

This information is provided as **guidance** only, allowing you to be more informed in your approach to being a more **inclusive** coach. No two people are the same; as such, please ensure your first step is always to speak to the person - understand their **abilities** and goals, and never assume.

### What is Amputation?

An **amputation** is the surgical removal of part of the body, such as an arm or leg, as a result of trauma, medical illness or surgery. **Congenital amputation** is birth without a limb or limbs, or without a part of a limb or limbs.

Approximately 5–6000 major limb amputations are carried out in England every year. 70% of these are on individuals over the age of 65. Trauma accounts for 5% of amputations.

### It is Important to Understand the Following Points:

No two people with amputations are affected in the same way. Some amputees can function as well as any non-disabled person, while others are severely impaired. This depends on a number of factors, such as level of amputation, number of amputations, cause of amputation, other medical conditions, type of prostheses, prosthetic fit, length of residual limb and scar tissue.

As an amputee cannot generate a muscular force to cause the prosthetic joint to rotate, other joints (most frequently the hips) will have to work harder to enable the movement. For instance, a lower-limb amputee will not be able to push the leg from the ankle; rather, they will pull the leg from the hip.

### Pain Threshold and Tolerance

Discuss **pain threshold and tolerance** with the participant in order to have a better understanding of specific issues and concerns, such as their pain management routine (eg use of medication). As a coach, you need to discuss this information.

This should be established and monitored regularly to prevent/reduce the risk of any aggravated or potential future injuries. Where appropriate, adjustments should be made to reflect this.

### Other Points to Consider

Discuss rehabilitation techniques used by the individual pre- and post-training session.

Consider their balance, coordination and strength as a starting point before introducing any sport-specific technical modelling.

Lay down solid foundations first to build on, and keep it simple.



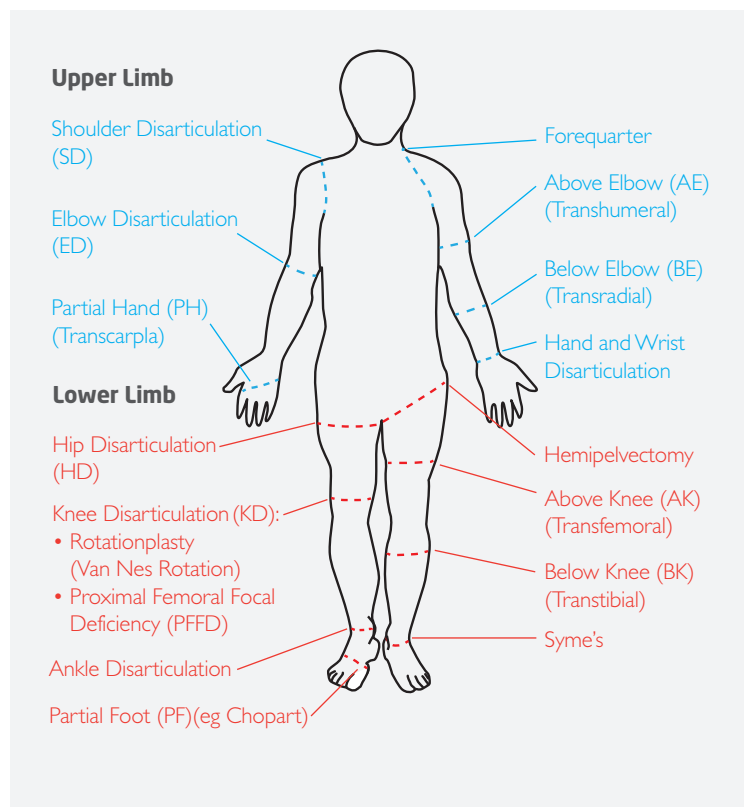
## Coaching Sessions

- Prosthetic limbs mimic real limbs in a more simplistic way. The coaching techniques you normally use are a good place to start, but you might have to make adaptations.
- A user should be aware that they can exercise on practically any type of prosthesis and do not need a blade. Some of the less active feet may restrict performance, feeling heavy and slow, but will allow them to do a degree of exercise. Encourage the individual to speak to their prosthetist.
- If the participant is limited by their prosthesis, work with them on alternative exercises – keep the approach simple.
- Participants may use stump socks or liners to help with the fit of the residual limb into the socket (like wearing socks in shoes). Participants will sweat in the socket, which can become swollen and uncomfortable, so give them time out to change them or remove their prosthesis during the session if necessary.
- Find out what the participant can do, or what may be preventing them from taking part (eg self-confidence, socket fit, pain, technology).
- Consider the individual's physique, mobility and application. Speak to the participant to understand their personal abilities and desires.
- Check the participant's range of movement as this can vary greatly.
- Constant and continual repetition and reinforcement can improve coordination and mastery, but it can cause skin breakdown. Talk to the participant about finding a good balance between repetition and changing the nature of the loading.
- Participants may have a slower response time when initiating movement on command, due to their prosthesis.
- The participant may have limb movement restrictions. Therefore, they need to improve their basic movement skills, through drills.
- Be aware of any balance and coordination problems, and take these into consideration with any relevant drills or game play.
- Safety and comfort are paramount.

## Levels of Amputation

Mobility, range of movement, coordination, balance and comfort vary greatly depending on the level of amputation. As a general rule, the more residual limb (stump length) an amputee has, the more mobile they will be.

- Partial foot or toe(s)
- Syme's (through the ankle)
- Transtibial amputation (below the knee)
- Knee disarticulation (through the knee)
- Transfemoral amputation (above the knee)
- Hip disarticulation or hemipelvectomy
- Bilateral lower-limb loss
- Partial hand or finger(s)
- Wrist disarticulation
- Below elbow
- Elbow disarticulation
- Above elbow
- Shoulder disarticulation or forequarter
- Bilateral upper-limb loss



### For further information and support, contact:

LimbPower

[www.limbpower](http://www.limbpower)

For a two-hour workshop aimed at increasing awareness and confidence of coaching disabled people in sport, visit [www.sportscoachuk.org/coach-disabled-sport](http://www.sportscoachuk.org/coach-disabled-sport)

Also, visit [www.sportscoachuk.org/inclusion-coaches](http://www.sportscoachuk.org/inclusion-coaches) for further useful information.