

Exertional Compartment Syndrome Information

What is Exertional Compartment Syndrome?

Exertional Compartment Syndrome is a painful condition most commonly experienced by athletes in the lower limb, but may also occur in the upper limb. As a muscle exercises it swells. As it swells, it can become trapped in its own compartment. Compartments are sacs of fibrous tissue, which are a normal part of the body. In Exertional Compartment Syndrome, the muscle swells enough that it starts to reduce its own blood supply. This is called claudication, and it causes pain.

What are the symptoms?

The most common symptoms are pain or muscle cramping during activity that resolves when the activity is stopped. The pain is usually severe enough that you have to stop doing the activity. Very shortly after stopping the activity, the pain dissipates as the blood flow restores itself. There may also be muscle bulging, or numbness and tingling. Some patients experience difficulty moving the foot. Other conditions have similar symptoms, such as shin splints, or entrapment of one of the arteries in the lower leg. Often it is difficult to distinguish these other conditions from Exertional Compartment Syndrome.

How can Exertional Compartment Syndrome be diagnosed?

The symptoms of Exertional Compartment Syndrome are typically not enough to make the diagnosis. The diagnosis is confirmed by measuring the compartment pressures before and after activity, and looking for an increase in pressure with activity. Compartment pressures are measured by inserting a needle through the skin into the muscle of that compartment. For most patients, this test is enough to confirm a diagnosis.

What will happen during the test?

Dress and equip yourself for the sport or activity that causes your symptoms as that activity will be simulated at Rebalance^{MD}. Resting compartment pressures will be taken before activity. You will then perform your activity until symptoms occur, and the pressures will be measured again after around 20 to 30 minutes of rest.

You may have up to six measurements depending on how many compartments could be involved. It is possible to perform compartment pressure measurements at the hospital, but the results are not as reliable, as it is more difficult to simulate your activity or sport there.

What are the risks of measuring compartment pressures?

The test does involve the insertions of needles. The insertion of the needle is no more painful than a normal injection. The risks are fairly limited and include infection from needle insertion. This is very rare and every precaution is taken. There can be mild bleeding and bruising at the insertion site that typically resolves quickly. Injuries to nerves or vessels are extremely uncommon.

What is the cost of the test?

A specialized needle and pressure valve is used to measure the compartment pressures. One needle is used per patient, but can be used to measure the pressure in multiple compartments. The cost of the needle is not covered by MSP, and the patient is required to cover the cost of the needle, which is \$125. Third party insurance coverage may provide reimbursement. Please check with your individual plan provider.