

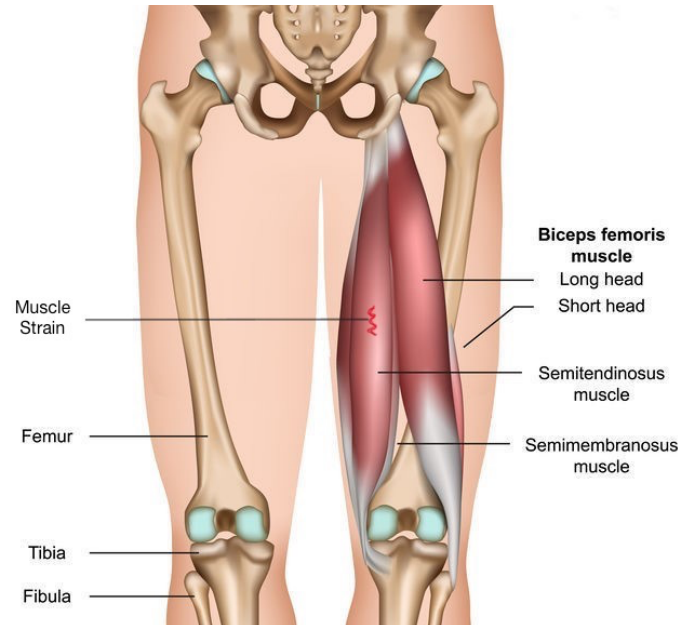
YOUR GROUP23

PATIENT HEALTH JOURNEY

BECOME AN EXPERT: Hamstring Strain

Understanding Strains

Muscles and tendons are living tissues within the body. The primary role of muscles is to contract, generating a force which tendons transmit to a joint, allowing for movement to occur. Both muscles and tendons adapt to forces and are flexible by nature. When a muscle or tendon is stretched or stressed beyond its individual tolerance, a **strain** occurs. We like to describe tendons as 'white' tissues, meaning they do not have a large amount of blood supply, compared to muscles which are considered 'red' tissue and have a large amount of blood supply. This means that by nature tendons are slower to recover than muscles because our bodies healing process utilizes blood and its constituent cells (platelets).



When a strain occurs, it is classified on a three-point scale similar to a sprain.

Grade 1, or mild strains, involve only a few muscle or tendon fibers being stretched or torn. Pain or sensitivity may not be noticed until after the activity has ended, and muscular strength and endurance are rarely affected. Some muscle tightness may also occur. Recovery time is usually about 1-2 weeks with rest, ice, compression, and elevation (RICE) therapy and appropriate rehabilitation exercises.

Grade 2, or moderate strains, involve a partial tear of the muscle or tendon. Pain and swelling are immediate, and the area is often sore to the touch. Limited range of motion is often observed. Recovery time can range from a few weeks to a few months, depending on the severity of the injury and the individual's rehabilitation program.

Grade 3, or severe strains, involve a complete tear of the muscle or tendon. They are often characterized by a sharp, sudden pain, and the area will be significantly swollen and tender. A large lump where the tear is located may be felt and a substantial loss of function is displayed. Recovery time can take several months, and may require surgical intervention in some cases.

An important concept to understand as it relates to muscles and tendons is **load capacity**. Load capacity simply means that muscle and tendon tissues can only absorb a certain amount of force before they begin to break down. An acute, sudden force applied to the muscle or tendon may cause it to tear or rupture. Most individuals will remember an acute injury, such as slipping on ice and feeling immediate pain afterward. Other times, an injury may be more chronic in nature, meaning that it is gradual overloading of the muscle or tendon that slowly breaks it down over an extended period of time. This chronic breakdown can occur during an activity you have always done without pain, such as going for a walk or up and down stairs.

BECOME AN EXPERT cont'd

Another equally important concept pertaining to muscles and tendons is something called **optimal loading**. Optimal loading means that as living tissues, muscles and tendons actually need to be loaded to keep healthy and strong. When people injure or overuse a muscle or tendon it causes pain, which can lead to decreased usage or over-protection of the affected area. However, reducing the use of the muscle or tendon can also cause it to weaken over time.

So what is a hamstring strain?

Located at the back of the thigh, the hamstrings are a group of three muscles: the semitendinosus, the semimembranosus, and the biceps femoris. This muscle group works in conjunction with other leg muscles to extend the hip, flex the knee, and stabilize the kneecap (patellofemoral joint). **Hamstring strains**, also referred to as a "**pulled hamstring**", are relatively common among both athletes and non-athletes. Such strains often result when one or more of the hamstring muscles are stretched beyond their individual tolerance. Sudden, dynamic movements such as sprinting, jumping, kicking, lifting, or lunging can all cause a hamstring strain.

Other risk factors for hamstring injuries include previous or pre-existing leg injuries, poor flexibility, muscle fatigue, muscular imbalance, and age.

In many cases, a hamstring strain presents itself as sudden, mild to severe pain located at the back of the thigh. Occasionally, an audible 'pop' may be heard. **Pain, tenderness, loss of normal motion, stiffness, numbness, swelling, and bruising at the site of injury are all symptoms of a hamstring strain.** One or more of the muscles in the hamstring group may be impacted. However, the severity of these symptoms and the length of time it takes to recover from this injury will depend on the grade of injury.

Treatment for hamstring strains typically involves a combination of rest, ice, compression, and elevation (RICE) in the initial stages to reduce pain and inflammation. Non-steroidal anti-inflammatory drugs (NSAIDs) may also be used for pain management. Physical therapy plays a crucial role in rehabilitation, with targeted exercises focusing on strengthening and flexibility. Gradual return to activity is essential to prevent re-injury. For severe cases, surgery may be required to repair the torn muscle fibers.

Why does this matter?

At Group23, we often see patients frustrated with their symptoms, lack of improvement, and the cost of ineffective treatments, products, and devices. Often the biggest issue we see with a diagnosis is the patient's lack of knowledge of the subject because no one has taken the time to explain what is truly happening! It's not enough to just know the words hamstring strain; it's important to us that you understand what it means!



Check out a free lifestyle assessment, available with the Health & Wellness team!



Surgery is a possibility, but a last resort option in the case of hamstring strains. We have a whole Toolkit of other options to try first!



Becoming an expert and setting a SMART goal ensures every treatment decision reflects your priorities, not ours!

BECOME AN EXPERT cont'd

Now that you know more about hamstring strains, we can address treatment options that will allow you to return to sport/activity as soon as possible. No matter where you start, you can get to the point of less pain and improved functionality... **IF** you create good SMART goals, utilize the options in your Toolkit, and commit to working proactively with your Group23 Health Journey

Our care philosophy

We see treatment choices as a Patient Health Journey, and we take pride in being on this Journey with you the entire way. The most crucial part is becoming an expert and creating Rise Above goals specific to you and your lifestyle. Once your Group23 healthcare team understands your destination, we can accurately create a treatment plan that is fit for you!



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