

Pes Cavus

Pes cavus literally means “caved foot” and is a foot condition that is often means you have high arches. Medically, the condition is classified as a foot deformity that is commonly recognized by an arch that does not flatten on walking. It tends to occur in roughly 8-15 percent of all those in the United States, but it isn’t as widely recognized as its counterpart pes planus (flat foot).

Essentially, pes cavus is generally the direct result of a fixed plantar flexion of the foot. Plantar flexion allows the ankle to move, pointing the toes away from that of the shin, such as when you press the gas pedal down in the car. Just because you have a fixed plantar flexion, that doesn’t necessarily mean you have this condition.

Pes Cavus Anatomy

The feet are full of flexible structures consisting of bones, muscles, joints and soft tissues that allow you to stand upright and perform activities such as running, walking and jumping. Three sections make up the feet:

- The forefoot contains five longer bones and five toes.
- The midfoot is a collection of bones forming arches in the feet. These include three cuneiform bones, the navicular bone and the cuboid bone.
- The hind foot is composed of the ankle and the heel. The talus bone supporting the leg bones form the ankle. The heel bone is the largest out of all the bones in the foot.

Tendons, muscles and ligaments run along the surface of the feet, which allows all of the complex movements that are needed to maintain balance and motion. The Achilles tendon connect the calf muscle to the heel, which is essential for jumping, running and being able to stand on your toes.



Pes Cavus on this patient's right foot

How to Treat Pes Cavus:

1. Nothing

Many therapists believe you should not try to adjust the high-arches as it could open the door to other problems further up the leg. The argument is that the foot has probably been like this since birth, so the body has already found a way to cope with the different forces going through the foot. However, if you are getting regular pain and have tried everything else, then the high arch may be addressed or corrected.

2. Orthotics

The underlying goal for these orthotics is to increase the amount of surface contact the plantar region of the foot has. By incorporating an orthotic insert into the shoe, the area handling the load when walking is increased, which will take the pressure from the sesamoid bone in the ball of the foot.

Orthotic inserts can also help those who struggle with supination, which is the outward rolling of the ankle and foot due to having an increased arch in the foot. Lateral ankle stability is another common problem found in those with pes cavus. Orthotics can help to fend off excessive supination.

3. Physical Therapy

In the event you are prescribed a non-surgical method of treatment, you might need to undergo physical therapy to help stretch the tightened muscles. Therapists will often give you home based exercise programs to do.

Tips:

- Pes cavus shoes should be of an orthotic nature, providing you with stability and support for the arches.
- Purchase shoes that help to reduce the amount of pressure that is placed on the ball of the feet when running or walking.
- Severe trauma to the foot has been known to cause the condition from burns, fractures and more, but most commonly its genetic/hereditary.
- Neuromuscular conditions can affect the muscles and nerves causing the foot to hollow.