

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

Preparing for Prosthetic Training

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

- **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.
- **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.
- **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.
- **Limb Muscle Exercises**
 - Performing limb muscle exercises with help with your ability to control the prosthesis and walk without a limp.

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. Once your suture line has completely healed place a dime sized amount of A&D Ointment onto your fingertips and rub directly onto the healed suture line in circle pattern. While rubbing increase the pressure until the point it “smarts” but not until the point of severe pain.
5. 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.



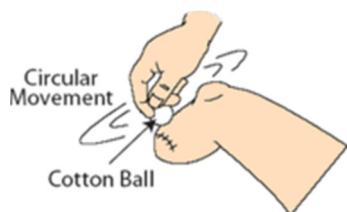
Tapping

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.



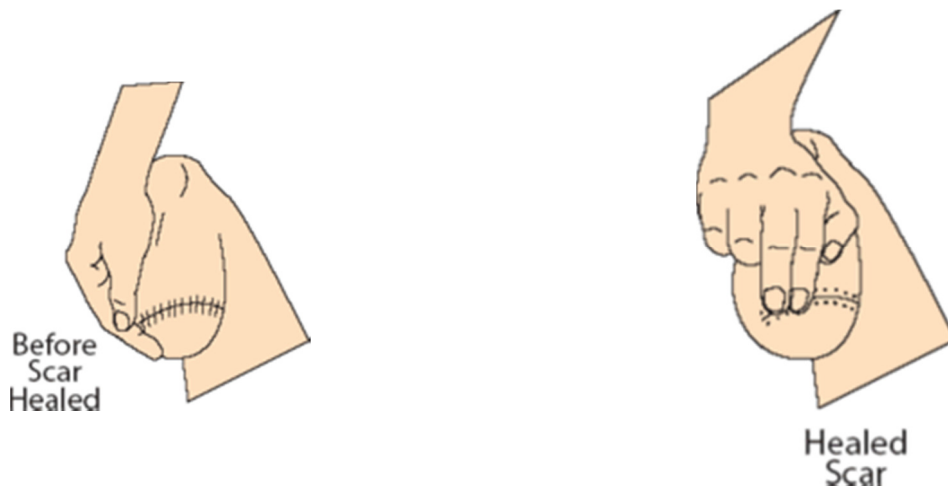
Desensitization

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

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** when you bathe.



Limb Muscle Exercises

If you are a Below Knee Amputee:

1. Try to point your toes up and hold for 5 seconds then relax your toes.
2. Point your toes down and hold for 5 seconds then relax.
3. Perform this activity **50 times per day**.

If you are an Above Knee Amputee:

1. Try to straighten your knee and hold for 5 seconds then relax your knee.
2. Bend your knee and hold for 5 seconds then relax.
3. Perform this activity **50 times per day**.

- 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

After your sutures are removed we will begin making the prosthesis. **Always bring a pair of shorts with you.**

- **Appointment # 1 – Casting and Measurement (Estimated time – 1 hour)**

- We will fit your limb with a silicone gel liner. This is the part that will “connect” you to your prosthesis. You will be given a gel liner wear schedule to follow.
- Next, a cast is taken of your limb over the liner.

- **Appointment # 2 – Test Socket Fitting # 1 (Estimated time – 2 hours)**

- Bring a large sized bag (gym, duffel, etc.) to this appointment. You will be given many items and this will be the best way to keep all items together. You will need to bring **ALL** items to **EVERY** appointment with the prosthetic clinic.
- Bring your most comfortable athletic style shoes and shorts to change into for your fitting.
- The purpose of a Test Socket is so the prosthetist can see the limb while in the socket to check that the fit is appropriate. If this fits 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 prosthesis.

- **Appointment # 3 – Test Socket Evaluation (Estimated time – 1 hour)**

- As you begin to learn to walk, your limb will change in size and shape and the alignment to your prosthesis will need to be altered to adapt to these changes. These changes are expected to continue for the next 3 – 4 months and we will need to re-cast your limb 2 – 3 times during these months to accommodate the different changes. Every time we take a new cast you will be fit with a new test socket until your limb stabilizes.

- **Appointment # 4 – Laminated Socket Fitting (Estimated time – 1 hour)**

- We allow this much time so that proper alignment and height adjustments can be made, as well as ensuring that you fully understand how to properly use the prosthesis since we will not see you back (barring any complications or issues) 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 you were 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 definitive prosthesis.
- It is very important that you are fit with the proper components because the final prosthesis must last you for 5 years.