

## **Amputations**

People with diabetes are 8–24 times more likely to have a lower limb amputation than people without diabetes. African Americans are four times more likely to have an amputation than White Americans. There are 1.8 million people living with amputations, and between 30,000 and 40,000 amputations performed on an annual basis in the United States. Below knee amputations are the most common amputation surgery and comprise about 23 percent of lower limb amputation surgeries. The majority of below knee amputations are performed on individuals 65 and older.

Any form of amputation is a life-changing event, but it's important to remember that amputations should be viewed as a reconstruction surgery with the goal of returning the patient to a normal life. Advances in medical technology and prosthetics have helped many patients return to a relatively pain-free and active lifestyle after amputation surgery.

Below knee amputation surgery is generally performed if a person's lower extremity or foot has been severely injured or if he or she suffers from chronic and severe pain in the foot or lower extremity. Causes are generally related to the following:

**Trauma** – A severe injury resulting from an event such as a vehicle accident or serious burn that causes severe fractures and/or nerve injuries. In an article by B Yuan 2023, Traumatic amputations are most common in the fingers. While unilateral lower limb amputation caused the greatest burden of disability to the patient.

**Diabetes** – People who suffer from diabetes may experience poor circulation because of their arteries. This is known as peripheral vascular disease (PVD). In this case, poor circulation does not allow the impacted extremities to obtain sufficient nutrients and oxygen. The affected tissue begins to deteriorate, which can lead to amputation. PVD is the leading cause of below knee amputations.

Recovery from below knee amputation is different for each patient and is highly dependent on a person's age and overall health. The incision from BKA surgery will heal over a period of two to eight weeks.

What you as the patient can expect immediately following BKA, when they come home.

### **Skilled nurse visit:**

- Involves managing pain
- Providing wound care Regular cleaning and moisturizing, along with routine checks for blisters, cuts, or sores, help maintain the skin's health around the prosthesis.
- Promoting mobility and rehabilitation, offering
- Psychological support

- Educating patients and their family,
- Coordinating care with other healthcare professionals
- Monitoring for complications

**Physical Therapy-** will help the patient perform basic exercises and functions. These will include

- Gentle stretching and range of motion exercises
- Learning how to roll in bed
- Sit on the side of the bed
- Move safely to a chair

Protecting the limb and incision after surgery is paramount. One small bump can open the incision and delay recovery, and possibly create the need for additional surgeries.

**Occupational Therapist-** They can also provide evaluation, treatment, and patient/caregiver instruction in:

- Daily living skills o Dressing, bathing, grooming, feeding
- Independent living skills Cooking, cleaning, leisure, laundry.
- Home exercise program Strengthening and range of motion related to daily living skills
- Adaptive equipment/skills Recommending, and assistance in acquisition, of adaptive utensils/ tools to assist with ADLs.

**Phantom limb pain** – Is when an amputee can still feel pain in the amputated limb it is called phantom limb pain. While the limb is no longer there, nerve endings continue to send signals to the brain, and they're interpreted as stinging, cramping, burning or other uncomfortable sensations. These symptoms generally subside over a period of about six months.

**Psychological effects** – The emotional challenges of losing a limb can include fear, depression, grief and more. It's vital for recent amputees to seek counseling and support from a psychologist or social worker, as well as the amputee community. Remember, amputations are performed to help people return to an active and independent lifestyle.

**Your prosthesis-** will return the mobility you lost due to pain before your surgery and during the recovery period immediately following surgery. While this is a very exciting phase for many amputees, it is important to prepare to use a prosthesis and learn to care for it. This will allow you to receive maximum benefit from your artificial limb.

**Maintain or Build Strength** – Work as hard as you can to maintain muscle strength before surgery and as soon as the doctor allows after surgery. Walking with a prosthesis

takes more energy than walking on your feet, so it's important to keep your leg muscles strong and healthy.

**Below Knee Prosthesis Care** – Carefully follow washing instructions on any parts of your prosthesis that come into contact with your skin including liners, socks, and the inside of the socket. Be sure to allow ample time for washed parts to dry to avoid fungal growth that could lead to infection or abrasion..

**Caring for your Residual Limb** – Wash your limb with soap and water each day (more often if you perspire heavily) and allow it to dry completely. Check your limb for any redness that does not go away within a few minutes after removing the prosthesis. Also check for skin breakdown. You may need to use a mirror if you can't see the end of your limb. If you have any skin breakdown, stop using your prosthesis immediately, and contact your prosthetist in order to arrange for an adjustment.

## **Summation**

While below knee amputation surgery is a life-changing event, the outcome is usually quite positive. Many people who opt for below knee amputation were living in tremendous pain prior to surgery. The inherent benefits of removing a painful foot or partial limb are realized very soon after surgery. In addition, many below knee amputees have found they are able to live an independent, comfortable, and active lifestyle after surgery.