

## Lumbar Spondylolisthesis

**Condition:** Lumbar spondylolisthesis (LS) is the misalignment of one of the bones in your spine (vertebra) relative to another in the lower back. The nerves of the spinal cord can become compressed, causing back or leg pain and numbness or weakness.

**Background:** LS is categorized based on the underlying causes, including malformations, fractures/microfractures, age-related processes, injury, or other diseases.

**Risk Factors:** Although women have a lower incidence of fracture-induced disease, women account for more than 50% of symptomatic cases, have more severe disease, and are more likely to have degenerative disease resulting from age-related processes. Family history, race, and participation in gymnastics or football are associated with higher LS risk. Black women are at higher risk than white women, but overall, Inuit people are at highest risk.

**History and Symptoms:** Patients report diffuse dull lower back pain and may describe pain in the legs as well. If the nerves or spinal cord are involved, the patient may experience tingling, numbness, or weakness in the legs. Bowel and bladder control and sexual function may be affected. Cauda equina syndrome, which involves compression of the nerves at the base of the spine that provide sensation to the legs, is a possible severe complication.

**Physical Exam:** A physical exam will be performed to assess back pain, curvature of the spine, posture changes, range of motion, alignment of the spine, weakness, numbness, and reflexes. Evaluation of the patient's walking ability may also be helpful.

**Diagnostic Process:** X-rays, and CT are used to diagnose LS. MRI can also be used for patients with nerve symptoms or weakness.

**Rehab Management:** A physician who specializes in Physical Medicine and Rehabilitation (PM&R physician) may help diagnose and identify the most appropriate treatment recommendations based on a person's symptoms. Treatment involves activity modifications and physical therapy. Nonsteroidal anti-inflammatory drugs (NSAIDs), acetaminophen, and opioids can be used for pain management. Bracing can also be used, especially in children and adolescents. Rehabilitation includes spinal stabilization exercises as well as physical therapy for stretching and muscle strengthening in the stomach, hip, back, and legs. Epidural steroid injections may be helpful for nerve involvement. Acupuncture and electrical nerve stimulation can also be used to ease symptoms. Surgery is an option in severe cases or those that do not respond to other treatments.

**Other Resources for Patients and Families:** Patients should be educated on basic spine movements and posture. The progression of the disorder and rehabilitation as well as symptoms that require immediate medical attention should be emphasized.

## 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](http://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](http://www.aapmr.org/findapmrphysician) or contact your primary care physician for a referral.