

# Ideal Functional Outcomes for Amputation Levels

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## KEYWORDS

• Functional outcomes • Amputations • Classifications • Ideal

## KEY POINTS

- Levels of amputations: To define amputation levels and how this relates to functional outcomes.
- The role of the rehabilitation team: Individual roles of the team members in accomplishing the rehabilitation of the amputee patient.
- Prosthetic candidacy: Based on comorbidities, compliance, energy expenditure, K-levels, and objective measures and subjective assessments.
- Therapy (physical, occupational, psychological, vocational): How each discipline contributes to the rehabilitation process.
- Ideal outcomes: Determining expected functional independence after an amputation.

## LEVELS OF AMPUTATION

For both upper and lower limbs, amputations are classified into specific levels (**Fig. 1**).<sup>1-3</sup>

### *Upper Extremity*

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The most common levels of amputations for the upper limb are the transradial (TR) (below elbow, BE) and the transhumeral (TH) (above elbow, AE).

### *Lower Extremity*

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The most common levels of amputations for the lower limb are the transtibial (TT) (below knee, BK) and the transfemoral (TF) (above knee, AK).

### *Bilateral Amputees*

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For the bilateral lower limb amputee, energy expenditure becomes a major consideration in how functional and compliant the amputee is with prosthetics in comparison

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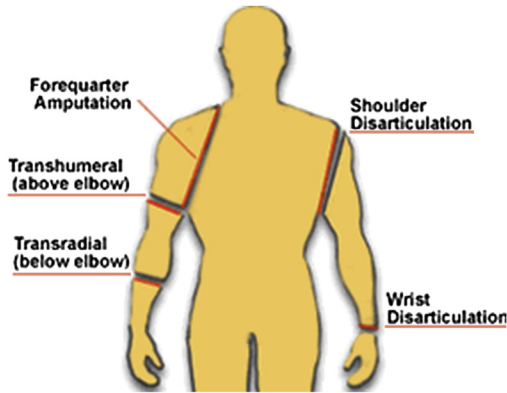


Image of upper limb amputations

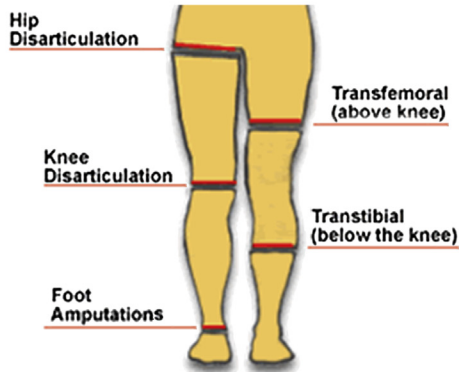


Image of lower limb amputations

**Fig. 1.** Levels of limb amputations.

with mobility with a wheelchair. The bilateral lower limb amputee at the above-knee level is less likely to wear prosthetics, whereas the bilateral upper limb amputee is more likely to rely on prostheses in order to be more functionally independent.

### REHABILITATION TEAM

Ideal outcomes for the amputee are best achieved by a multidisciplinary team including physicians, nurses, physical and occupational therapists, prosthetists, psychologists, vocational counselors, and social workers. Returning to independence and the highest level of function is the goal of the rehabilitation team. It is crucial for the team to identify issues such as pain, depression, and acceptance of changes experienced by the patient and his or her level of disability as a result of the amputation. Adapting to the use of a prosthesis is best accomplished by the team identifying and addressing potential barriers to wearing and using a prosthesis effectively.

### PROSTHETIC CANDIDACY

Multiple factors that must be considered in determining whether a patient is an appropriate candidate for a prosthesis include cardiovascular endurance, level of amputation, cognitive ability, mobility goals, and comorbidities. For an upper extremity

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