

Prosthetic Rehab Plan

First 4 – 6 weeks after surgery – Until sutures are removed, follow the instructions below:

- ✚ Gently wash your limb daily with anti-bacterial soap and water
- ✚ Wear the brown stump shrinker to control swelling in the residual limb **AT ALL TIMES**
- ✚ Wear the APOP (Adjustable Post-Operative Protector) to protect limb and prevent knee flexion contractures **AT ALL TIMES**
- ✚ To prevent hip flexor contractures, for at least 20 minutes per day and while you are asleep, lay completely flat on a bed to stretch the hip flexor muscles
- ✚ To prevent knee flexion contractures squeeze the thigh muscles to tighten your kneecap. Tighten this muscle and hold for 5-10 seconds, repeat 50 times daily

6 – 8 weeks after surgery – After **ALL** sutures are removed

- ✚ Typically, it takes 6 to 8 weeks for a limb to be in the condition to begin the process of fitting the prosthesis
- ✚ To be able to walk on a prosthetic limb, your limb must be completely healed and able to tolerate bearing weight and pressure onto the limb
- ✚ If you cannot moderately massage your limb without pain, then you must understand that you cannot expect to walk efficiently until this is possible
- ✚ You must begin the following activities to prepare for walking with a prosthesis:
 - Limb Desensitization and Scar Massage
 - Place a dime sized amount of A&D Ointment onto your fingertips and rub directly onto the suture line in circles increasing pressure until the point it “smarts” but not until the point of severe pain. **Perform this activity 4 times per day.**
 - Take different textures (wash cloth, leather, rubber, etc.) and rub them directly onto your skin on your residual limb lightly. **Perform this activity several times a day.**
 - There are several other desensitizing and scar massage exercises that your Physical Therapist can help you with.
 - Limb Muscle Exercises
 - Try to point your toes up, hold 5 seconds, relax and then move your toes down, hold 5 seconds. **Perform this activity 50 times per day.** This will help with your ability to control the prosthesis and walk without a limp.
 - You should be able to see the muscles moving in your limb while performing this exercise. If you cannot see them try to feel your limb with your hand while trying to fire muscles and this will help with your ability to perform this exercise.

BUILDING AND FITTING YOUR TRAINING PROSTHESIS TIMELINE

1 DAY PROSTHESIS FABRICATION “ROLL IN...WALK OUT”

After your sutures are removed and you have completed aggressive scar massage we will begin making the prosthesis

For patients who travel a long distance we offer the option of completing this process all in one day to minimize trips to the prosthetic clinic

This will be a long day and we would expect you to be prepared by bringing the following items with you:

- + Lunch and be prepared to stay at our office for 8 hours
- + Large sized gym bag to store all of the prosthetic leg supplies
 - o ALL these supplies will be brought to EVERY prosthetic appointment
- + Lightweight comfortable gym shoes
- + Shorts
- + MUST have current copies of ALL insurance cards

The following is a breakdown of how the day visit will proceed:

+ **8am – 10am – Casting and Measurement**

- o We will fit you with a silicone gel liner. This is how you will be “connected” to your prosthesis. You will be given a gel liner wearing schedule to follow.
- o Next, a cast is taken of your limb over the silicone gel liner.

+ **10am – 12pm – Study Time**

- o You will be given prosthetic literature and DVDs to watch to begin educating yourself to better prepare for the afternoon session when you will be walking.

+ **12pm – 1pm – Lunch**

+ **1pm – 3pm – Test Socket Fitting # 1**

- o A few hours after the cast has been taken, you will be fit with a clear diagnostic socket so that we can see the limb while in the socket. If the fit is well then we will temporarily attach the socket to your prosthetic foot. We will then align the prosthesis dynamically to match your pattern of walking. You will wear this temporary set-up for 1 week. You will be given a wearing schedule to follow for the first 6 weeks you have your limb.

+ **3pm – 5pm – Dynamic Assessment**

- o You will need further changes to the alignment as you begin to learn to walk and these changes will continue for the next 3 – 4 months. There is a possibility that your limb will need to be re-casted 2-3 times within the first 6-12 months. Every time we take a new cast you will be fit with a new test socket until the changes in your limb stabilize.

- ✦ After the all day visit we will need to see you back in the office no later than 2 weeks after your fitting. The materials used on the test socket are temporary in nature and are not covered under warranty to last any longer than 2 weeks. There is a strong risk of the materials breaking if they are not replaced for permanent style components within 2 weeks.
- ✦ 2 weeks after initial fitting – Laminated Socket Fitting (Estimated time – 2 hours)
 - We allow this much time so that proper alignment and height adjustments can be made, as well as ensuring you fully understand how to properly use the prosthesis since we will not see you for several weeks after this
- ✦ There will be at least 3 more routine follow up visits to verify that the prosthesis is functioning properly before we make your final prosthesis.
- ✦ Your feedback and participation in this process is very important to us being able to get you back to walking as good, if not better than before your amputation surgery.
- ✦ We will be trying different materials and prosthetic feet during this time to maximize your ability, function and safety before we fit you with the final prosthesis
- ✦ This is very important because the final prosthesis must last you for 5 years.

Preparing for Prosthetic Training

At this point in your rehabilitation, there are four techniques you can use to prepare your residual limb for prosthetic training: Massage, Tapping, Desensitization and Scar Mobilization.

Massage and Tapping

Early massage and tapping of your residual limb will help you develop a tolerance in your residual limb to both touch and pressure. Both of these techniques can be performed through your soft compression dressings and when the soft compression dressing is off. Additionally, these techniques may help decrease your sensation of phantom pain.

Massage

1. Using one or two hands, massage your residual limb using a gentle kneading motion. Initially, be especially caution when massaging over your sutured area.
2. Massage the entire residual limb.
3. Over time and once your sutures are removed you can increase the pressure to massage deeper soft tissues and muscles in your residual limb.
4. This should be done for at least 5 minutes 3-4 times a day. It can be done more often if it is found to be helpful in reducing phantom pain.



Tapping

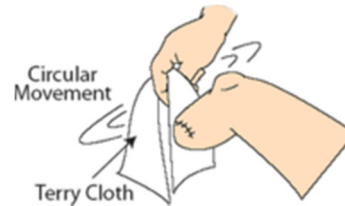
1. Tap your residual limb with your fingertips, being careful not to tap with your fingernails. Gentle tapping over the suture line is generally allowed even before your sutures are removed.
2. Over time and once your sutures are removed you can increase to a slapping motion using one or two hands.
3. Tapping should be done for 1-2 minutes 3-4 times a day. It can be done more often if it is found to be helpful in reducing phantom pain.



Desensitization

Desensitization is the process of making your residual limb less sensitive. If you start with a soft material and progress to rougher materials, desensitization can help you increase your tolerance to touch in your residual limb.

1. This technique is done when you are not wearing your soft compression dressing. It should be done for 2-3 minutes twice daily and is usually done during bathing times.
2. Initially, start with a cotton ball and gently rub the skin of your residual limb using a circular motion.
3. When you are able to tolerate it, progress to a rougher material such as a paper towel.
4. Finally, advance to a terry cloth towel.
5. This technique should be done until you can tolerate gentle friction from a terry cloth.



Scar Mobilization

This technique is done to keep the skin and scar tissue on your residual limb loose. Scar adherence to underlying tissue can be a source of pain when using your prosthesis and can also cause blistering. This technique is best performed when you are not wearing your compression dressing.

1. Place two fingers over a bony portion of your residual limb.
2. Press firmly and, without moving your fingertips, move your fingers in a circular fashion across the bone for about 1 minute. Continue this procedure on all of the skin around the bone of your residual limb.
3. Once your incision is healed, use this procedure over your scar area directly.
4. This technique should be done daily with you bathe.

