

Spinal Cord Injury

Condition: A spinal cord injury usually is from a sudden, trauma or a blow to the spine (the backbone) that fractures or dislocates vertebrae. The damage begins when displaced bone fragments, disc material, or ligaments bruise or tear into spinal cord. Injuries to the backbone cause fractures and compression of the vertebrae, which then crush and destroy the cord and its nerve cells that carry signals up and down the spinal cord between the brain and the rest of the body. An injury to the spinal cord can damage a few, many, or almost all of these nerve cells. Some injuries recover almost completely while others will result in complete paralysis. Depending where the injury is and how severe it is, it can lead to partial or complete loss of feeling and muscle control in just the legs (paraplegia) or both the arms and legs (tetraplegia).

Background: Between 12,000 and 20,000 SCIs, occur each year, mostly from auto accidents. Violent acts such as gunshots, falls, and sports injuries are other common causes of SCI.

Risk Factors: Men between the ages of 15 and 35 are most likely to have an SCI. Older people also have SCIs because of falls.

History and Symptoms: The paralysis that follows an SCI is usually sudden. There may also be breathing or heart problems, or problems controlling the bladder and bowel. Recovery depends on how severe the injury is. Most improvement occurs in the first 6 months after the injury.

Physical Exam: It is important to keep the back and neck from moving. Your doctor will check muscle tone and reflexes, whether you have lost sensation or have trouble moving parts of your body, and whether your blood pressure and heart rhythm are under control.

Diagnostic Process: Blood tests may show if you are bleeding, have an infection, or if other chemicals in your body are out of balance. X-rays, CT scans, and MRIs may be ordered to show how severe the injury is.

Rehab Management: The goal of rehab is to maintain as much mobility and activity as possible and prevent further injuries. Patients and caregivers need to be educated about safe ways to move and do exercises that will improve strength, balance, and endurance. Assistive devices, ramps, and other changes in the environment may also be helpful.

Physical medicine and rehabilitation (PM&R) physicians, also known as physiatrists, coordinate a team of healthcare professionals such as physical and occupational therapists in developing and implementing a comprehensive rehabilitation plan while in the hospital and beyond. They typically follow individuals with SCI for life providing medical management, diagnosing and treating pain, spasticity, contractures and a host of other conditions that may accompany spinal cord injury such as pressure sores, blood pressure dysregulation. In addition, they assist individuals with equipment needs such as wheelchairs, crutches and adaptive equipment and so on. They educate patients and families, advocate for their needs. PM&R physicians coordinate care of SCI with other specialists such as

Urologists, primary care physicians, Neurologists, Orthopedic surgeons, neurosurgeons, pulmonologists, plastic surgeons, wound care clinicians and Home care agencies. They promote health of individuals with SCI, via preventative care, rehabilitation measures and strive to maintain health and quality of life. More importantly, some of them conduct research in SCI towards finding appropriate treatments and for the long range to find cures. Some of them also get additional training to care for SCI population. PM&R physicians are an asset to the individual with SCI.

Other Resources for Patients and Families: The Paralyzed Veterans of America (PVA) provides support and other resources on their website (www.pva.org) for people with SCI and their caregivers.

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.