

## Proximal and Mid-Hamstring Strain/Tendon Tear

**Condition:** The hamstrings are a group of three muscles in the back of the thigh that help the knee flex and the hip extend. A proximal or mid-hamstring strain or tendon tear occurs when a patient injures one of these muscles.

**Background:** Hamstring injuries account for 12-16% of all injuries in athletic populations, and it is most common for them to occur in the middle of the hamstring.

**Risk Factors:** Athletes are more at risk, particularly those who participate in sports that require them to sprint or stop and start frequently, such as soccer or tennis. If a person has injured a hamstring once, there is a 22-34% chance they will reinjure it. Overuse and muscle fatigue can also contribute to the diagnosis.

**History and Symptoms:** Symptoms can develop suddenly or gradually worsen over time. For the immediate presentation, there is usually sudden pain and pulling on the patient's posterior leg just below the buttocks. This may also include a popping sound/sensation along with bruising in this area. When symptoms develop gradually, people can experience deep buttock or posterior thigh pain that worsens over time and is made worse with sitting.

**Physical Exam:** The physician will check for swelling and tenderness and determine where the damage occurred. He or she may also reposition the leg to check strength and range of motion. physical medicine and rehabilitation (PM&R) physicians are able to evaluate the hamstrings as well as surrounding structures including the hip, low back, and knee to make sure that the correct source of pain is identified.

**Diagnostic Process:** In addition to physical examination, ultrasound and MRI are helpful in characterizing the hamstring strain or tear. If the injury is severe, the hamstring can detach from where it is connected and that can involve a small piece of bone breaking off. An X-ray can check for this type of bone injury.

**Rehab Management:** Recovery from this type of injury requires a comprehensive approach prioritizing physical therapy and using additional treatments like ice, heat, anti-inflammatory medications, and rarely surgery. PM&R physicians are the leaders in identifying the injury and creating a patient-centered treatment approach with the goal of returning the patient back to previous function. Physical therapy programs focus on gradually increasing your range of motion, strengthening your hamstring, and getting you back to your prior running ability before the injury.

**Other Resources for Patients and Families:** Athletes should talk to their coaches about the injury and returning to the sport, particularly since re-injury is common. The American College of Sports Medicine offers a brochure for patients and families, "[Sprains, Strains and Tears](#)" that may be helpful.

## 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.