

# COMPARTMENT SYNDROME

## What is compartment syndrome?

Compartment syndrome is pain and swelling caused by swollen muscles pressing against the sides of the compartment (or sheath) that surrounds the muscles. The sheath is called the fascia.

The syndrome affects the compartments or spaces in the body partly surrounded by the long bone:

- in the leg between the knee and ankle
- in the leg between the thigh and knee
- in the arm between the elbow and wrist

## How does it occur?

Compartment syndrome occurs as the result of injury to the forearm or leg or overuse of the muscles and ligaments of the lower leg.

These injuries can cause tissues in the affected area to swell. In these compartments muscles, ligaments, nerves, and blood vessels work together. Swelling cuts off circulation of blood to ligaments, muscles, and nerves in the injured area and/or the area below it.

The compartments in the lower leg are generally most affected. This injury occurs most often in athletes who run a great deal. It has been noted in women airline attendants because of the continued stress on their lower legs from wearing high-heeled shoes while walking a lot each day.

## What are the symptoms?

The symptoms usually occur in the area of the affected compartment of the forearm, thigh, or leg. They can include:

- pain
- swelling
- weakness
- warmth of affected area
- tenderness over the front of the shin
- tingling and/or numbness of the leg and foot
- foot drop (inability to lift the toes so that you must limp to keep the foot from dragging)
- pain when flexing or pointing the big toe

## How is it diagnosed?

To diagnose compartment syndrome, your healthcare provider will review your symptoms, examine you, and may do a needle test to measure the increased tissue pressure within the compartment.

## What is the treatment?

Depending on the cause and extent of the problem, your provider may first treat the syndrome with ice packs to the area for 15 minutes several times a day and with anti-inflammatory medicines.

If the trauma is more severe or the injury more involved, your provider may want additional tests that could include an arteriogram to identify where the blood flow to the area is stopped.

If surgery is necessary, a fasciotomy is performed. This surgery involves cutting through the tissue surrounding the injured area (the fascia) to release the pressure. This decreases swelling and restores circulation to the area.

## How long will the effects last?

The effects last as long as the problem exists. If use of muscles and nerves, in addition to circulation, is not restored, further damage such as paralysis and loss of use of the area can occur.

## How can I take care of myself?

You should see your provider at the first sign of any symptoms and follow your provider's treatment and rehabilitation plan.

## How can I prevent this from occurring?

You can use warm-up exercises before exercising. Gradually increase your exercise level for any job-related activity or exercise requiring extensive use of lower arms and leg muscles.