

Prosthetics Worksheet **Answer Key**

Fill in details about the following aspects of prosthetic limbs:

1. Purpose and benefits of prostheses (artificial body parts):

To restore functionality and capabilities of lost limbs.

Enables patients to regain mobility, conduct daily living activities, keep a job, etc.

2. Design considerations:

1. *Location*: Does a joint need to be replaced? What functions should the prosthesis be able to perform? Does it need to appear natural?
2. *Strength vs. weight*: The prosthesis needs to be strong enough to be durable (and possibly support body weight if it is a lower limb), but light enough to be easily moved.
3. *Attachment method*: How will the prosthesis be securely attached to the body, yet still permit it to move as needed?
4. *Available materials*: What materials are available to fabricate the prosthesis? What materials make sense for the particular prosthesis?
5. *Cost*: How much will the finished prosthesis cost? Is the cost reasonable for patients to afford?

3. Parts of a prosthesis:

1. *Interface (socket)*: Where the prosthetic device meets the remaining part of the limb. Usually includes some kind of suspension system /attachment method.
2. *Components (pylon)*: The internal working parts of the prosthesis.
3. *Foot*: Or hand, in the case of an arm prosthesis.
4. *Cover*: The prosthesis may be covered in a material to make it look more lifelike.

4. Four main types of artificial limbs:

1. *Transradial*: A prosthesis that replaces the arm from below the elbow (includes the wrist, hand and fingers).
2. *Transhumeral*: A prosthesis that replaces the arm from above the elbow (includes the elbow, wrist, hand and fingers).
3. *Transtibial*: A prosthesis that replaces the leg from below the knee (includes the ankle, foot and toes).
4. *Transfemoral*: A prosthesis that replaces the leg from above the knee (includes the knee, ankle, foot and toes).