



Welcome to Limb Awareness

A resource for Healthcare Professionals



Who are
LimbPower?

LimbPower, was founded in 2009 to engage amputees and people who have limb impairments in physical activity, sport and the arts to improve quality of life and to aid lifelong rehabilitation.



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LimbPower?

LimbPower became a National Disability Sports Organisation in 2014 working with the Activity Alliance (formerly English Federation of Disability Sport) and Sport England to help amputees and people with limb impairments to reach their physical potential.



What are the benefits of physical activity & sport for young people who have amputations or limb impairment?

The physical, psychological and social benefits of physical activity and sport are the same for young people who have amputations or limb impairments as they are for anyone else.



Benefits: examples



Physical benefits include:

- better balance
- improved fitness
- range of movement & flexibility
- more proficient coordination

In everyday life this can:

- improve mobility around the home, including climbing stairs or moving in restricted spaces
- improve skills involving the lower limbs, upper limbs, hand-eye coordination and enhanced agility (e.g., when using a sports prosthetic)
- supports all aspects of a young person's life.



Benefits: examples



Psychological and social benefits include:

- increased independence and self-reliance
- improved confidence by achieving rehabilitation targets and developing physical skills
- better self-image through success in sport
- acceptance and respect of peers.

In everyday life this can:

- enable a smoother transition into home and school life following rehabilitation
- develop social skills such as teamwork and cooperation.



Impact on physical activity: key take-aways

The benefits of physical activity and sport are the same for children who have amputations or congenital limb impairments as they are for non-disabled children.

With some planning, care and imagination, **most** of these young people can do **most** things **most** of the time!

Re-integration into a physical education programme following amputation is important for psychological as well as physical reasons.

Young people born with limb impairment may have already developed coping mechanisms that can support the development of movement skills.



Photo: reach.org.uk



Causes of amputation



These fall under seven main headings:

- Inadequate circulation in the extremities (**Dysvascularity**); 70-75% of all cases
This includes **Diabetes** (Type 1 and Type 2)
- **Infection** (acute or chronic) 8%
- **Trauma** (for example, road, mechanical or tool accidents); 7% of all amputations
- **Neoplasia** – the abnormal growth of tissue (including tumours); 3%
- **Neurological disorder** including diabetic and peripheral neuropathy (nerve damage, especially in the extremities) being the most prevalent; 1%
- **Other** (accounts for around 5%)



Causes of amputation

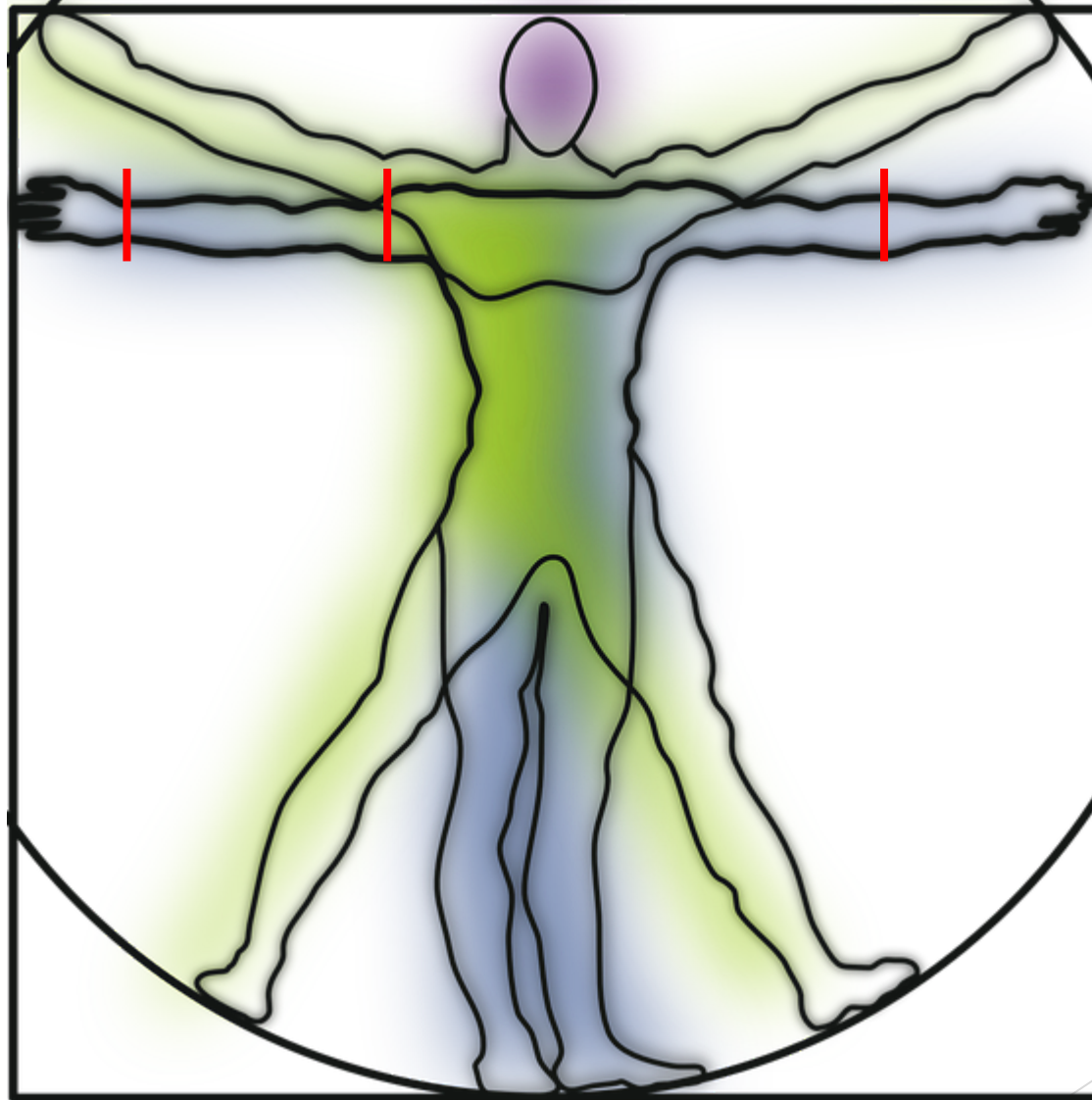


In young people of school-age, however, the two most common causes of amputation are:

- **congenital limb impairment;**
for example:
 - requiring surgery to enhance the fitting of a prosthetic limb, or:
 - to balance limb length inequality
- as a result of **trauma or infection**



Understanding amputation and congenital limb impairment



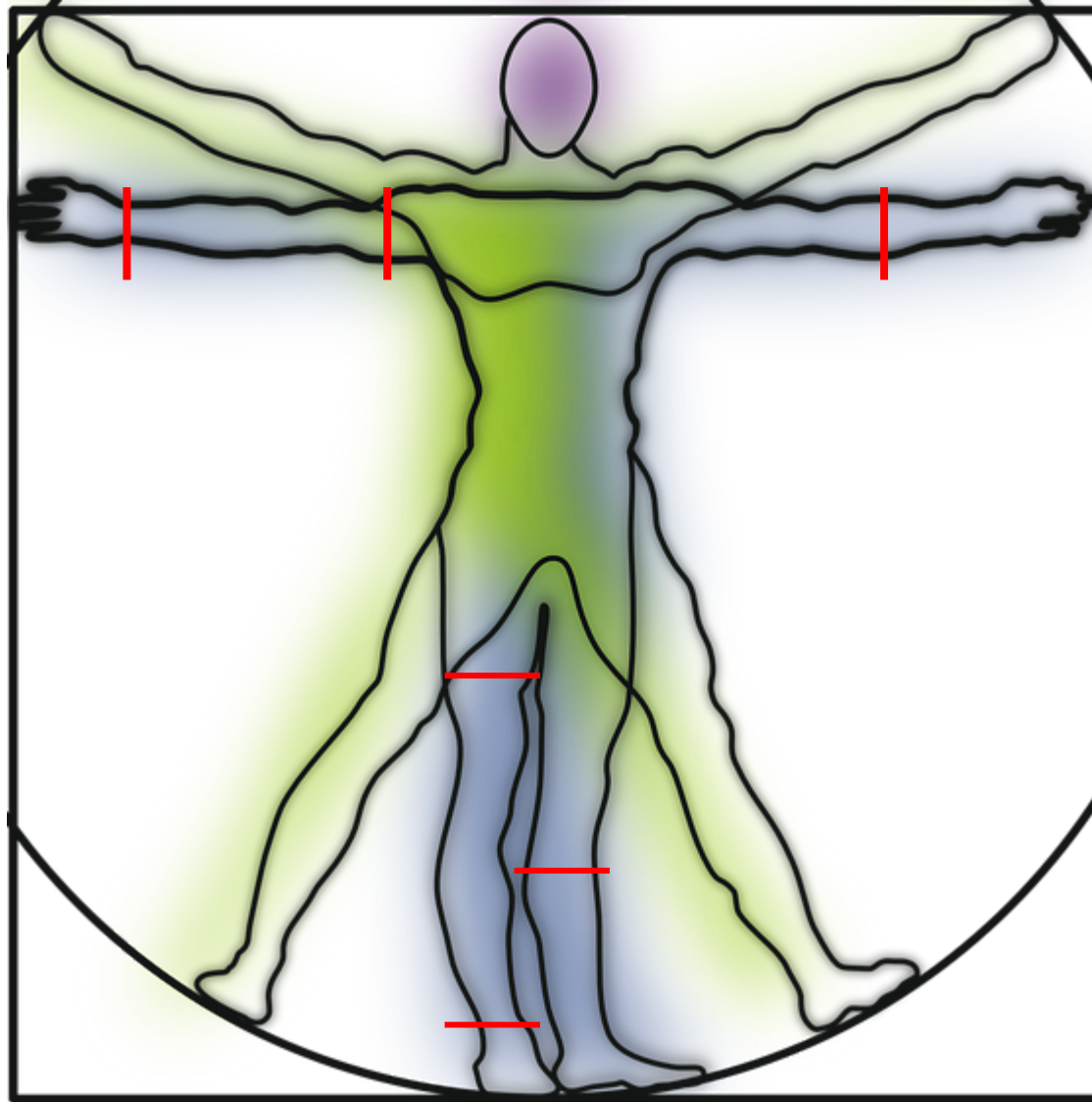
Modified Vitruvian Man after Da Vinci courtesy of pixabay

Amputations or congenital
limb impairment can be:

upper limbs



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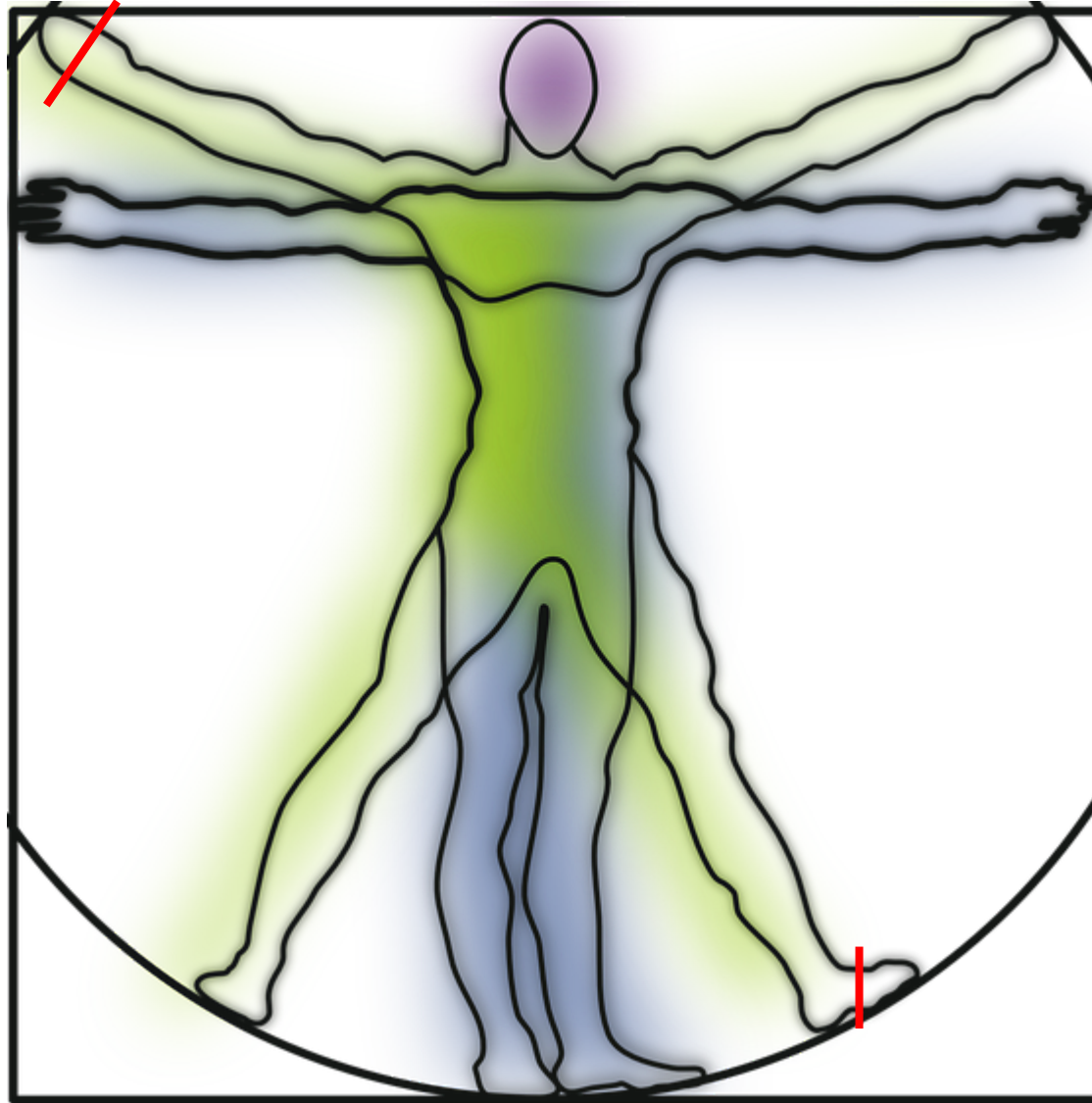
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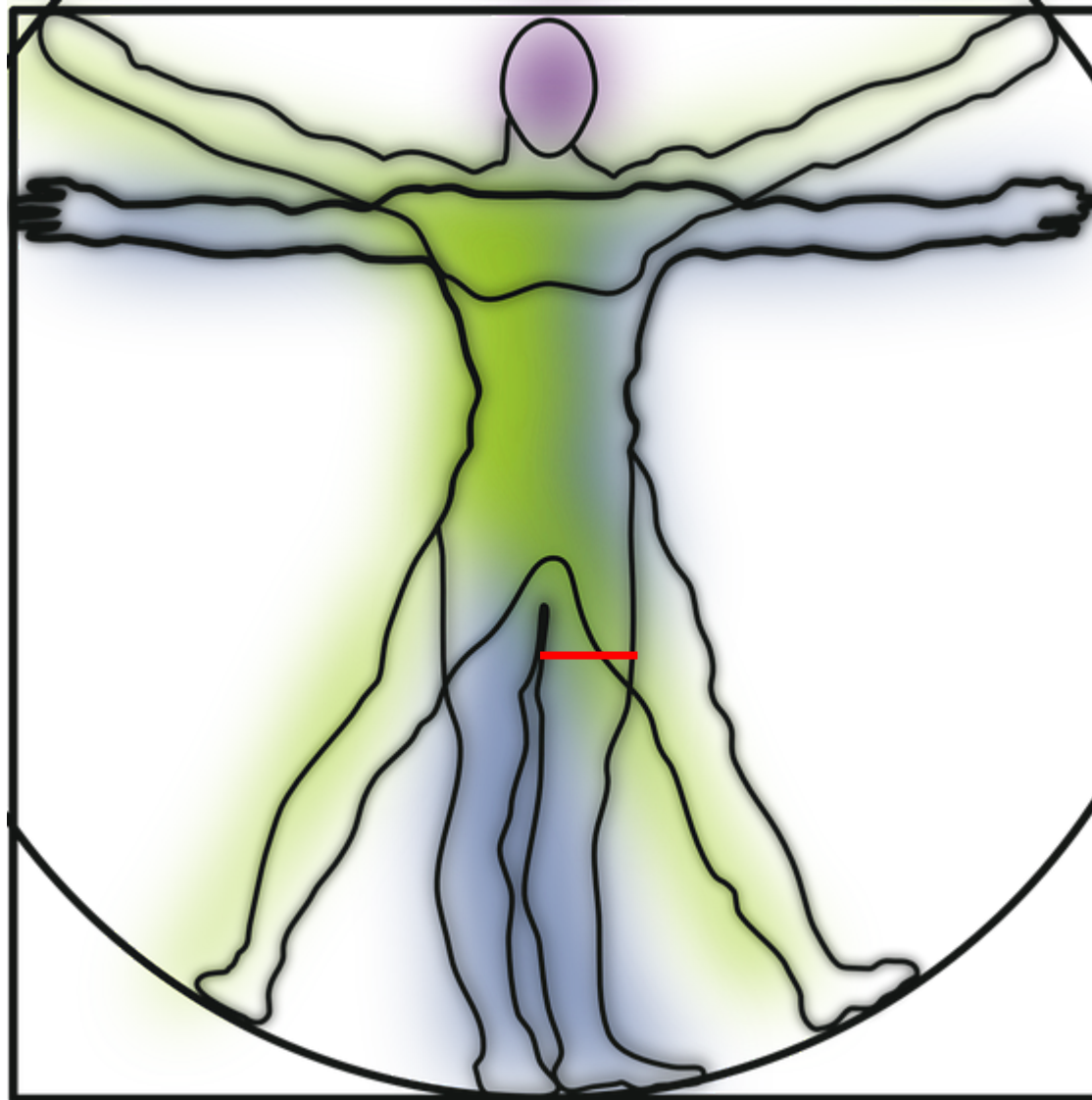
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lower limbs

or partial limbs (hands or
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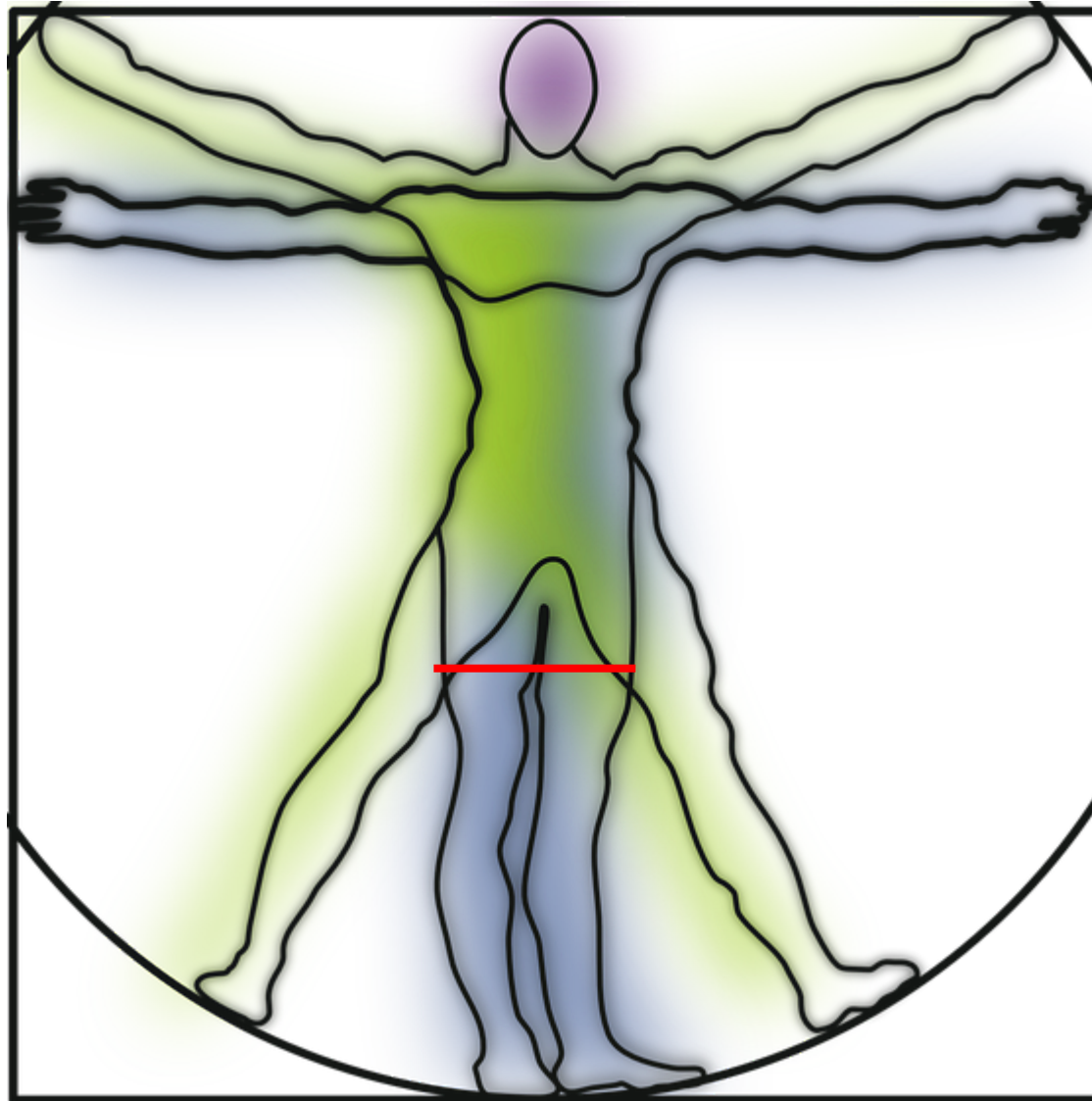
or partial limbs (hands and feet)

This can affect:

- a single limb



Understanding amputation and congenital limb impairment



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lower limbs

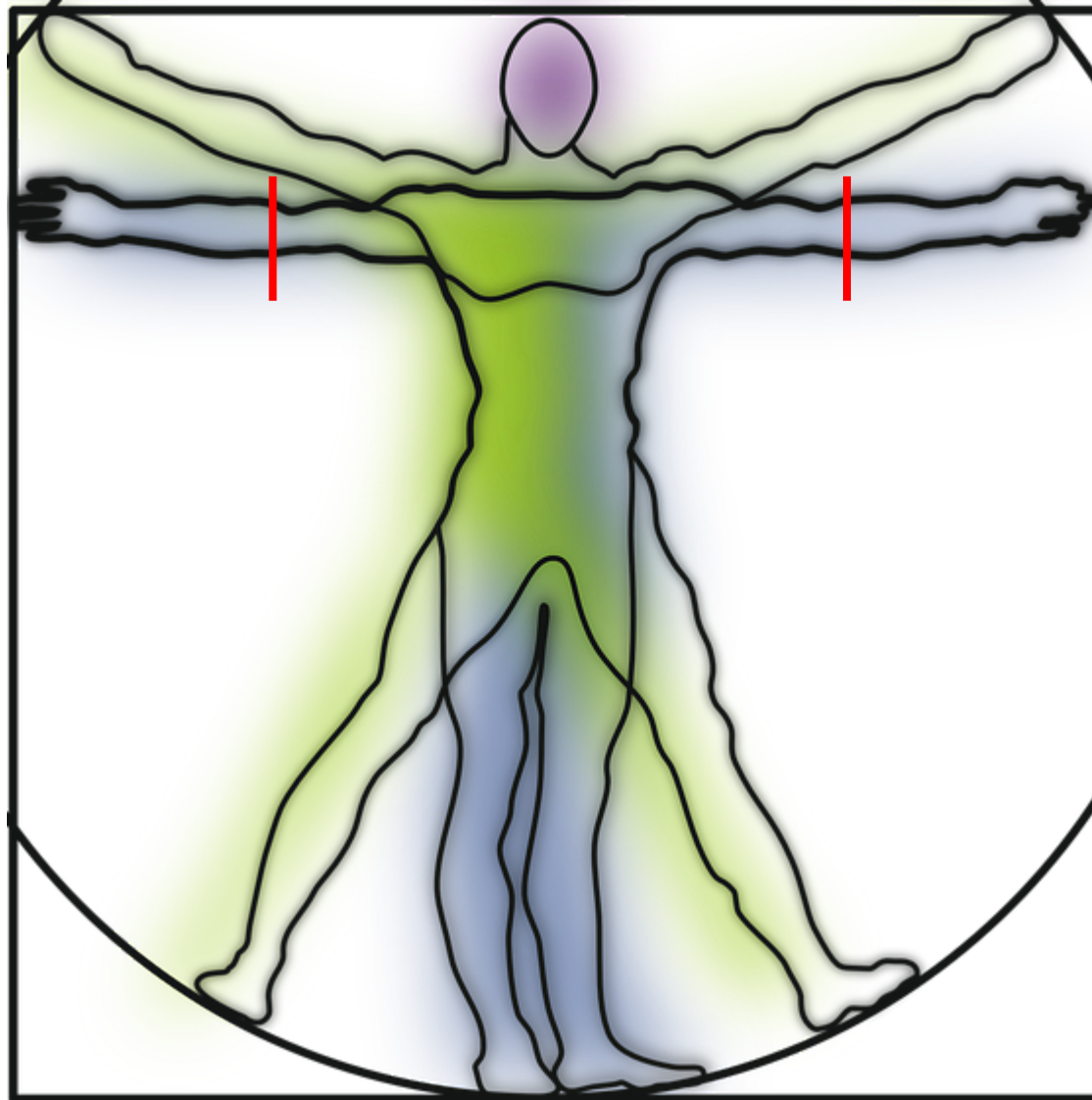
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Understanding amputation and congenital limb impairment



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Amputations or congenital limb impairment can be:

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lower limbs

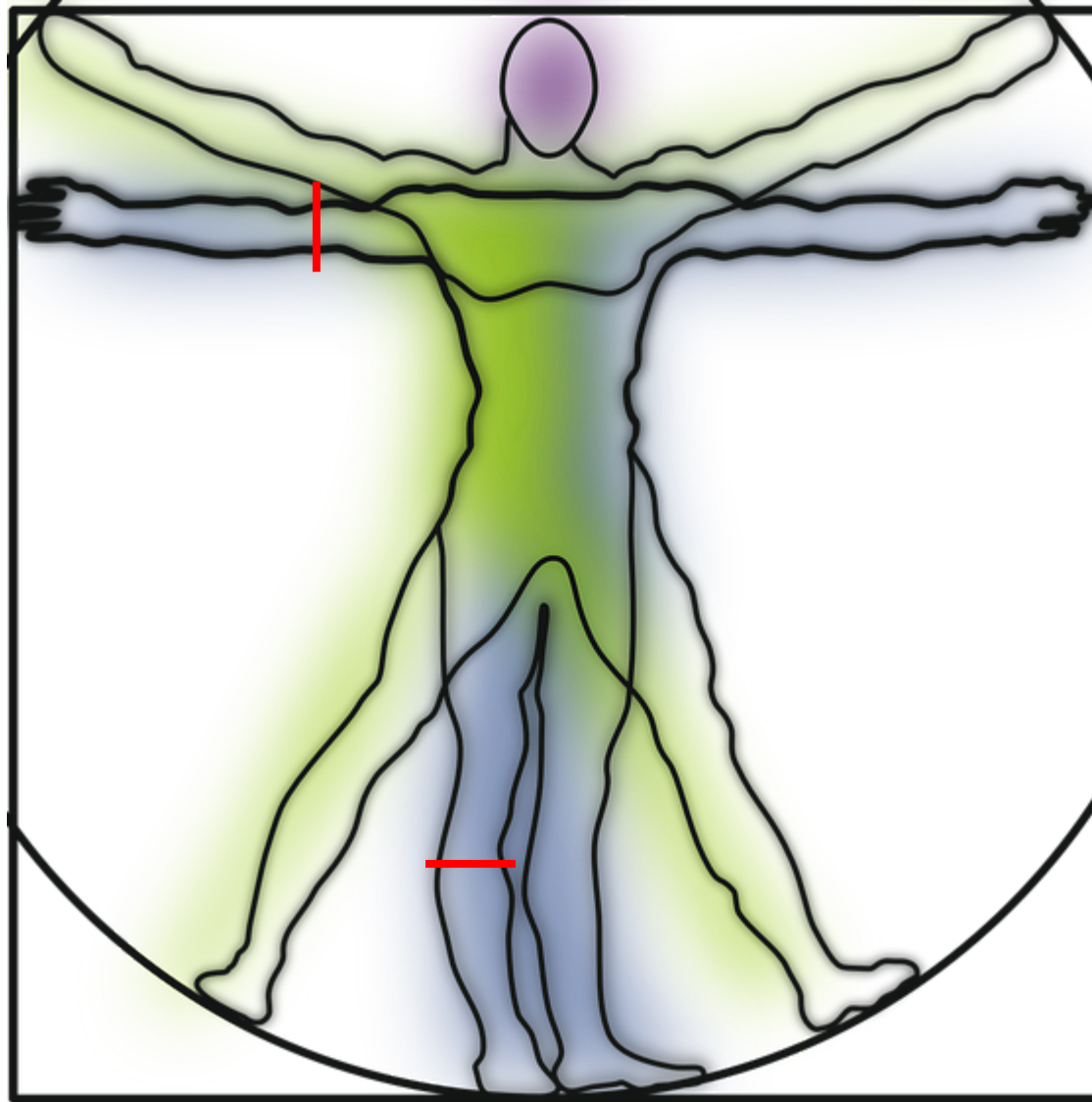
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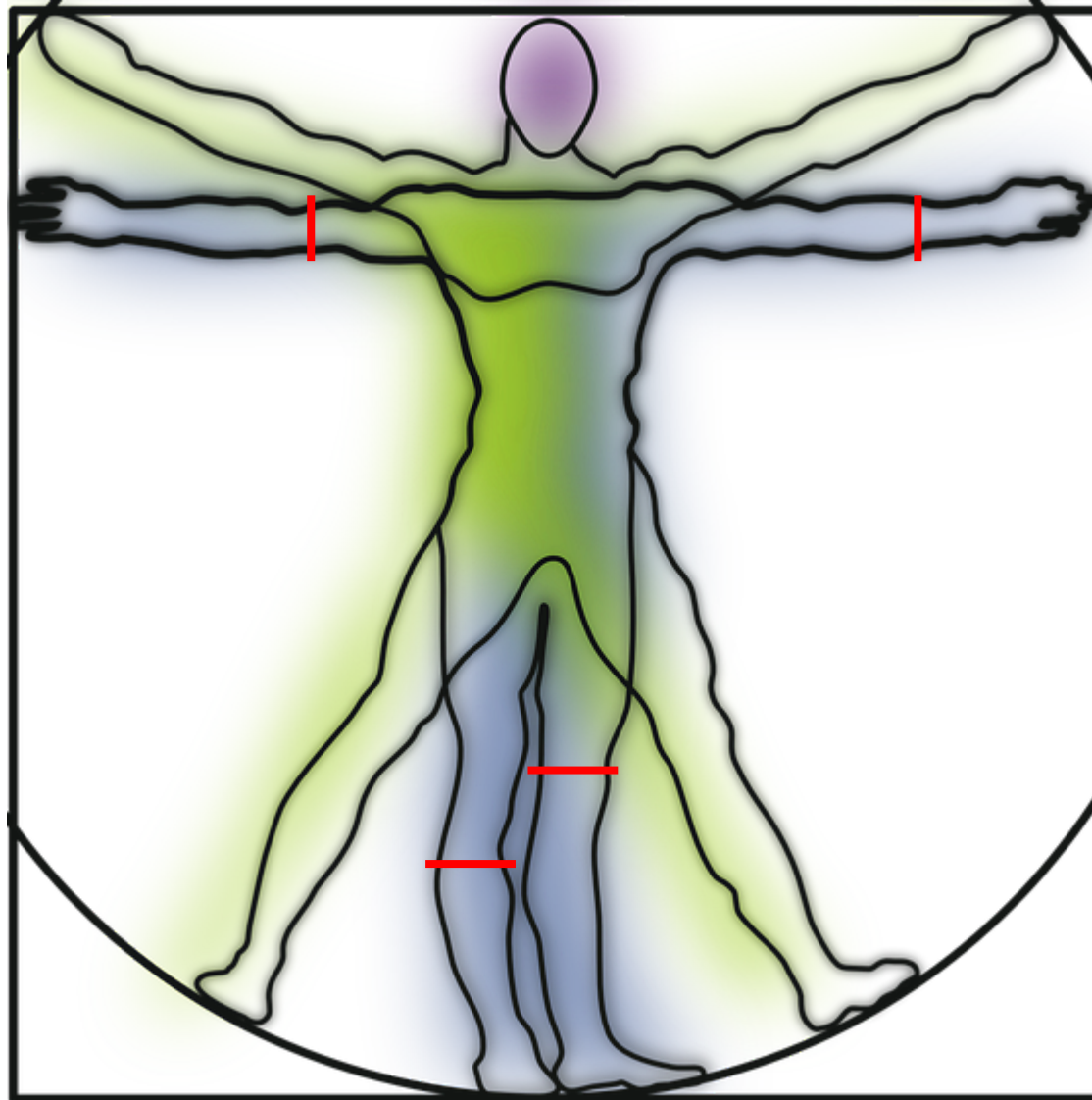
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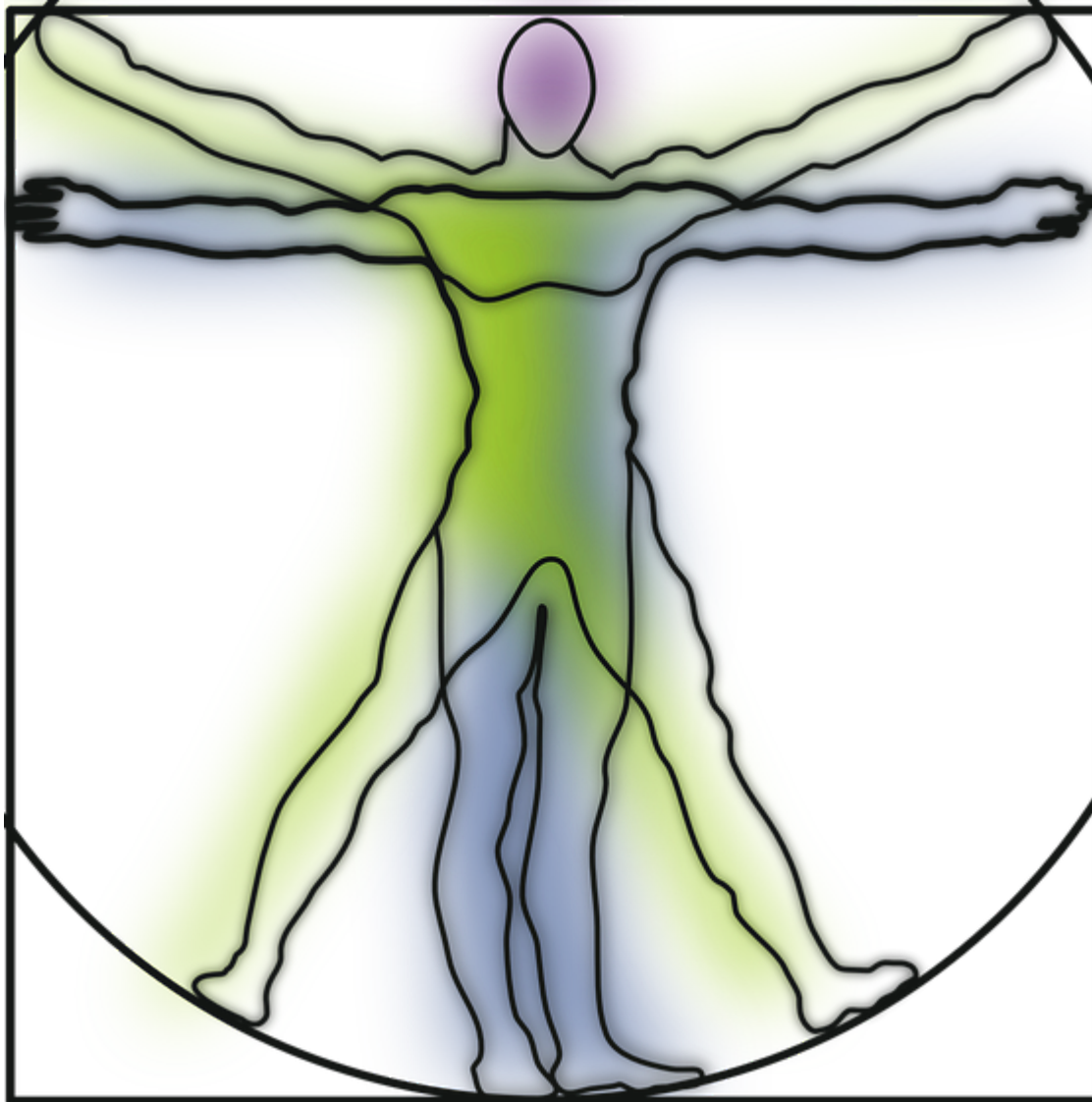
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Some amputations can be through a joint, often called a disarticulation.

Amputations or congenital limb impairments can affect:

- mobility
- range of movement
- balance
- coordination
- comfort
- and emotional well-being

Generally, the more remaining or residual limb an individual has, the more mobile they will be.



The work of Disablement Service Centres (Artificial Limb Centres)

There are 35 centres in England specialising in prosthetic services (artificial limbs).

There are three types of centres, **Tertiary, Standard** and **Satellite**. The Tertiary Centres have a multi-disciplinary team including a Rehabilitation Consultant, prosthetists, occupational therapists, physiotherapists, podiatrists and psychologists.

Not all of the smaller centres have a rehabilitation consultant, podiatrists and psychologists.

The staff, led by a specialist consultant, aim to involve the patient (young person) at all stages in the assessment, fitting and after-care process.

This may involve a number of visits, including working with a physio to ensure that the individual can move efficiently and with maximum comfort.

NHS centres provide a free service.





The Children's Prosthetic Fund

- ▶ LimbPower administer the Children's Prosthetic Fund on behalf of the Department of Health and Social Care.

Contact **Carly Bauert**, LimbPower's Children & Families Coordinator:

carly@limbpower.com / 07789 075709

- ▶ The Department of Health and Social Care has made funding available (£500,000 per financial year) to fund prostheses in England. The fund is for children who have limb loss, or were born with a limb impairment, to enable them to take part in physical activity and sports. The funding is available until the end of March 2020.
- ▶ NHS limb centres in England may request funds for individual prostheses they have prescribed up to the value of £5,000 per limb (not per child). This includes all the associated costs of fitting the new limb, such as a new socket or liner.

For more information and eligibility criteria see:

<https://www.gov.uk/government/publications/childrens-sports-prostheses-funding-how-to-apply>



Prosthetics: impact on physical activity

Use the person's current functional ability as the start point; build on what they can do.

Those using prosthetic limbs may use stump socks or liners – ensure these are fitted properly.

Prosthetics can cause adaptation to movement skills; work initially within the way in which the person moves.

Balance and cadence in movement will be affected; explore ways in which adjustments can be made to correct imbalance and instability.

Some people, for example those who have above knee amputations, may find lateral movement challenging; head and body movement can initiate changes in direction.

Avoid repeated heavy impacts on the prosthetic lower limb.

Individuals **must not** continue to participate if they begin to experience chafing, soreness or pain.

Current Government and NHS schemes can provide young people with sports prosthetics that can support their participation.

Note that young people may require multiple prosthetic adjustments as they grow and mature.



Department of Health & Social Care



The Limb Centre



“So, (the patients) will come and meet the doctor, the nurse, the physio and the prosthetist. We’ll make sure that we know what they want to achieve and what we need to achieve. We’ll have the limb made, then we’ll start the rehab process, using a stick, for example, just to get them more mobile”.



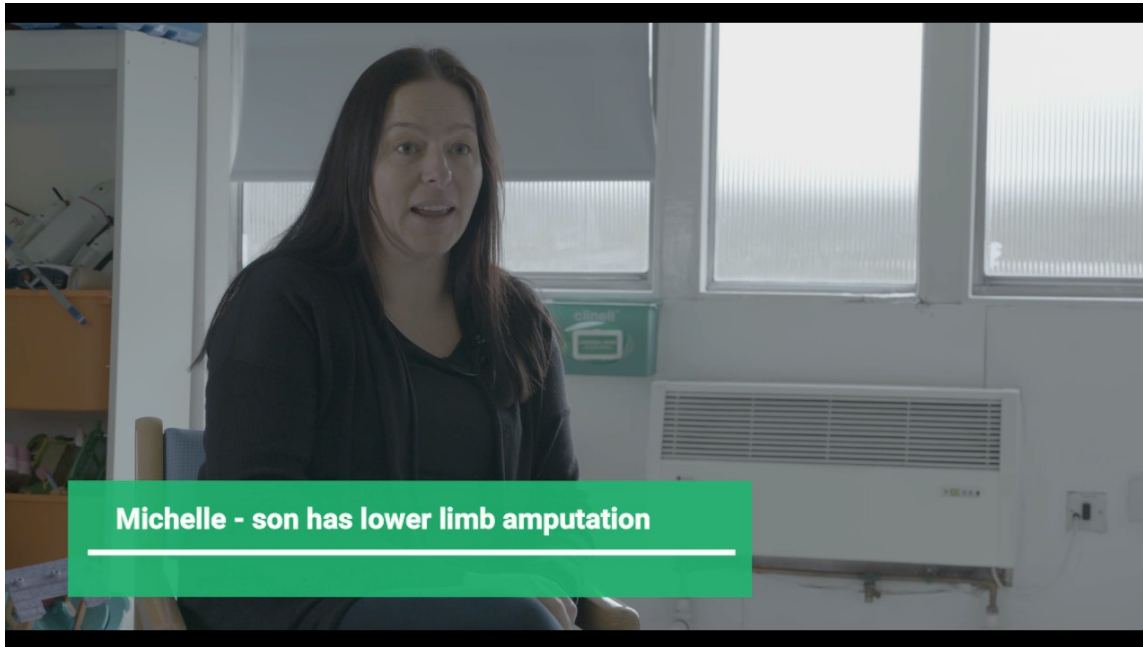
The Limb Centre



“The (patient) will then take the leg home. We’ll come to their home to make sure that they’re fine – that they’re doing everything that they need to do - for example, stairs or interaction with family life.
(With children) we’ll go into school with them to make sure that they can do everything in school.
And that’s basically it!”



A parent's view



“This process of having the prosthetic leg is just loads better for Max – for his mobility, his sports or just getting around doing what everyone else can do. The blade has made it better because he’s faster – his running is faster – and he can jump where he couldn’t jump before”.



The young patient



“I like to do pretty much every sport. But at the moment we’re doing hockey in school and I do cricket, swimming, football and I also do a bit of golf with my dad”.



How LimbPower can support

- ▶ LimbPower have a Children and Families Co-Ordinator who works with families to support them through the rehabilitation process.
- ▶ LimbPower organise events and activities and develop resources to support families to engage with physical activity, sport and the arts.
- ▶ LimbPower have created the Limbformation website www.Limbformation.com to empower families.
- ▶ LimbPower works with partner sports organisations to provide opportunities for children and adults who have amputations or congenital limb impairments.
- ▶ LimbPower work with the 35 Disablement Service Centres in the UK, Department of Health and NHS England to administer the Children's Prosthetic Fund.
- ▶ LimbPower have partnerships with a number of National Governing Bodies of Sport– but sports opportunities can cover almost any possibility, including Archery, Badminton, Horse-riding, Golf, Sailing and Windsurfing.
- ▶ Visit the LimbPower website to find out more about how to get into a wide range of sports.

<http://limbpower.com/index.php/what-can-i-do>





How LimbPower can support: events

- ▶ LimbPower organises and supports events and workshops that can help young people who have amputations or congenital limb impairments get into sport and physical activity.
- ▶ These include:
 - Multi-sport events and single sport events – a chance for young people to try out a range of sports with expert advice on hand.
 - Fundamental skills workshops – for children aged 5-18 aimed at helping them develop skills and confidence.
 - LimbPower Games: a sport festival for amputee athletes of all ages.
 - Outdoor education events





Sports classification

- ▶ *Classification is a structure for competition in sport for disabled people. Other structures for competition are based on gender, age and weight.*
- ▶ *For disabled people classification is based on impairment (functional ability) and its impact on the outcome of competition.*
- **To take part in LimbPower events you do not need to have a classification**
- Young people who have amputations or congenital limb impairment may require a sports classification in order to compete in:
 - some amputee sport (sport between people who have limb impairment) grouped according to the number of limbs involved and degree of function
 - Paralympic or pan-disability sport (sport between people who have a range of different impairments) where athletes compete in categories based upon functional ability.

LimbPower can point young athletes in the right direction.



LimbPower Resources - Children

- ▶ Limbformation website – for children and families www.limbformation.com
- ▶ LimbPower website www.limbpower.com
- ▶ Infographics and information sheets <http://limbpower.com/index.php/resources/info-sheets>
- ▶ Publications <http://limbpower.com/index.php/resources/publications>
- ▶ Exercise videos <http://limbpower.com/index.php/resources/toolkit-videos>
- ▶ Top Sportsability website (via YST Lead Inclusion Schools)
- ▶ Case Studies <http://limbpower.com/index.php/resources/case-studies>
- ▶ Instructors and coaches <http://limbpower.com/index.php/resources/instructors-and-coaches>
- ▶ Directory <http://limbpower.com/index.php/contact/directory>



Contact information

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