

Upper Limb Amputations

Condition: An upper limb amputation is the removal of any part of the forearm or arm.

Background: Disorders that are commonly related to amputation include trauma, cancer, infection, blood vessel disease and birth deformities or diseases. Younger men are more at risk for amputations caused by trauma, such as machinery, motor vehicle or work-related accidents.

Risk Factors: Risk factors associated with amputation include: trauma, blood vessel disease, exposure to chemicals, radiation therapy, infection, diabetes, high blood pressure, and soft tissue or bone tumors.

Disease Progression: Patients experiencing traumatic injury may need an immediate amputation. Patients with blood vessel disorders may have a more prolonged time course leading to amputation. Poor blood supply, reduced sense of touch and wound formation increased risk of infection that may ultimately lead to the need for an amputation.

History and Physical Exam: Healthcare providers obtain a thorough medical history, which includes a patient's functional status, other injuries and complications. A complete physical exam is performed and includes assessment of range of motion joints, muscle strength, and sensation. Although there are many members of your health care team, a physical medicine and rehabilitation (PM&R) physician has unique experiences and abilities when dealing with amputations. PM&R physicians are highly trained doctors specializing in adding function and decreasing pain.

Diagnostic Process: Several tests may be performed to determine a patient's need for upper arm amputation, including x-rays, MRI, CT and bone scans, and ultrasound. These tests evaluate bony structures, tumors, infection, blood flow, and nerve injury. Other special test includes electromyography/nerve conduction test (EMG/NCS). EMG/NCS can be helpful with finding potential nerve problems and determining muscle strength. These special tests are generally done by a PM&R physician, also known as a physiatrist.

Rehab Management: After a patient undergoes an upper arm amputation, careful monitoring is required to assess wound healing and infection in the residual limb. Treatment includes wound dressings and/or casting, bandage wrapping, pain control, exercise, and psychological support. PM&R physicians work with patients on resuming activities of daily living. As the wound heals, the patient will receive support and education from the treating team to ready the residual limb for prosthetic fitting. When ready, the patient is fitted for a prosthesis and receives support and education to master use of the prosthesis in performing activities of daily living and other goals that might relate to work or leisure. A PM&R physician can help guide the patient with obtaining the proper prosthetic fitting, trouble-shoot issues, and even prescribe medication for any pain or symptom that may be limiting the patient from having the highest possible function. PM&R physicians often work alongside the therapist and surgeon to help coordinate the best plan for every patient.

Other Resources for Patients and Families: Several groups are available to support patients and families, including the Amputee Coalition of America, Wounded Warrior Project, American Amputee Foundation and Veteran Administration (VA) Hospitals.

Frequently Asked Questions

What is PM&R?

Physical medicine and rehabilitation (PM&R), also known as physiatry, is a primary medical specialty that aims to enhance and restore functional ability and improve quality of life to those with injuries, physical impairments or disabilities affecting the brain, spinal cord, nerves, bones, joints, ligaments, muscles and tendons. PM&R physicians, known as physiatrists, evaluate and treat the whole body, maximize patients' independence in their daily life and are experts in designing comprehensive, patient-centered treatment plans to empower patients to achieve their goals. By taking the whole body into account, they can accurately pin-point problems, decrease pain, assist in recovery from devastating injuries and maximize overall outcomes and performance with non-surgical and peri-surgical options. To learn more, visit www.aapmr.org/aboutpmr.

What makes PM&R physicians unique?

PM&R physicians' training focuses not just on treating medical conditions, but on enhancing the patient's performance and quality of life in the context of those medical conditions. They focus not only on one part of the body, but instead on the development of a comprehensive program for putting the pieces of a person's life back together – medically, socially, emotionally and vocationally – after injury or disease. PM&R physicians make and manage medical diagnoses, design a treatment plan and prescribe the therapies that physical therapists or other allied therapists perform or that are carried out by the patients themselves. By providing an appropriate treatment plan, PM&R physicians help patients stay as active as possible at any age. Their broad medical expertise allows them to treat disabling conditions throughout a person's lifetime.

Why see a PM&R physician?

A PM&R physician will thoroughly assess your condition, needs, and expectations and rule out any serious medical illnesses to develop a treatment plan. By understanding your condition and goals, you and your PM&R physician can develop a treatment plan suited to your unique needs.

How do I find a PM&R physician near me?

Visit www.aapmr.org/findapmrphysician or contact your primary care physician for a referral.