

## Points to Know and Consider When Preparing for and Undergoing an Amputation

by Paddy Rossbach, RN, former President and CEO (Revised 2006. reviewed 2008)

### ***Pre-surgery***

The patient and, if possible, a family member should have a discussion with each member of the surgical/rehabilitation team. This team should include the surgeon, anesthesiologist, physical/occupational therapist (PT/OT), prosthetist, and an insurance specialist. The patient should be given information (available through ACA) on how to choose a prosthetist well before surgery or, failing that, immediately afterward. The patient should check the prosthetist's education, prosthetic training, qualifications and credentials, and experience, as well as the location and accessibility of the prosthetist's office. The patient should also request that the surgeon and prosthetist discuss together how to structure the amputation to maximize prosthetic success (e.g., best residuum length, and surgical technique, as well as what postoperative edema-reducing techniques should be used). Following are some important topics that should be discussed:

- The need for and type of proposed surgery
- Type of anesthesia
- Subsequent care including pain control, type and duration of rehabilitation and prosthetic options
- Preoperative therapy (e.g., walker/crutch training, general conditioning)
- What the patient's insurance policy will reimburse what co-payment the patient will be responsible for, and the difference between in- and out-of-network providers. (Many insurance carriers limit reimbursement to one prosthesis per lifetime or put an annual cap on the amount reimbursed.)
- How to contact a peer visitor similar in age, type of amputation, etc., who has been trained and certified. Peer visitors act as role models, offer emotional support, and provide information about resources. The ACA has a database of certified peer visitors.

### ***Post-surgery***

Unless otherwise indicated, compression should be maintained around the residual limb. Reducing postoperative swelling will reduce pain and increase circulation so that healing can occur as quickly as possible. This can be achieved through:

- Serial wrapping with an elastic bandage
- Application of an elastic shrinker sock
- Application of an Immediate Post-Operative Prosthesis (IPOP), which can be made of either plaster or, more recently, plastic
- Application of a plaster cast

Physical therapy should be instituted as soon as possible at the doctor's discretion to prevent contractures of affected joints, increase circulation, and minimize muscle atrophy. Therapy should include:

- Exercises to improve range of motion
- Stretching/strengthening exercises for affected and unaffected limbs
- Use of walker and/or crutches on flat surfaces and stairs
- Use of wheelchairs
- Activities of Daily Living (ADL).

With the doctor's recommendation, the patient will go to the chosen prosthetist to be assessed for the preliminary prosthesis. This is usually after the sutures have been removed and the wound is completely healed. The choice of prosthetic components to be used should be discussed among the patient, prosthetist, and doctor, with insurance coverage in mind. Medicare and some insurance companies use a "grading system" called the "K" level to quantify a patient's outcome potential. The components considered medically appropriate are tied to this "K" level and are chosen by the rehab team. Once the appropriate components are chosen, the doctor will write the prescription and a letter of medical necessity. Preauthorization by the insurance company is sometimes needed, and the patient should be aware of any required co-payments.

## ***Prosthetic Fitting***

The process of fitting prostheses differs from facility to facility. However, with each type of amputation there are a few common techniques:

- The residual limb will be measured either with a casting technique or by using one of several computerized methods. A cast will be formed from these measurements and used as a mold for the socket.
- One or more clear plastic diagnostic sockets may be fit onto the patient to check for the best fit.
- The final socket and components will be aligned and fit onto the patient.
- The patient will be given preliminary training in the use of the prosthesis and instructions on donning and doffing (putting on and taking off) as well as instructions concerning stump/skin care.
- To maintain a good prosthetic fit and avoid skin breakdown, it will be necessary to check the fit and alignment of the new prosthesis frequently. As postoperative swelling goes down, the socket will have to be constantly adjusted – sometimes just adding a prosthetic sock will be enough – to accommodate the change in size. This is perfectly normal and will lessen as time goes by. Once the residual limb seems to have stabilized, the definitive socket and/or prosthesis will be fabricated. It is important to know, however, that although the changes have slowed down, minor changes will continue for several years. When in doubt about the fit, the patient should consult his or her prosthetist.

## ***Physical Therapy with the Prosthesis***

The patient should be sure that the chosen PT/OT has had the proper training and experience to work with him or her and the new prosthesis. It's also a good idea to use a PT/OT who has a good working relationship with the prosthetist so that they can work together to return as much function as possible to the patient. Many lower-limb amputees use more than twice the energy of an able-bodied person but walk at half the speed. Aerobic conditioning can reduce this gap, and an active individual is less at risk for the secondary conditions that can occur as the result of a sedentary lifestyle: obesity, diabetes, cardiovascular disease, depression, loss of bone density, back pain, amputation of another limb, and even some forms of cancer. Rehabilitation of the patient will likely include:

- Stretching exercises
- Strengthening exercises
- Gait (walking) training with or without assistive devices
- Managing and care of the prosthesis
- Care of the residual limb
- Care of the remaining limbs.

## ***Emotional Needs***

The loss of a limb is one of the most devastating events in a person's life. Recovering from this event is a process that every amputee goes through at a different pace and with different support systems. Depending on the individual, these might include religious beliefs, family, friends, healthcare providers, peer visitors, and support groups. Learning about what is available and what might be achieved helps, but time is the best healer of all. The ACA's information center, Web site, educational resources, peer and support group network, and many other programs can help the new amputee move towards recovery.