

# Pronation

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## What is it?

The term pronation is actually a description of directional movement that can be used in reference to various body segments. For instance, a tennis player should pronate the hand while serving and a pitcher should pronate the hand during delivery. In the foot, pronation describes an in-rolling or collapsing of the longitudinal arch during weight bearing. Some pronation is good because it allows our foot and ankle to function correctly and makes it possible for us to walk effectively on an uneven ground surface and absorb the shock our body gets while walking or running. Pronation only becomes a problem when it exceeds the normal range. If the foot remains in-rolled or collapsed for a longer time period than it should, then we have an unstable foot, which can lead to a wide variety of clinical problems. Bunions, corns, calluses, heel pain, shin splints, knee pain and the list goes on and on, can all be caused directly or indirectly by excessive pronation. It should be noted that as we increase our gait from walking to running the pressure increases on our foot to increase pronation. In a sense, excessive pronation is one of the chief reasons of chronic foot pain and is directly related to secondary conditions that can get worse without



## What causes it?

As stated earlier, we pronate out of necessity, in order to adequately adapt to uneven ground surfaces. In short, our ability to walk, stand, and function throughout normal gait is largely dependent upon our capacity to pronate. However, in some instances, our mechanics or functioning capabilities become abnormal and excessive pronation is a common result. A two hundred-pound man standing on his feet all day on cement floors with two poorly supported ankles due to excessive pronation is predictably waiting for clinical problems to occur.



## How is it treated?

The treatment of excessive pronation is more difficult than what it might seem. A thorough examination by a foot specialist is necessary in order to identify not only the degree or extent of pronation but also the source of the excessive motion. **Orthotics** devices are the chief means of treating this condition. Controlling pronation can many times be the only treatment necessary for a lot of foot conditions.

Early treatment of children who excessively pronate is very important especially in young athletes. As the child develops, by controlling pronation we can eliminate many of the conditions before they get a chance to start. There are now available small implants that go into the joint that moves the most in pronation to eliminate excessive pronation. These are used if conservative treatments have failed.