

## **WEARING A PROSTHESIS**

Wearing a prosthesis is a very important step in both physical and emotional healing after an amputation. When you wear a prosthesis, you help prevent swelling in our residual limb and improve your muscle strength and flexibility. Wearing a prosthesis also leads to greater independence and a sense of accomplishment and well-being. These are all positive factors for good emotional health.

Understand that a prosthesis is a very unique piece of equipment designed specifically for one person. After you and your team determine the type of prosthesis that best fits your lifestyle, a prosthetist will work with you to create your device. This involves a series of measurements, cast molds, and multiple fittings so that the prosthesis can be shaped as closely as possible to resemble your other leg. Creating a prosthesis is a team effort and requires a two-way communication between you and your prosthetist, as well as patience and cooperation. The goal is to build a prosthesis that is comfortable to wear and will maximize your mobility.

Once fitted with a prosthesis, your physical and occupational therapists will begin a therapy program aimed at improving your mobility using your new prosthesis.

Check your skin after wearing your prosthesis to look for signs of poor fit. These include redness that does not go away, blisters, or skin tears. If you see any of these problems, stop using your prosthesis and notify your prosthetist immediately.

## **PROSTHETIC PROCESS**

Upon successful healing and control of edema (swelling of the tissues in the residual limb), your physician will most likely prescribe a prosthesis for you once your sutures (stitches) have been removed.

It is very important to inform the practitioner of any goals and aspirations you have. Your history and lifestyle will be discussed with things such as your activity level, recreational interests and hobbies. With your goals in mind, the process of prosthetic selection can begin.

As part of your first visit to the prosthetist, your residual limb will be evaluated for any scarring, redness, blisters, or any other problems that might affect the fit and function of a prosthesis.

Your prosthetist will go over the different options for prosthetic interfaces. The most common types of prosthetic interfaces include pelite, flexible plastic and gel liners. Each has pros and cons that must be considered.

- Pelite: Moldable foam that is lightweight, soft to the touch and moisture proof. Can be fragile and will compress over time.
- Flexible plastic: Plastic that is moisture proof, will not compress and provide the ability to make numerous alterations to the fit of the prosthesis. They are very durable but aren't the most comfortable.
- Gel Liners: These liners are worn directly against the skin to provide cushioning. Due to the daily wearing against your skin, it is important to wash and dry completely every day before reapplying.

Once it has been decided on the most appropriate course of action and type of prosthesis design, paperwork will need to be obtained by your referring physician to continue with this process.

After the socket design and interface choices are made, the prosthetist will take a series of measurements from your residual limb that will be used in the fabrication process.

Your prosthetist will then take an impression of your limb using plaster. This will model the exact size and shape of your limb. It is from this impression that your prosthetic socket will be fabricated.

### **CHECK SOCKET FITTING**

A Check socket (trial fitting of socket) will be made before the final prosthetic socket will be fabricated. This allows changes to be made if certain pressure points are created or an increase/decrease of limb volume.

When you return to see your prosthetist for the check socket fitting, you should bring a pair of shoes with you.

The check socket is typically made of a clear plastic that allows the practitioner to view the pressures exerted on the residual limb prior to fabrication of your prosthesis.

During this visit, your prosthetist will allow you to stand in the prosthetic check socket.

After adjustment are made to the socket to alleviate pressure points, your prosthetist may have you walk in the parallel bars to dynamically align the prosthesis.

Your practitioner will work with you to make any necessary adjustments to the socket for a better fit and to optimize how you walk.

### **RECEIVING YOUR PROSTHESIS**

The definite socket may be fabricated of a laminated carbon or other composite materials. Definitive sockets may also be made of thermoplastics.

During your delivery appointment, your prosthetist will have you walk in the parallel bars and make any necessary alignment changes to optimize how you walk.

Once all adjustment have been made, you will be able to take the definitive prosthesis home with you.

Cosmetic covering may be made of a soft foam or a rigid foam. It give the prosthesis a natural appearance, typically matching the previous shape. The outer coloring/ tone is typically incorporated into a nylon or rubberized prosthetic skin that is applied over the cover. The prosthesis can be finished to match your sound side. However, this process only happens after a few months of necessary adjustments to achieve your best fit and function.

## **SOCK MANAGEMENT**

While wearing your prosthesis, it is common to experience a loss of volume in the limb throughout the day. This is commonly referred to as “sock management.”

As your residual limb loses volume, the space between your residual limb and prosthesis will become greater and must be filled. Your prosthetist will provide you with several socks, of various thickness, that will fill this space.

Sock ply is determined by the thickness of the sock. The sock ply can visually be determined by a number on the sock to the color of the sock stitching. The lower the sock ply, the thinner the sock. It will be your job to determine when socks are required and what size will best fill in the gap. It takes some time to get proficient with this. Be sure to talk with the prosthetist and physical therapist when you have questions.

## **PROSTHETIC HYGIENE**

You should wash your residual limb on a daily basis to help prevent the accumulation of bacteria or development of cysts or pimples. Simply wash your residual limb with warm water and a mild soap. The soap should be fragrance free to prevent any skin irritation. A good soap to start with is the same brand you use to wash the rest of your body with. If this doesn't work for you, consult your physician or dermatologist for other recommendations. Always be sure to rinse thoroughly and remove any residual soap from your limb.

When drying, try to pat with a towel rather than rubbing the limb. While this action is soothing to some people's limbs, it is irritating to others.

During this process you should check your skin for any abnormalities such as redness, blisters or anything that is otherwise abnormal to you. Any signs of prolonged redness or soreness should be reported to your healthcare provider right away. Early identification of problems tends to result in less complications. If something does not appear to be normal, always ask a professional.

## **PHYSICAL THERAPY**

Your physical therapist will work with you on safety and gait training (walking) with your new prosthesis. Gait training is a process in which the physical therapist teaches you how to walk safely and efficiently with your prosthesis with either an assistive device or without assistance.

Your therapist will train you on gait patterns as well as how to navigate stairs and any other every day challenges that may occur. You will be introduced to many different exercises that may be accomplished at the therapist's office and/or at home.

A physical therapist will begin with certain exercises to help strengthen the muscles needed for ambulation.

It is important that you follow the regimen given to you by the therapist. The exercises and training you get in physical therapy will help you improve strength, balance and efficiency for walking with your new prosthesis.

## **ASSISTIVE DEVICES**

Throughout your rehabilitation process, you may be prescribed different assistive devices to help you transfer, walk, and exercise.

In the early stages following your amputation your therapist will begin training you to utilize various assistive devices to aid in walking. Some of the most commonly used devices may include the use of a wheelchair, walkers, crutches or a cane.

It is common to start off with one device before you receive your prosthesis. After receiving your prosthesis, you may use a different assistive device.

Many people express a desire to walk without the use of any assistive device and many people with an amputation are able to accomplish this. Again, be sure to talk with your healthcare provider about what is realistic for you.