

# Lower-Limb Amputation

## Fact Sheet

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### Treatment of Last Resort

Each year in the United States, more than 160,000 individuals undergo a lower-limb amputation, and Critical Limb Ischemia (CLI) is frequently the cause. CLI is a severe obstruction of the arteries, which dramatically reduces blood flow to the extremities and can progress to the point of severe pain and even skin ulcers or sores on the toes or feet. When skin ulcers and sores do not heal because of the restricted blood flow, infection can result that can lead to gangrene and ultimately amputation.

More than 60 percent of lower-limb amputation patients have diabetes. Additional risk factors for CLI include:

- Age (men over 60 and women after menopause)
- Smoking
- Overweight or obesity
- Sedentary lifestyle
- High cholesterol
- High blood pressure
- Family history of vascular disease

### Amputation in the United States

- 49 percent of the individuals who have a limb or foot amputated never had a vascular diagnostic evaluation to determine if blood flow could be restored.
- A 25-percent reduction in amputations would save an estimated \$3 billion in healthcare costs annually.
- Approximately 85 percent of all amputations occur in people over age 60.
- One in three people over age 50 with diabetes is likely to have peripheral arterial disease (PAD).
- The mean survival rate following an amputation is approximately 6.5 years.
- Nine years after an amputation, the mortality rate is 68 percent, regardless of diabetes status.

### The High Costs of Treatment and Long-Term Care

The typical cost of an amputation ranges from \$20,000 to \$60,000, including the surgeon's fee, facility fee, anesthesia and medical supplies. The cost depends partly on which limb is amputated; a toe amputation is at the lower end of the cost range, while an above-the-knee amputation is at the higher end.

These costs do not include the treatment of non-healing wounds. In 2007, the most current data available, the cost of treating wounds per episode ranged from \$8,000 to \$17,000, depending upon the presence of infection.

Prosthesis costs range from a few thousand dollars for a basic prosthetic limb to more than \$40,000 for a high-tech limb with a computer chip. Many health insurance companies have low caps on the amount they will pay for prosthetics. Consequently, many patients pay significant out-of-pocket costs. For patients covered by health insurance, typical out-of-pocket costs include a co-pay or coinsurance for an inpatient surgery of 10 to 20 percent or more of the total cost, which would stop at the annual out-of-pocket maximum. Further, prosthetic limbs wear out and have to be replaced.

Lifelong care costs for a person with an amputation average \$509,000 according to a study published in 2007 in the *Journal of Bone Joint Surgery Association* by physicians at the Center for Injury Research and Policy, Johns Hopkins Bloomberg School of Public Health, Baltimore.

## Emotional Impact

The emotional impact of an amputation varies with the cause, according to a study published in the *Journal of Prosthetics & Orthotics*. However, the study reported that of the 57 percent of patients who accepted counseling:

- Depression and anxiety affected 78 percent
- Anger and resentment affected 30 percent
- Body image affected 26 percent

## Preventing Unnecessary Amputations

A PAD diagnostic workup and physical examination of the feet and leg blood flow can determine the presence of PAD. Several non-invasive tests are available, such as the ankle brachial index (ABI), toe pressure, pulse volume recordings, and Doppler or ultrasound imaging.

A thorough diagnostic evaluation enables physicians to develop a treatment plan with the goal of restoring blood flow to the endangered limb and preventing an amputation.

## Information Sources

American Diabetes Association  
American Heart Association  
Centers for Disease Control  
Diabetes Care  
Endovascular Today  
Foundation for Accelerated Vascular Research  
Journal of Managed Care  
National Institutes of Health  
PAD Coalition  
Reversegangrene.com  
Sage Group