



Welcome to **LimbPower Awareness**

A resource for Teachers and Physical Educators



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.



Who are
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.

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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
- manipulative skills involving the upper limbs, hand-eye coordination and enhanced agility (for example, when using a sports prosthetic) supports all aspects of a young person's life.

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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

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Understanding amputation and congenital limb impairment



An **amputation** is the surgical removal of part of the body – an arm or a leg, for example – as a result of trauma (accident) or illness.

Congenital limb impairment is an absence of all or part of a limb or limbs from birth.

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Causes of amputation



These can include:

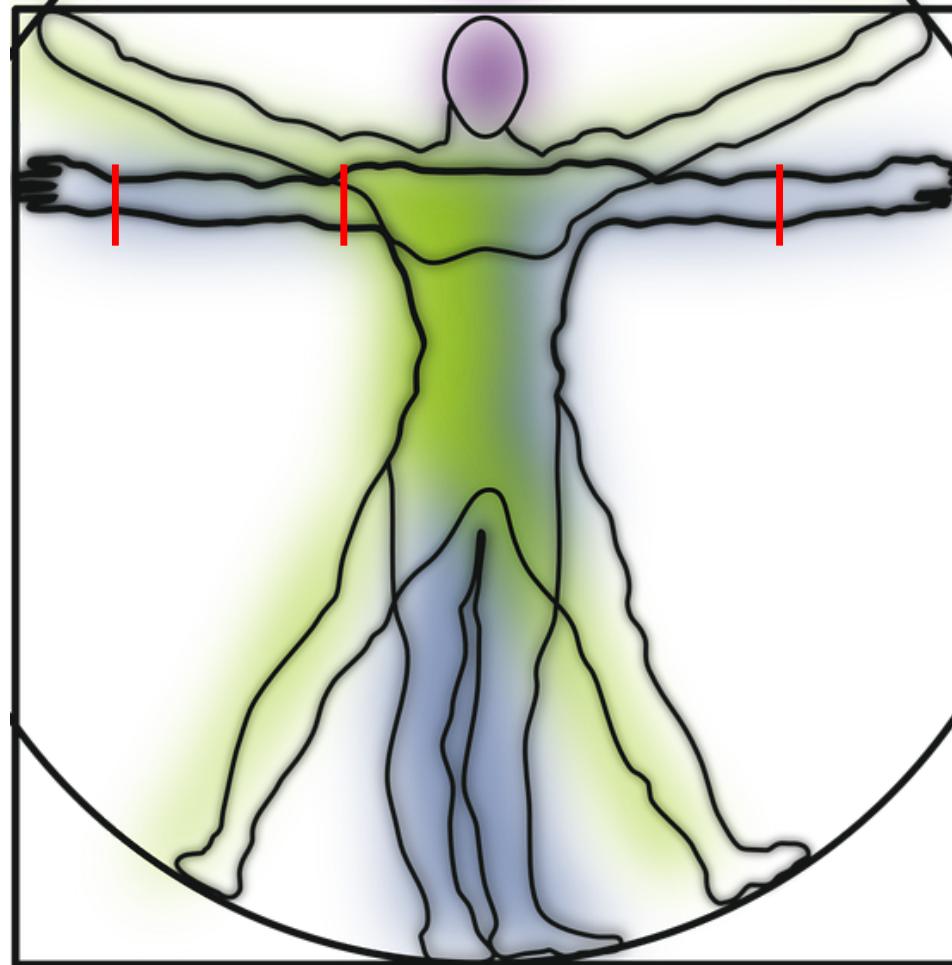
- Infection
- Trauma
- Effects of diabetes

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**

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Understanding amputation and congenital limb impairment



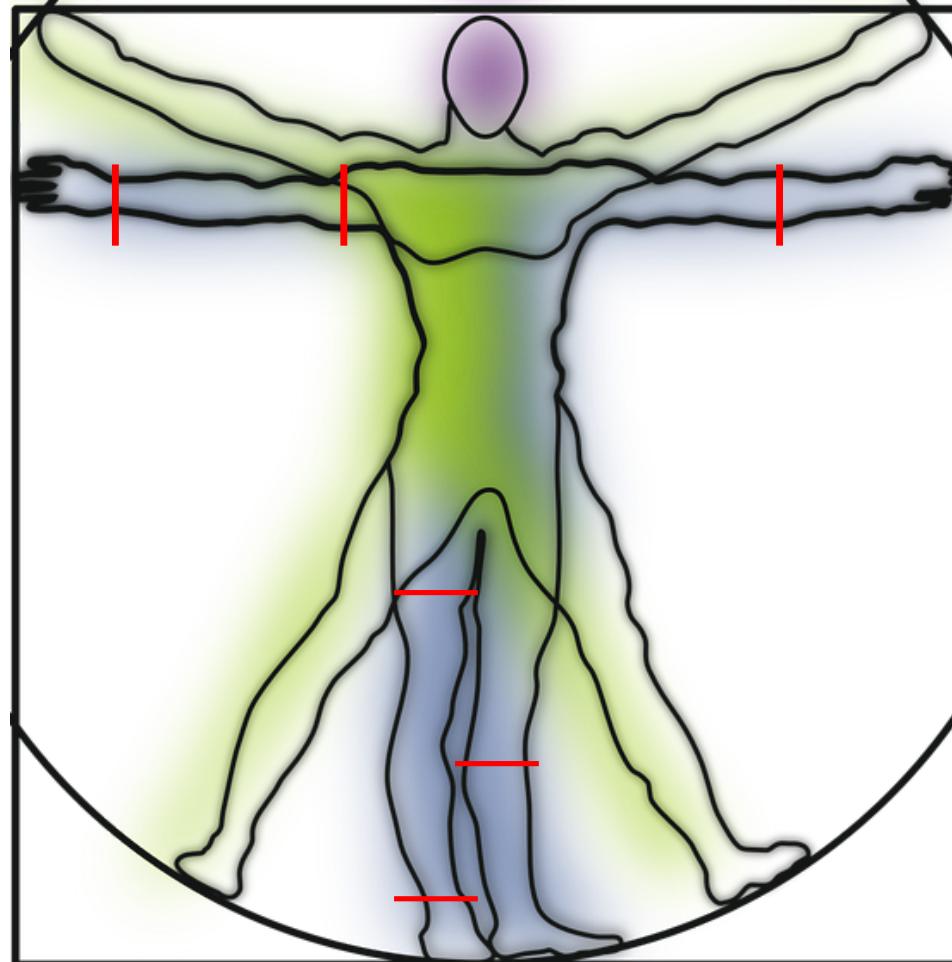
Modified Vitruvian Man after Da Vinci courtesy of pixabay

Amputations or
congenital limb
impairment can be:

upper limbs

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Understanding amputation and congenital limb impairment



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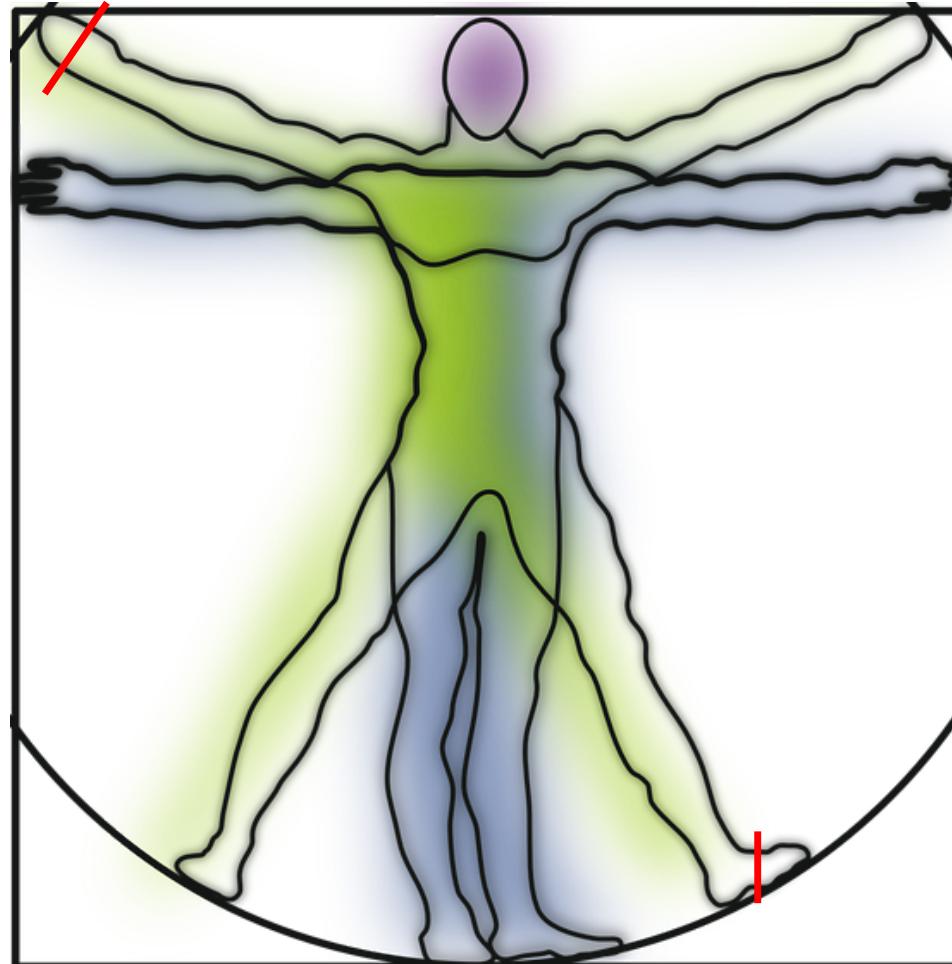
Amputations or congenital
limb impairment can be:

upper limbs

lower limbs

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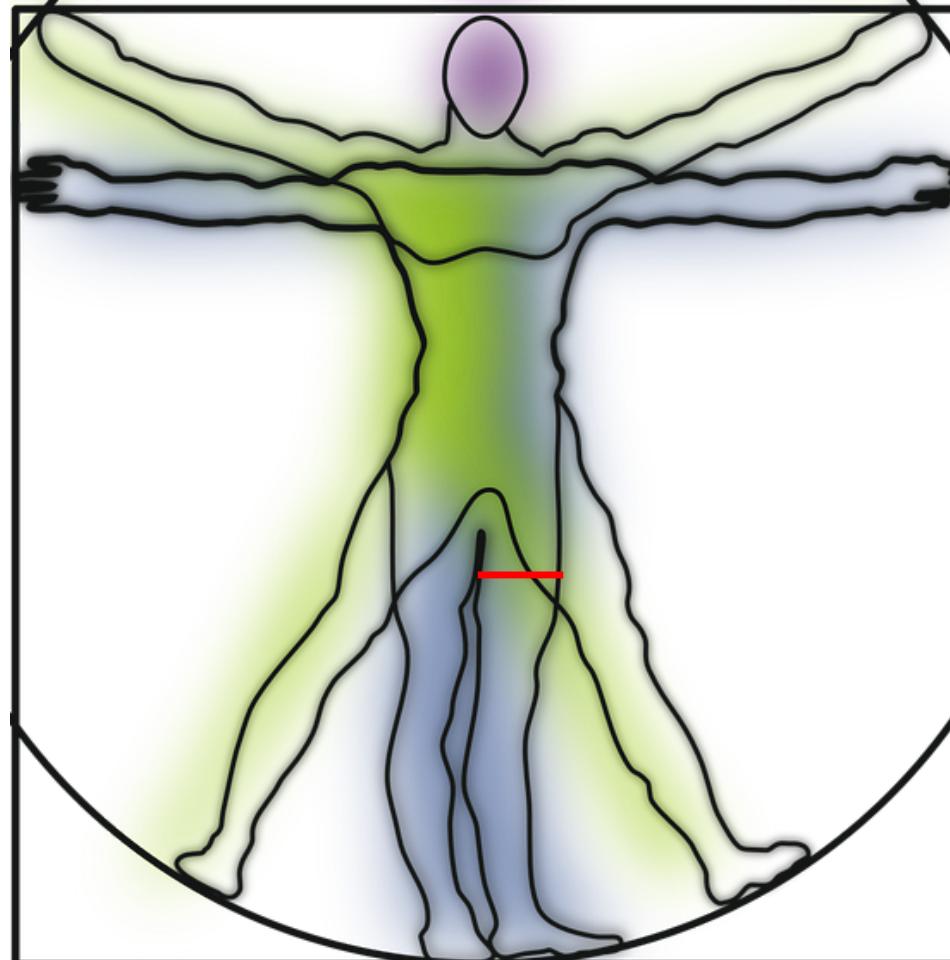
upper limbs

lower limbs

or partial limbs
(hands and feet)

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Amputations or congenital limb impairment can be:

upper limbs

lower limbs

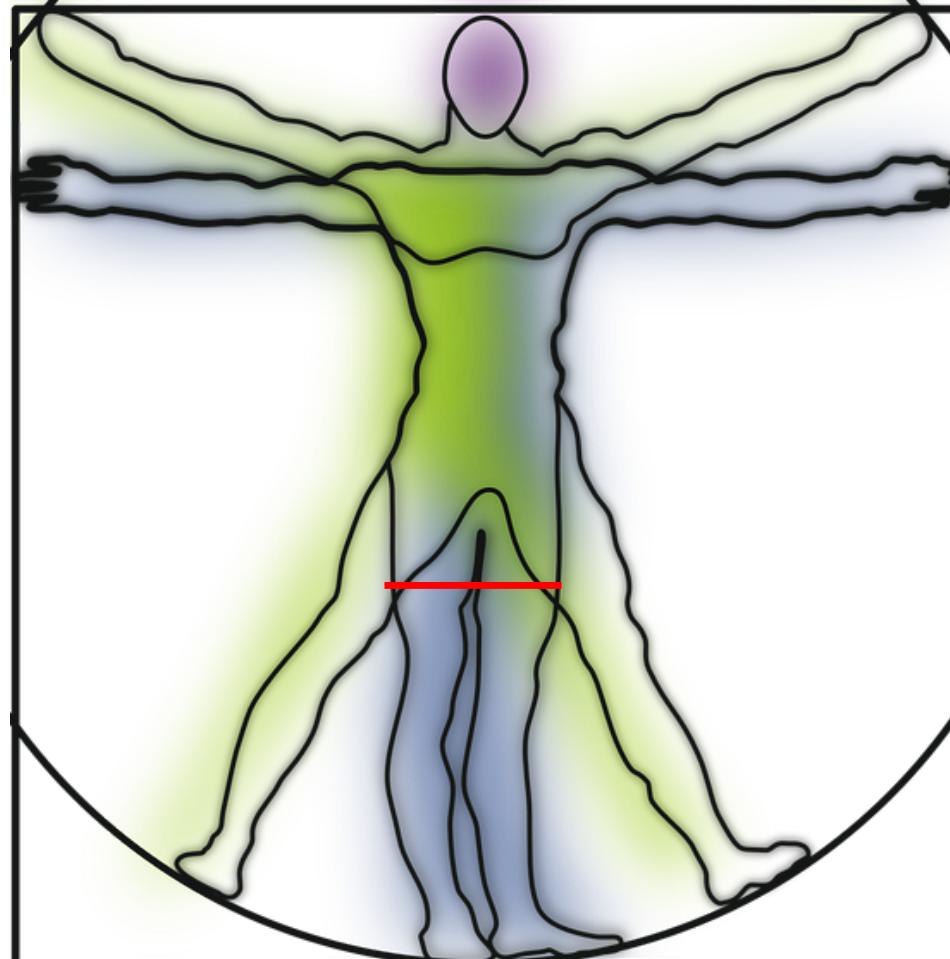
or partial limbs (hands and feet)

This can affect:

- a single limb

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Amputations or congenital limb impairment can be:

upper limbs

lower limbs

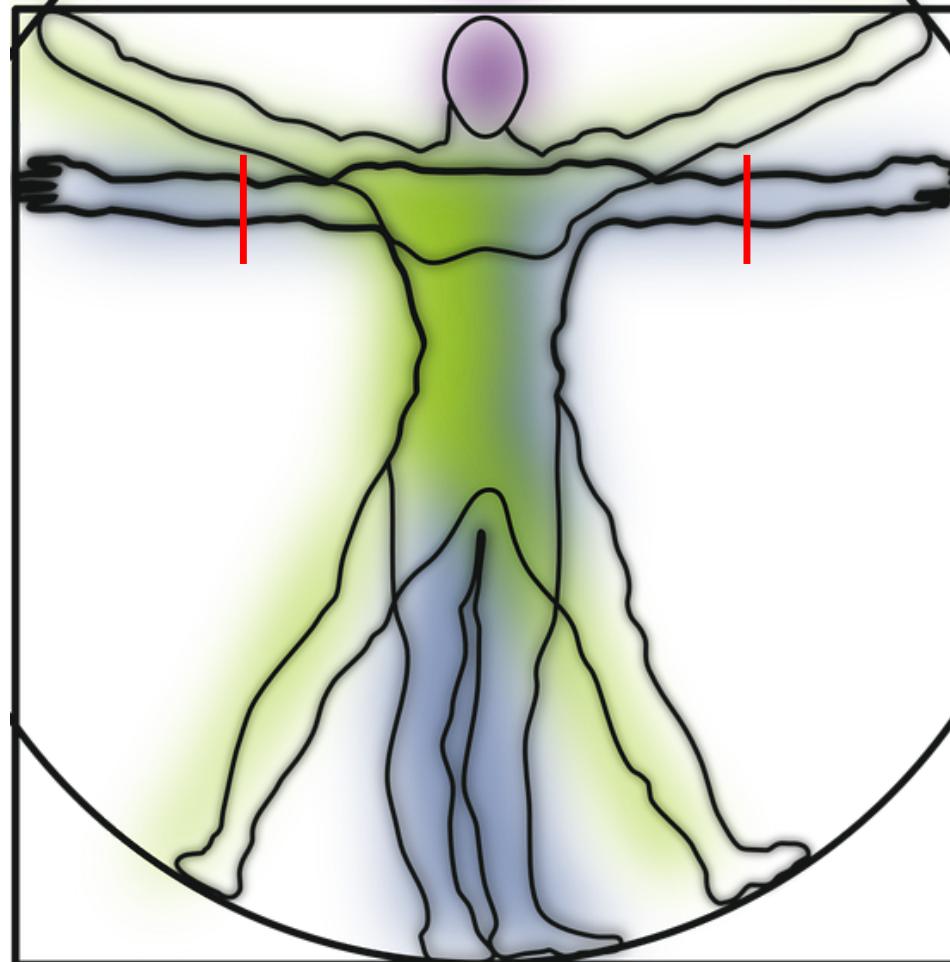
or partial limbs
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This can affect:

- a single limb
- two lower or upper limbs

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Amputations or congenital limb impairment can be:

upper limbs

lower limbs

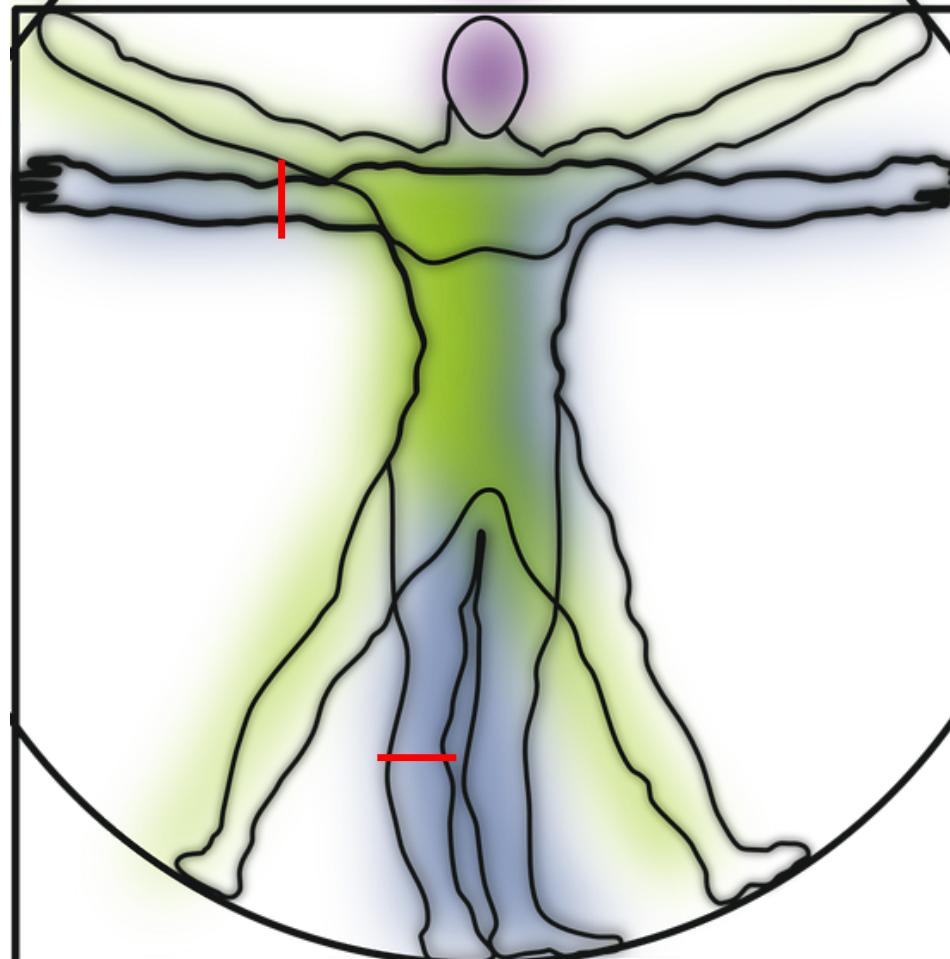
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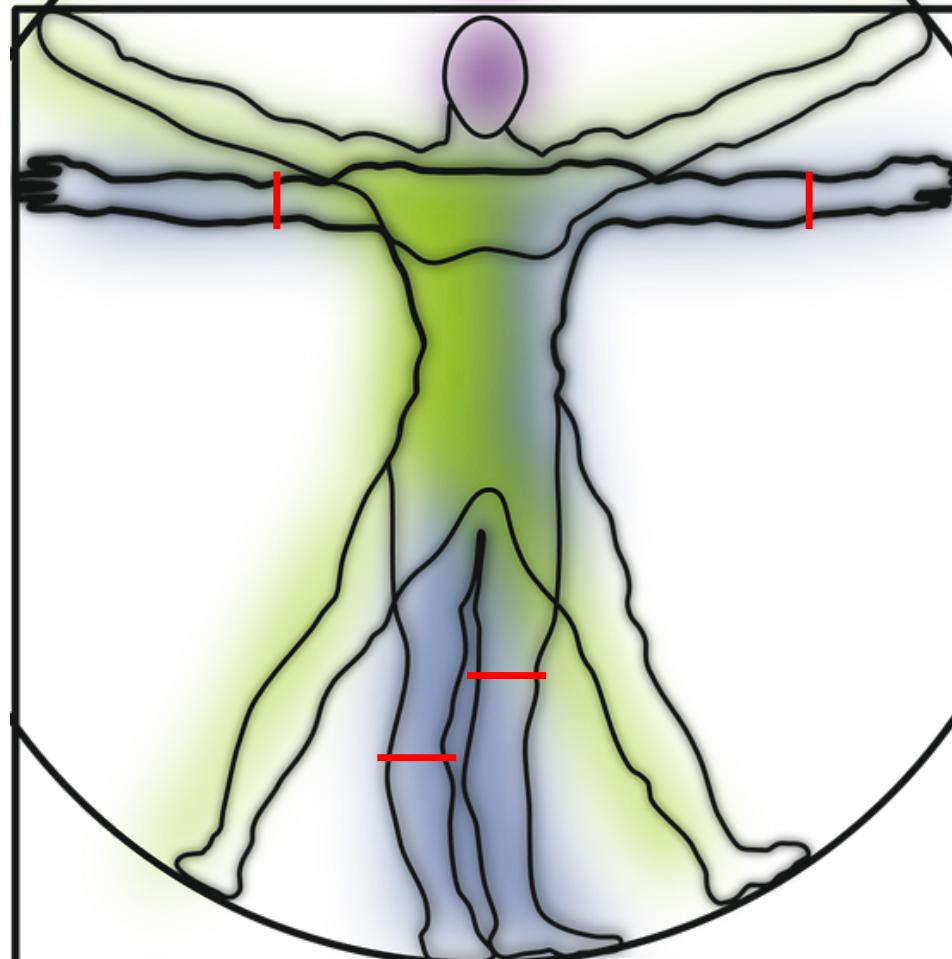
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This can affect a:

- single limb
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- or a combination of upper and lower limbs

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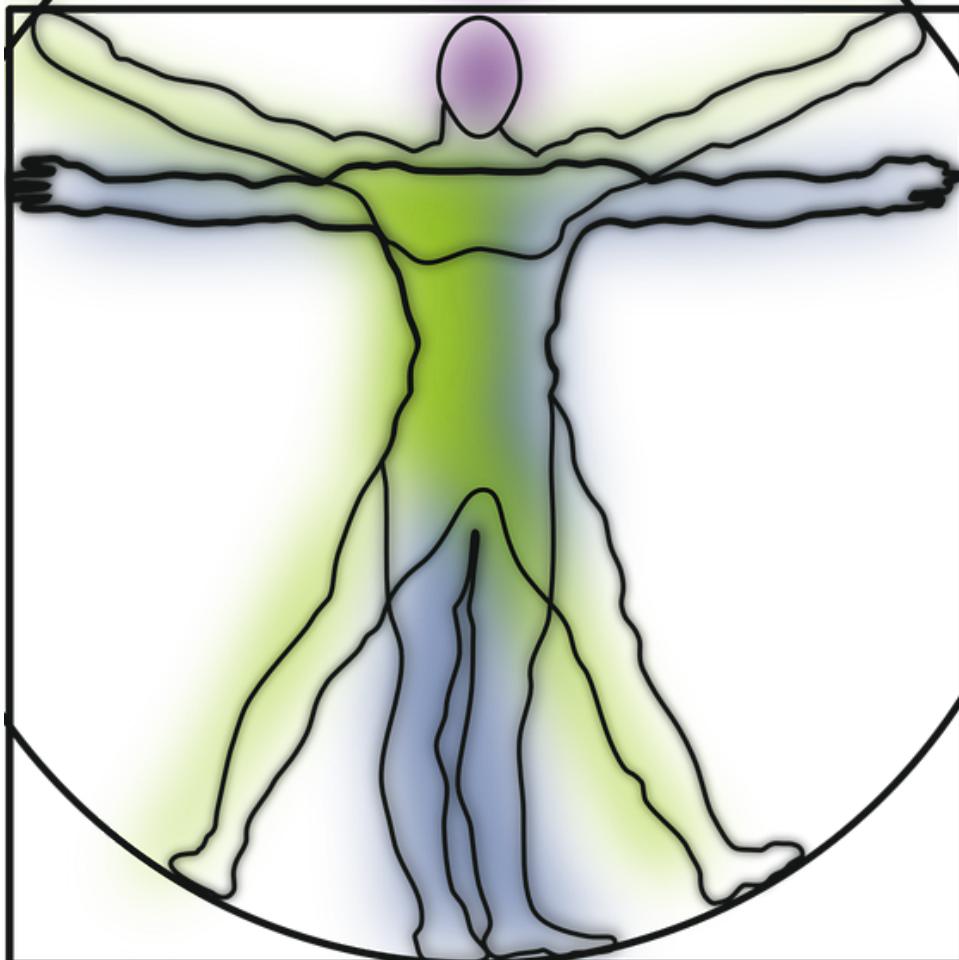
lower limbs

or partial

This can affect a:

- single limb
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Modified Vitruvian Man after Da Vinci courtesy of pixabay

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).

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 the specialist consultant, aim to involve the 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.



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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 education

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

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

Those children using prosthetic limbs may use stump socks or liners – ensure they have time to fit these properly.

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

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

Some young 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.

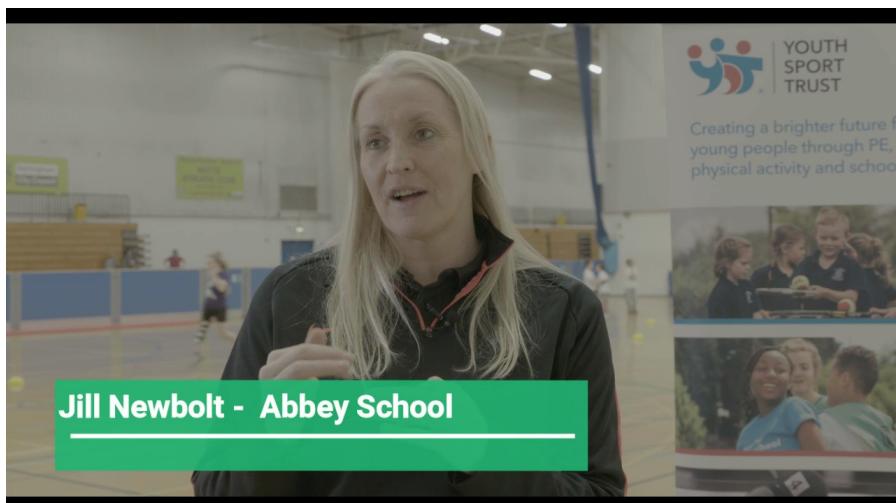
Young people **must not** continue to participate if they begin to experience chafing, soreness or pain.



Department of Health & Social Care



A teacher's view



Jill Newbolt - Abbey School

"As a PE teacher the inclusion is my responsibility. But I need more advice on where I can go to challenge the pupil further, what opportunities there are outside of school.

I need to link with parents to find out how they feel about us challenging their son or daughter and to talk to the young person about their aspirations in sport and PE".



A teacher's view



“All our children are different. Some of them get a lot out of meeting young people who have similar impairments to themselves, they share stories, and some like to be with non-disabled peers and some like a mix. It’s ... creating opportunities that meet their needs. The most powerful resource we have as teachers is the STEP model. It’s a real tool to help us include all young people in any sport”.



Using the STEP adaptation tool

Space

- ▶ Distances can be reduced initially to enable young people to build up exercise tolerance.
- ▶ In group activity, some young people using prostheses or wheelchairs may require more turning space.

Task

- ▶ Develop skills (such as sending and receiving) from a static position and gradually introduce movement.
- ▶ Young people may have to develop new skills using their naturally non-dominant side (hand, leg); allow time for this re-adjustment.

Equipment

- ▶ For some activities where weight transfer is involved (such as throwing), young people may require the support of a crutch, chair or some other means of support.
- ▶ Young people may need to remove their prosthesis during the session if their stump becomes hot or there is a build-up of sweat.

People

- ▶ Consult with each individual to determine optimum ways of over-coming issues; be conscious that psychological as well as physical adjustment is required.
- ▶ Work with other young people in the group to agree ways of including everyone in the activities.



A teacher's view



"We have a couple of students at school who have congenital limb impairments. They are extremely determined to get involved in PE as much as possible and quite often we have to do very little in order to accommodate them in a normal lesson".



Ollie – his blade



“Having a blade means that I can join in with my friends both during school and outside of school.

I can keep up with my friends and I can play football and run.

I also seem to have more energy, more freedom and more choice in what I can take part in.



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 can offer advice and guidance on community sport opportunities.
andy@limbpower.com
- ▶ 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 – however 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 and workshops

- ▶ 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.*
 - ▶ *In sport 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

- ▶ General Enquiries: 07502 276858
- ▶ Sport Enquiries: 07503 030702

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