



BK Prosthetics: Definitions and Troubleshooting

Some common definitions:

1. **Patella**- knee cap
2. **Patella tendon**- the doctor taps on this to check your knee reflexes. It is the tendon below your patella.
3. **Tibia**- the largest bone below your patella, also called the shinbone.
4. **Medial flare of tibia**- this area is on the inside portion of the tibia below your knee. This is where the tibia changes from wide to narrow.
5. **Fibula**- the small, skinny bone on the outside of your leg below your knee. The top of the fibula is the **fibula head**.
6. **Shrink**- a term used to refer to a residual limb that is decreasing in size, especially below the wide part of the knee. Shrinking of the muscles or soft tissue is especially common with a newly amputated limb.
7. **Suspension**- this refers to how a prosthesis is held onto your residual limb. Some of the most common types of suspension are:
 - a. Supracondylar (SC)
 - b. Silicone suction suspension (3S)
 - c. Cuff strap and waist belt
 - d. Suspension sleeve
 - e. Vacuum
9. **SC = Supracondylar**- *supra* means **above**, and *condylar* refers to the bone at the wide part of the knee. A prosthesis with supracondylar suspension holds onto your leg by having a snug fit above this bone on the inside of the knee.
10. **3S = Silicone Suction Suspension**- this refers to a type of prosthesis that uses a roll-on silicone sleeve with a **locking pin or plunger** on the end to hold the prosthesis onto your limb. The **locking pin or plunger** inserts into a locking mechanism called a **shuttle lock** that is in the bottom of the prosthetic socket.
11. **Cuff Strap and Waist Belt**- a cuff strap is a strap that is attached to the top of a below knee (BK) prosthetic socket. Because it is attached above the patella it does not allow the prosthesis to slip past the patella. The cuff strap is often used in combination with a waist belt. The waist belt helps to prevent pistoning of the prosthesis on your residual limb
12. **Piston**- if a prosthesis pistons, it is not held (suspended) properly in position on your leg. Your suspension is not adequate. Your prosthesis should be held snug to your limb and not pull away (drop down) when you walk. If there is exaggerated motion between your limb and your prosthesis when you walk this is referred to as pistoning.
13. **Ply**- a term used to signify the thickness of a prosthetic sock. One ply is approximately the thickness of a thin cotton sock. You refer to a prosthetic socket fit in terms of ply. For example, "I am wearing 5 ply with my BK prosthesis"

14. **Flexion**- this refers to the position of the knee when it moves from a straight position to a *bent position*. To kneel on the floor your *knee bends* or goes into flexion. Flexion is the opposite of extension.
15. **Extension**- this refers to the knee being in a *straight position*. A *straight position* of the knee is referred to as *full extension*. When you go from a kneeling position, with your knee bent, to a standing position, your *knee straightens* or goes into extension. Extension is the opposite of flexion
16. **Hyperextension**- this refers to the knee being *pushed backwards*, or beyond a straight position. Hyperextension of the knee is beyond full extension.
17. **Shuttle lock** (see 3S=silicone suction suspension)
18. **Plunger or locking pin** (see 3S=silicone suction suspension)