
web: www.theEAFA.co.uk

Football Association
Jeff Davis – National Football Development Manager (Disability)
5-a-side football is played in 21 countries.
Tel: 020 7745 4545
Email: FootballforAll@TheFA.com
Web: www.thefa.com

ICE SLEDGE HOCKEY

As its name suggests, players sit in sledges and propel themselves using sticks with a spike in the one end to dig into the ice and a blade in the other end for shooting. The sledges are raised slightly off the ground, which allow the puck to pass underneath the sledge, making ice sledge hockey an incredibly fast-paced sport. The sport is played by athletes with a physical disability in the lower half of their body.

The British Sledge Hockey Association
Simon Berry – Development officer
Email: info@sledgehockey.co.uk
Web: www.sledgehockey.co.uk

POWERLIFTING

IPC Powerlifting is the ultimate test of upper body strength. Competitors must lower the bar to the chest, hold it motionless on the chest and then press it upwards to arms length with locked elbows. The bench press is the only discipline with 10 different categories based on body weight. The athletes are given three attempts and the winner is the athlete who lifts the highest number of kilograms.

British Weight Lifting
Samantha Jamieson – British Weight Lifting Development Officer
Tel: 0113 8127098
Email: sam.jamieson@britishweightlifting.org
Web: www.britishweightlifting.org

SAILING

Sailing is open to everyone and all disabilities. There are three Sailing Classes within Paralympic sailing, a single person Keelboat, a two person Keelboat and a three person Keelboat.

The Royal Yachting Association
Debbie Blachford – Sailability Manager
Tel: 0844 556 9550
Email: sailability@rya.org.uk
Web: www.rya.org.uk/sailability

The Gwennili Trust
The Gwennili Trust provides yacht sailing opportunities for people with disabilities. Over the years people of all ages with a wide range of disabilities have enjoyed the thrill of sailing on our yachts.
Tel: 01488 658330
Email: ops@gwennili.org.uk
Web: www.gwennili.org.uk

SHOOTING

Shooting is open to athletes with a physical disability. There are two classifications at Paralympic level SH1 and SH2. SH1 incorporates pistol and rifle shooters who are able to support the weight of their weapon unaided. SH2 incorporates rifle competitors who are not able to support the weight of their weapon unaided and use a stand.

There are events in four different weapons: Air rifle, Air pistol, .22 rifles, .22 pistols

Disability Target Shooting GB
Dave Porrill – Chairman
Rosie Hughes – Secretary
Email: info@dtsgb.org.uk
Web: www.dtsgb.org.uk

VOLLEYBALL ENGLAND

Sitting volleyball is a version of Volleyball that has been adapted to allow anyone to participate including those with a disability. To play at an International level there are certain classification requirements that need to be met.

British Sitting Volleyball
Richard Stacey-Chapman, Sitting Volleyball Development Officer
Tel: 01509 22 77 14
Email: r.staceychapman@volleyballengland.org
Web: www.volleyballengland.org

SWIMMING

Swimming is open to men and women of all disabilities

At the Paralympic Games the eligible classifications are S1-S13. S1-S10 stands for swimmers with a Physical Impairment. S1 being swimmers with the most severe impairments through to S10 who have a minimal impairment. S11-S13 stands for those with a visual impairment. S11 being swimmers with no vision, S12 being swimmers can recognise the shape of a hand and have some ability to see. S13 swimmers who are the most sighted but are legally considered to be blind.

Disability Swimming
Tel: 01509 640 192
Email: wcpdisabilityswimming@swimming.org
Web: www.swimming.org

TABLE TENNIS

Table tennis also known as ping-pong is a sport in which two or four players hit a lightweight, hollow ball back and forth using table tennis rackets. The game takes place on a hard table divided by a net Table Tennis is open to male and female athletes with a physical or learning difficulty spread over 11 classes.

The English Table Tennis Association
Judy Rogers – Disability Lead Officer
Tel: 01424 722525
Email: judy.rogers@etta.co.uk
Web: www.etta.co.uk

SPORTS Contacts

WHEELCHAIR BASKETBALL

Wheelchair Basketball is one of the largest Paralympic Sports, it embraces a wide range of disabilities including amputees, paraplegics, spina bifida, brittle bones, cerebral palsy and multiple sclerosis. Able bodied players are eligible to play in divisions 1, 2, 3 and 4, junior league and women's league. Virtually everyone who can conceivably play wheelchair basketball is encouraged to do so. Classification is based on physical ability and players are given a points rating between 1 and 4.5: those with 1 point are the most severely disabled and those with 4.5 the least.

There are over 103 clubs in the country to encourage as many people as possible to try the sport at all levels.

British Wheelchair Basketball
Jay Popat – Club Development Officer
Tel: 01509 279900
Email: j.popat@gbwba.org.uk
Web: www.britishwheelchairbasketball.co.uk

WHEELCHAIR FENCING

In Wheelchair Fencing the athlete's wheelchair is clamped into a metal frame which holds the competitors at a given distance from each other. The fencer with the shortest arm decides if the playing area will be at his distance or that of his opponent.

The competition comprises individual and team events in foil, epee and sabre for men and individual and team events in foil and epee for women.

British Disabled Fencing Association
Cath Ross – Secretary
Email: info@bdfa.org.uk

WHEELCHAIR RACING

Wheelchair racing is the racing of wheelchairs in track and road races. Wheelchair racing is open to athletes with any qualifying type of disability, amputees, spinal cord injuries, cerebral palsy and partially sighted (when combined with another disability). Athletes are classified in accordance with the nature and severity of their disability or combinations of disabilities.

British Wheelchair Racing Association
Ian Thompson
Tel: 01642 789362
Email: i-thompson@hotmail.co.uk

WHEELCHAIR RUGBY

Wheelchair rugby is a full-blooded, contact sport developed initially for tetraplegics. It offers male and female players significant rehabilitation, health and social benefits. Wheelchair rugby became a full Paralympic sport at Sydney in 2000 and is without question one of the fastest-growing wheelchair sports in the world.

Great Britain Wheelchair Rugby
Steve Huckett – Company Secretary
Tel: + 44 (0)1482 442611
Email: steve.huckett@gbwr.org.uk
Web: www.gbwr.org.uk.

WHEELCHAIR TENNIS

Wheelchair Tennis is both great fun and great exercise. This dynamic Paralympic Sport can be played by anyone with a permanent physical disability. The only rule change from the able-bodied game is that the ball is allowed to bounce twice, as long as the first bounce is within the confines of the court.The Tennis Foundation organise come and try weekend camps as well as a full competitive structure of tournaments in the UK and there is also an international tour of over 170 events.

Tennis Foundation
Tel: 0845 872 0522
Email: disabilitytennis@tennisfoundation.org.uk
Web: www.tennisfoundation.org.uk

LIMBPOWER

LimbPower – The British Ambulant Disabled Sports and Arts Foundation. Provide access to sport and the arts through events, the provision of useful and relevant information, access to facilities and opportunities for participation in sport and the arts.

Kiera Roche, Chairman
Tel: 07502 276858
Email: kiera@limbpower.com
Web: www.limbpower.com

THE ENGLISH FEDERATION OF DISABILITY SPORT

The English Federation of Disability Sport (EFDS) was established in September 1998 as the national body and charity dedicated to disabled people in sport throughout England.

Tel: 01509 227750
Email: federation@efds.co.uk
Web: www.efds.net

SPORT ENGLAND

Sport England is focused on helping people and communities across the country create a sporting habit for life.

Tel: 08458 508508
Email: info@sportengland.org
www.sportengland.org

BRITSH PARALYMPIC ASSOCIATION

The British Paralympic Association (BPA) is responsible for the United Kingdom's participation in the Paralympic Games.

Tel: 020 7842 5789
Eamail: info@paralympics.org.uk.
Web: www.paralympics.org.uk/

BALASA

BALASA: British Amputee & Les Autres Sports Association
Tel: 01773715984
Email: balasaoffice@aol.com
Web: https://sites.google.com/a/balasa.org.uk/main

SPORTS+ (LIMBLESS ASSOCIATION)

The Limbless Association is a national charity that supports the needs of amputees and people born with limb deficiencies.

Dean Heffer, Sports Officer
Tel: 01245 216670
Email: dean@limbless-association.org
Web: www.limbless-association.org/sports

Stef Reid's Top Tips

for Getting Healthy and Lean

1. Healthy Eating

EAT!!! – Severely restricting calories is the WORST way to lose weight.

Our metabolisms are too smart for that. If we eat too little, our metabolisms simply slow down. You need to 'eat yourself lean'. This means eating small meals every 3-4 hours.

2. Protein

Include a source of protein in every meal, such as chicken, eggs, nuts, milk, tofu, beans etc. Protein is vital to building muscle, and building muscle is the best way to lose fat. Muscle requires more energy to maintain, so the more muscle you have, the higher your resting metabolism will be.

3. Right kinds of fat

Eating fat does not make you fat. Fats are vital to the health of every cell in your body. The trick is to pick foods with the right kinds of fat, such as mono and polyunsaturated fats, and especially omega 3s: nuts, avocados, coconut, fish. Limit sources of trans and saturated fats.

4. Portion control

Properly portion your meals – counting calories is overrated. The best guideline is our hands: your protein source should be the size of your palm, your carbohydrate should be the size of your fist, and the rest of your plate should be loaded with veggies.

5. Carbohydrates

Pick carbohydrates that are high in fibre. Replace boring white rice and pasta with more exotic choices such as pearl barley, quinoa, spelt, or bulgur wheat.

6. Training

Introduce interval training to your workouts. Instead of running at a slow steady pace for 40min, run full out for 30sec, and jog for 90sec 10 times. The key to burning fat is to work your body at maximum intensity.

7. Treats

If you are going to indulge do it right. Every healthy diet should allow for a cheat meal at least once a week. Don't waste this on a bag of crisps, processed cookie or chocolate bar. Bake a delicious rich cheesecake and share it with friends. Not only does the amount of effort involved deter you form doing it often, you will be eating a cake full of fresh wholesome ingredients.

Team LimbPower Events and activities

LimbPower Running Team

LimbPower are launching a running team where, beginners and intermediate runners can join us to learn to run through the 'Running Clinic' and take part in both fun runs and races. The objective behind this is to support amputees in their quest to get fit and create a sporting habit for life. We already have a facebook page LimbPower Running where amputee and ambulant disabled runners can share information, experiences and events. Why not join us? Contact paralympian Robert Barrett at **Robert@limbpower.com** for running advice or **kiera@limbpower.com** for events information.

LimbPower Cycling Team

LimbPower already have a core contingent of cyclists who have learnt to cycle through the 'Cycling Clinic' and join us for training ride and fundraising events. We now have a core number of rides and sportifs that amputees take part in. The Lingfield Park Ride (Surrey), the Merlin Ride (Wales), The Isle of Wight Randonee, Stoke Mandeville Ride (Amputee Games) London to Paris (Fundraising ride) and the Nightrider (Fundraising ride). If you want to learn to cycle join us at the 'Cycling Clinic' at the Amputee Games or Lingfield Park Ride or contact Damian MacDonald at **damian@limbpower.com**
Our facebook page is LimbPower Cycling.

LimbPower Walking Team

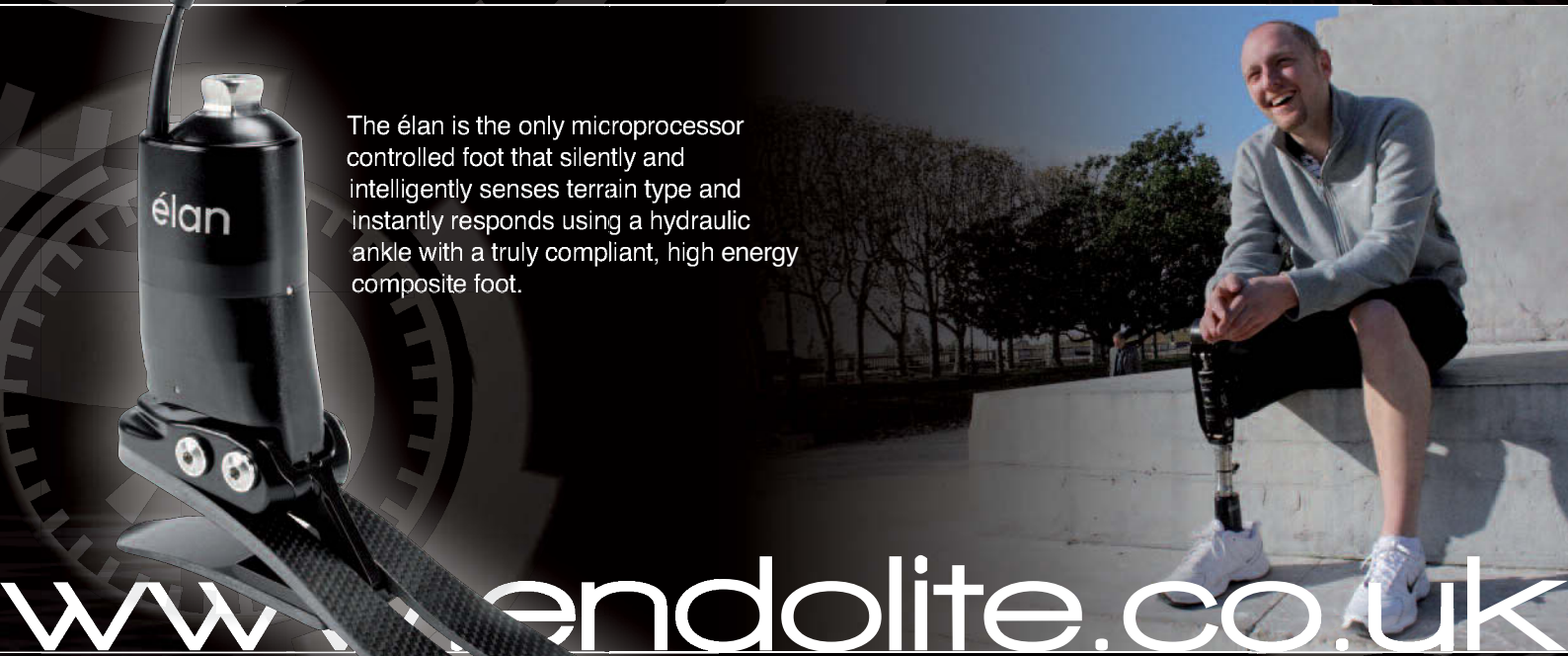
LimbPower are launching a walking team headed up by amputee trekker Mark O'Leary who has recently climbed Mount Kilimanjaro and Mount Toubkal. Mark is a keen walker and wants to help other amputees get back into walking to get fit and create a sporting habit for life. LimbPower are organising a four-day fundraising trek along Hadrian's Wall in 2013. Join us at LimbPower Walking on facebook or contact Mark at **mark@limbpower.com**

Limb POWER
Life after limb loss

endolite
get busy living

Style and vigour inspired by passion

The élan is the only microprocessor controlled foot that silently and intelligently senses terrain type and instantly responds using a hydraulic ankle with a truly compliant, high energy composite foot.



www.endolite.co.uk

Come and see us at the ORTHOPÄDIE + REHA-TECHNIK in Leipzig May 16th-18th, Hall 3 Stand A47

936302 Iss1 0312 Blatchford