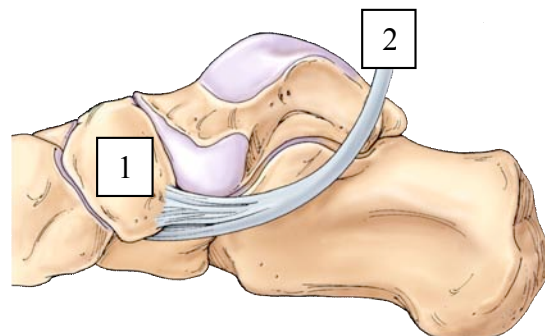
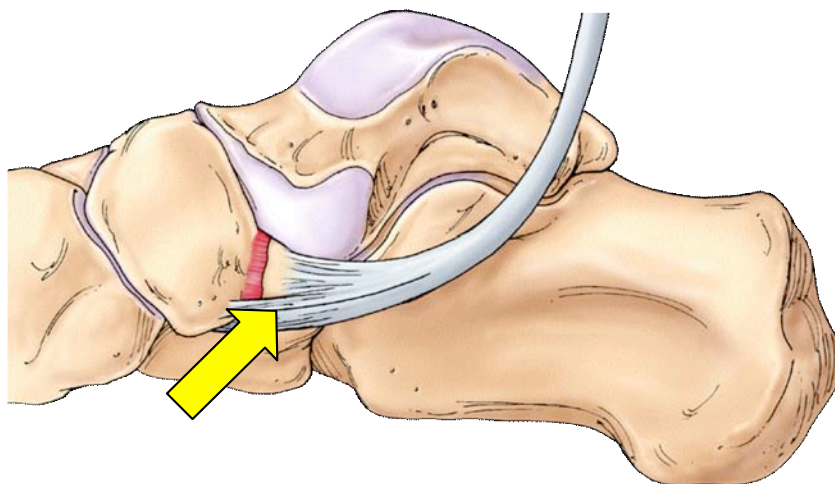


ACCESSORY NAVICULAR BONE

Foot pain and swelling in the arch may represent symptoms of an accessory navicular bone. The navicular bone (1) is important because the tendon of the posterior tibialis muscle (2) attaches to it. Normal function of this muscle is necessary for walking.



In almost 15% of teenagers the navicular bone forms with two separate pieces instead of one single bone. The extra piece is called the “accessory navicular”.



With rapid growth of the foot, which occurs during early adolescence, this abnormal bone development may cause a painless swollen lump or bump in the arch. This fullness may give the foot the appearance of a flattened arch.

X-rays, however, demonstrate the foot has a normal alignment of the arch but the navicular has two parts. This can become symptomatic over time. In particular certain stiff, leather shoes may cause redness and tenderness over the accessory navicular bone.

Once symptoms begin they may wax and wane. Activities such as prolonged running and jumping and the wear of stiff cleated or hard sole shoes tend to aggravate the pain and inflammation associated with an accessory navicular.



The vast majority of pain symptoms will be improved with non-steroidal analgesics, reduction in activity, and soft arch supports made of sorbathane. The size of the lump of the accessory navicular will not change significantly despite the pain diminishing. The vast majority of adolescents will improve and resume extra curricular activities.

If pain persists despite adequate treatment with anti-inflammatory medications, activity restriction and shoe wear modifications, surgery is considered. In surgery, the "pea-sized" piece of the accessory navicular bone and surrounding reactive material are removed. After the posterior tibial tendon has healed from the surgery, most teenagers will return to normal activity with few restrictions.