



LONG-TERM CARE FOLLOWING TRAUMATIC AMPUTATION

The Veterans Health Administration (VHA) has long recognized that the Veteran with a traumatic amputation epitomizes the sacrifices of military service made on our Nation’s behalf. The Veterans Medical Programs Amendments of 1992 and the Veterans Health Care Eligibility Act of 1996 formally recognized Veterans with amputations as a special population. VHA remains fully committed to providing optimal care and cutting-edge prosthetic technology to this Veteran population.

OVERVIEW

Veterans with traumatic amputations represent a population with wide-ranging medical and rehabilitation needs. These needs can include issues directly related to the amputation itself, issues related to traumatic injury of other body parts, as well as more long-term secondary complications.

Individuals with trauma-related amputations typically sustain their injuries at a relatively young age and have a long life expectancy, emphasizing the need for longitudinal care considerations.

VHA AMPUTATION SYSTEM OF CARE (ASOC)

VHA developed the ASOC in partnership with the VHA Polytrauma System of Care to assure that Veterans with both traumatic amputation and polytrauma receive comprehensive and coordinated services. The ASOC is an integrated health care delivery system that provides patient-centered, lifelong, holistic care and care coordination for

Veterans and Servicemembers with amputations.



(Photo courtesy of Jeff Bowen)

The ASOC provides care for over 30,000 Veterans with extremity amputations, including those with amputations secondary to combat and other types of traumatic injuries.

AMPUTATION-SPECIFIC CONSIDERATIONS

Residual Limb Care

Following amputation, the residual limb undergoes a number of changes over time which can potentially result in secondary complications and result in a limited ability to wear a prosthesis for functional activities.

These changes and secondary complications include:

- Soft tissue and muscle atrophy
- Skin irritation and breakdown
- Joint contracture
- Infection (soft tissue and bone)
- Proximal Osteoarthritis / musculoskeletal complications
- Heterotopic Ossification
- Osteopenia and Osteoporosis

Pain Management

Pain following amputation can generally be classified as residual limb pain or phantom limb pain.

Residual limb pain typically improves following amputation surgery, but can be persistent and associated with prosthetic use.

Phantom limb pain (pain perceived in the part of the body that is missing) can be chronic and severe enough to interfere with prosthetic use and functional abilities.





AMPUTATION SYSTEM OF CARE

Traumatic Amputation

OTHER TRAUMATIC INJURY CONSIDERATIONS

Amputations related to combat and other trauma are commonly associated with moderate to severe injury severity scores, and multiple co-morbid injuries that require long-term management and care. These associated injuries have the potential to impact Veterans' medical and rehabilitation outcomes such as functional independence, satisfaction, and quality of life.

Frequently associated injuries include:

- Traumatic Brain Injury (TBI)
- Fractures and other musculoskeletal injuries
- Soft tissue injuries and burns
- Peripheral nerve injuries
- Abdominal injuries
- Hearing loss and Tinnitus
- Vision impairment or loss
- Genitourinary injuries (common with dismounted blast explosions)
- Mental Health conditions such as PTSD, Depression, and Adjustment Disorder

SECONDARY COMPLICATIONS

Amputation of one or more limbs has a longitudinal impact on many areas outside of the residual limb itself. The two areas most commonly affected are the musculoskeletal and the cardiovascular systems. Many of the considerations in these areas gradually progress or worsen over time, whereas other conditions may be more intermittent. These conditions highlight the importance of comprehensive prevention strategies including proper nutrition, exercise, tobacco cessation, and wellness counseling for individuals with amputations. Wellness promotion and preventive measures should be part of one's lifestyle. Medical monitoring and education should be routine in amputation clinics and rehabilitation services.

Musculoskeletal Considerations

Longitudinal considerations for musculoskeletal conditions include:

- Osteoarthritis in the non-amputated extremity
- Overuse Syndromes
- Delayed amputation after initial limb salvage
- General musculoskeletal pain and Low Back Pain

Weight Gain/Obesity

Decreased activity levels and metabolic changes can result in weight gain and obesity. This weight gain can lead to a vicious cycle where weight gain makes prosthetic fitting and use more difficult, thus resulting in even greater declines in activity.

Cardiovascular Disease

The aging amputee population has significantly worse cardiovascular and metabolic issues that appear to be directly related to their traumatic amputation, and not accounted for by obesity, sedentary lifestyle, or tobacco use. Persons with traumatic amputations have been identified as having increased hypertension, ischemic heart disease, and diabetes mellitus. Lower extremity amputees should be monitored for aortic aneurysms; occurring at a reported rate of 6% versus 1% in the non-amputee population.

