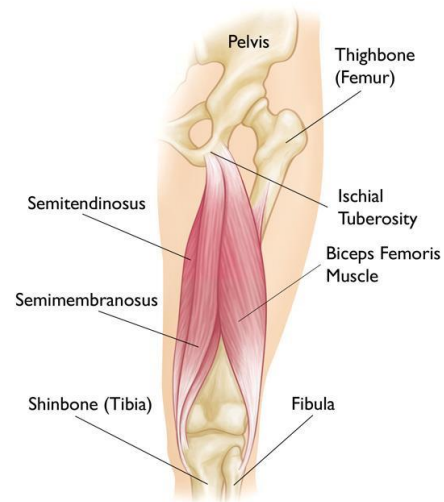


Anatomy:

The hamstrings are group of 4 muscles, like the quadriceps. Three of these muscles originate at the same place; at the ischial tuberosity (also known as the “sit bone”). All 4 of these muscles end at different parts of the tibia, beyond the knee joint. Proximal means closer to the torso, meaning that this injury is when the tendons tear at its origin (the sit bone). Because the hamstrings cross both the hip and knee joint, this muscle group performs actions at these joints. The hamstrings extend your hip and flex you knee. This is the reason when you stretch your hamstrings, you have your hip flexed and knee straightened as far as you can.



What causes proximal hamstring tears?

Proximal hamstrings can tear from a significant trauma when the hamstrings are rapidly stretched (hip flexed, and knee straightened) along with a forceful contraction of the hamstrings. These are relatively common with football players, but also with snow and water skiing, as well as dancing. You are at an increased risk of developing proximal hamstring ruptures if you have had pre-existing degeneration of the hamstrings, potentially from prior hamstring injuries.

What are the most common symptoms?

One of the most common symptoms of a proximal hamstring tear is pain at or just below the buttock area, that is significantly worse when you sit. You may also notice that the injured side is significantly weaker than the other, and that you are walking with a limp. If there is significant bruising at the back of your leg, this is from the swelling of the injury traveling down your leg (gravity takes its course as always). At the time of injury, you may have also heard and/or felt a pop at the back your leg, which is also common. This may have felt like you got shot or stabbed in the back of your leg.

If you experience any shooting pains, numbness and tingling going down your leg or any other weird sensations, this is potentially due to injury to the sciatic nerve. The sciatic nerve runs very close to the proximal hamstring origin, and can be injured at the same time, or can simply be affected by the swelling.

What can I do to treat it?

Treatment can depend on the severity of the injury. If the tear is minor, it is possible to treat it with physical therapy, pain killing and anti-inflammatory medication and activity modifications. Some may offer steroid injections to reduce pain and swelling, however, steroids weaken the integrity of tendons, including the proximal hamstrings, and therefore may not be the best option. Steroids can be great at limiting your pain, but they do not heal the injury.

If you have a full tendon rupture, conservative treatments may not be as successful. This is not an emergent condition, so you could leave it alone if you needed to, but your hamstring is not attached to anything. You will probably feel this hamstring is more flexible and significantly weaker compared to the uninjured side. You will also leave yourself prone to significant cramping. Currently, the gold standard of treatment for this injury is surgical repair.

What is the surgery like?

To perform the surgery, Dr. Everhart will use an instrument called an arthroscope; a camera that can be used to look into the joint. The arthroscope makes it easier to look all around the hip joint and minimizes the incisions he would need to make. Using the arthroscope, you will likely have 2-5 incisions that are 2-3cm long. Sometimes, Dr. Everhart will have to make a bigger incision and do an open repair of the tendon if he is unable to do it arthroscopically. These incisions will be located around the crease of your buttock area.

The goal of this surgery is to put the hamstrings back to their anatomically correct position on the sit bone, to facilitate healing. The surgery involves Dr. Everhart starting with the arthroscope in the hip to do a routine examination. He will then take a shaver to clean out some of the surrounding soft tissue of debris from the injury. Then, he will turn his attention to the injured tendon. He will try to take the tendon and pull it to its original spot to determine whether he can proceed



Figure 4: Sutures extending out to the torn tendon stump from anchors placed in the ischial tuberosity (pelvic bone).

Figure 5: Sutures tied off to approximate the torn tendon to the ischial tuberosity (pelvic bone).

arthroscopically or will need to create a bigger incision. Usually, if the tear is partial, he is able to perform the procedure arthroscopically. If it is a complete rupture, he will attempt to perform it arthroscopically, but there is a good chance he will create a larger (open) incision for the repair. Once he decides which method of repair he will use, he then takes the tendon and approximates it back to its anatomic location and sutures it down. This will require several weeks to heal. An arthroscopic repair will normally take about 2.5 hours, and an open repair will usually take less than 2 hours.

This is typically an outpatient surgery, meaning that you get to go home after your surgery is over. You will be placed in a knee brace that limits your range of motion from 45 to 90 degrees of knee flexion so that you do not activate or stretch the hamstrings. You will also sleep in the brace. You will be restricted to non-weight bearing using crutches for a period of 2 weeks, followed by a period 4 weeks of partial weight bearing with 1 crutch. You can return to

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sedentary work as early as 2 weeks, but full return to work will be determined by Dr. Everhart and may take about 6 weeks from surgery. Full return to activity will also be determined by Dr. Everhart but you can expect to return to activity between 6-12 months. You will be given a full rehabilitation protocol.

There are several risks to surgery such as development of an infection, or a blood clot. We do several things to minimize the risks. There can be some risks from anesthesia, but these risks are low as well. We will prescribe you some narcotic medication to help with the pain, and these types of medications have their own side effects as well. We will help you manage these side effects while maximizing the desired effects for you.