

Venous Thromboembolism

Condition: Venous thromboembolism (VTE) is a blood clot in the veins. Types of VTE include superficial (in veins close to the skin), deep vein thrombosis (DVT, in deep veins) and pulmonary embolism (PE), which is a blockage in the lungs.

Background: A DVT develops when blood pools then clots in an arm or leg. Sometimes clots in a leg loosen and travel to the lung, causing a PE. In the United States, more than 600,000 people develop VTE yearly, and nearly half die from it.

Risk Factors: Anyone who is inactive for long periods is at risk for VTE, from a patient post-surgery to a long-distance traveler. However, there are many other risk factors for VTE, including cancer, trauma, smoking, alcohol consumption, pregnancy, stroke, and obesity.

History and Symptoms: A DVT may cause pain, swelling, redness, or warmth in the arm or leg. With PE, shortness of breath, rapid breathing, rapid heart rate, chest pain, lightheadedness, or passing out may occur.

Physical Exam: While healthcare providers usually check for pain, swelling, or redness, or feel for a clotted vein, a patient with a DVT may not have any symptoms. A physical examination also is not helpful to determine whether a patient has a PE, but healthcare providers often check for low blood oxygen, rapid breathing, or an increased heart rate. Physical medicine and rehabilitation (PM&R) physicians are especially good in diagnosing VTE because many of the patients they treat are at high risk for this condition.

Diagnostic Process: DVT is diagnosed using ultrasound of the veins and sometimes using a blood test (D-dimer). PE is diagnosed using CT Angiography (a CT of the blood vessels in the lungs) or a ventilation-perfusion (V-Q) scan (a nuclear medicine test).

Rehab Management: Frequent movement is encouraged to prevent blood from clotting in the arms or legs. Patients also can wear compression stockings that help with circulation or take blood thinners under the supervision of a healthcare provider. In the hospital, patients may receive shots of blood thinners or wear compression devices that pump blood by squeezing on the leg. The PM&R physician will prescribe appropriate preventive measures during your rehabilitation, and can diagnose and treat VTEs should they occur during your rehab stay. Most cases of VTE can be managed on the rehabilitation unit, avoiding return to the acute care hospital.

Other Resources for Patients and Families: Patient and family education about VTEs is critical since the complications of VTEs are dangerous but preventable.

UpToDate Patient Education: Deep vein thrombosis (DVT) (Beyond the Basics).
<https://www.uptodate.com/contents/deep-vein-thrombosis-dvt-beyond-the-basics>

Centers for Disease Control and Prevention (CDC-P). Venous thromboembolism (Blood clots).
<https://www.cdc.gov/ncbddd/dvt/index.html>

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.