

Dressings

Often the residual limb will be put in a plaster cast right after surgery while you are still under anesthesia. The cast or rigid dressing is used to reduce swelling, to protect the leg, to prevent shortening of the hamstring muscles and to keep foreign bodies away from the incision. This cast is changed every 7-10 days for 2-3 weeks. Sometimes a pylon and foot will be attached to cast. This is called an immediate post operative prosthesis (IPOP). This allows a person to begin partial weight bearing before complete tissue healing has occurred. An IPOP is generally used on someone without disease as the cause of an amputation or when someone needs assistance in transferring.

Sometimes the leg will be put in a specially designed brace called a removable rigid dressing (RRD). Usually the RRD is worn until you are fit with a prosthesis. The purpose of this dressing is similar to the rigid dressing: to limit swelling, to protect your leg from bumps and infection and to keep the leg straight. It differs however from the rigid dressing in that it is removable to allow for dressing changes, frequent inspection of the limb and for exercising.

Another option for post-surgical care is to use only soft dressings and/or bandages on the residual limb post surgically. This allows the incision site to be monitored and dressings to be changed easily. Bandages are used on the leg to limit swelling.

Stitch Removal

Once the incision site has healed shut the stitches will be removed. Your doctor may use some steri-strips over the scar to protect the site. Though the site is closed, the skin is new and can be very delicate. The steri-strips are placed over the scar to help hold the area together while tissue toughens and healing continues.

At this point you may begin some steps at home to prepare your leg for a prosthesis. Gently massage and tap on your leg to help desensitize it. You can take off a removable rigid dressing for short periods of time to exercise and bend your leg. Do not let your leg remain in a bent knee position for long periods of time, however. Maintaining your range of motion in full knee extension is important for fitting and walking with a prosthesis.

Prosthetics

Once your physician deems you are ready for a prosthesis, your prosthetist will begin your prosthetic care. You will see your prosthetist many times over the next year. At the beginning when the prosthesis is new, you will see your prosthetist more frequently and visits will decrease in frequency over time. Appointments take approximately one to two hours and you will usually be seen weekly at the beginning. Wear loose fitting clothing or shorts to your appointments.

Step 1: Shrinkers



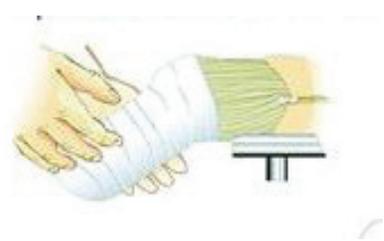
Once the stitches or staples have been removed and the incision is healed, you will receive shrinker socks. You will be measured and fit by your prosthetist. The purpose of the shrinker socks are to keep the leg from excessively swelling and to prepare the leg for a prosthesis. A swollen, bulbous shaped limb is normal after surgery because blood pools at the bottom of the leg. A bulbous limb makes prosthetic fitting difficult because the leg will not easily slide in and out of prosthesis. The shrinker socks help shape the limb into a conical or cylindrical shape necessary for using a prosthesis. Shrinkers will be worn at all times but can be removed for bathing. You will be given 2 socks, one to wash and one to wear. If there is a lot of swelling initially, you will be given another set of shrinkers in a smaller size to continue compression on the limb. As the swelling subsides throughout the day, shrinker socks will tend to slide down. You may need to pull them up several times throughout the day.



Post-Surgery (continued)

Step 2: Cast/Measure for Preparatory Prosthesis

Once you have been in shrinkers for 1-2 weeks, your limb begins to take on a cylindrical shape because the swelling continues to decrease. At this time your physician and prosthetist will decide if you are ready for a prosthesis. It is important not to rush into being fit with a prosthesis before your leg is physically ready.



The process of making and fitting the prosthesis may take 2-3 weeks. You will be casted or measured for a prosthetic socket. If you are casted, your prosthetist will wrap plaster or Paris bandages on your leg and then remove the cast when it hardens. Several measurements will also be taken. If you are measured for the socket, the prosthetist will take additional detailed measurements of the leg. Discuss with your prosthetist your occupational requirements, your hobbies, footwear and any other concerns you might have. This will help you and your prosthetist determine what components or options may be the best for your initial or preparatory prosthesis. You may see a sample of what the prosthesis will look like.

Step 3: Check Socket Evaluation

The mold or measurements taken previously will be used to make a check socket. The socket is a clear plastic device that is a trial socket for the prosthesis. The socket is the interface between your leg and the rest of the prosthesis, therefore a comfortable fit is crucial. This check socket is used to determine if any changes need to be made before proceeding with the prosthesis. Adjustments will be made at this time to ensure the best possible fit of the prosthetic leg. There is a certain amount of discomfort associated with wearing a prosthesis. The socket should not be painful. Rather most people describe the feeling as pressure. The reason a prosthesis needs to fit tightly is to support your body weight in areas on the leg that can tolerate it. The bottom of the leg cannot tolerate weight bearing forces and therefore the socket pushes elsewhere on the leg in order to hold you up. If significant changes need to be made to the check socket, this step will be repeated in order to provide the most comfortable socket possible.

Step 3: Delivery of the Prosthesis

At the delivery appointment, your prosthetist will make alignment adjustments to the leg in order to help you stand on your prosthesis comfortably. You will be instructed on how to use your prosthesis. Time spent on the prosthesis will be restricted in order to provide a break in period and to identify any potential problems with the fit of the prosthesis. As you are breaking in your prosthesis, you will continue to wear shrinker socks any time you do not have the prosthesis on. Shrinkers may be discontinued when you are up to full time use with your prosthesis. Also in some cases, people will wear the shrinkers at night if they find difficulty getting the prosthesis on in the morning due to swelling.

Step 4: Follow Up Appointments

You will be seen 1-2 weeks after receiving your prosthesis for a checkup. Once you have begun to adapt to the leg and trust it, you will stand on the leg differently. Changes will need to be made to adjust the leg to fit you. At this time you will be evaluated to determine if you are ready for physical therapy or if you need continued adjustments to achieve optimum fit. Once physical therapy begins you will be seen 1-2 weeks afterward for follow up. Follow up beyond this is will be monthly or as needed.

Over the Next Year

The preparatory prosthesis is the first prosthesis you will receive. It is expected to last 6 months to a year. Over the course of the next year your leg will change dramatically. Swelling will stabilize and the muscles that used to control movement of the amputated lower leg will atrophy. In order to compensate for the changes in your leg, prosthetic socks are worn and more adjustments are made to the prosthesis

in order to ensure it is comfortable and functioning properly. At some point anywhere from 6-15 months after being fit with your preparatory prosthesis, no more adjustments will be possible to the current leg to make the leg fit the way it should. Your limb will stabilize and not swell as much either. At this time you will be ready for your definitive prosthesis.

Definitive Prosthesis

In order to make the definitive prosthesis, you will again be casted or measured and a check socket will be fit. You and your prosthetist will discuss any changes that will be made for the new prosthesis. You may choose another system of suspension, a different foot or knee, a protective leg shape cover, or to make no design changes at all.

Anatomy of a Prosthesis

There are six different components needed for every below knee or transtibial prosthesis. There are many different options within each category. There are benefits and drawbacks to every component. For example, certain components require more maintenance or may have weight or activity limitations. You and your prosthetist will determine what will be best for you.

Socket: Serves as the interface between you and the rest of the prosthesis.

Suspension: This is how your prosthesis is held onto your leg.

Interface: The layer between the socket and your skin.

Foot: foot component of the prosthesis

Pylon: Serves as the shin component.

Structure: Endoskeletal- series of modular components which are interchangeable
Exoskeletal- series of components which are not interchangeable