



All information is courtesy of Ashfield Orthotics: A Foot Health Clinic, Inc.
Sharing, with acknowledgement, for the advancement of foot joy is encouraged.



With all areas identified here, orthotics can help. *Sometimes very good over the counter devices are simply enough.*
Based on pain, onset, degree of pathology, lifestyles, work needs & other factors, custom orthotics are often better.

Lateral Ankle Pain

The lateral or outside ankle is often affected by inversion sprains. This "rolling" your ankles during sports, stepping off a curb or other activity can lead to a medical condition known as "chronic ankle instability."

If you have a history of ankle sprains or if your ankle feels "loose," like it is going to "give out" or even "lock," it may be time for proper support. Ankle braces are an option for some but they are often, in fact, too much support compared to less restrictive orthotics. Too much restriction of the ankles in motion can lead to atrophying of the supportive musculature that helps stabilize a weakened ankle joint.

Clinically, there are different degrees of ankle sprain but it is becoming widely understood that effects are often cumulative. Ligaments are exceptionally strong connective tissues that tether bones to each other. Naturally, ligaments are a bit elastic. However, these tissues can become "plastic" instead of elastic due to the effects of trauma.

Ligaments that have been stretched do not bounce back to their original shape like before injuries. Chronic instability can begin to develop, with deformity to follow as the feet try to compensate for the weakened area.

Metatarsal Phalangeal Joint Pain

If it is painful here, your doctor may diagnose "metatarsalgia" - a general term that encompasses many things.

These areas, commonly referred to as the "balls" of the feet, are where our toes join long metatarsal bones. There are many tiny structures associated with the joints: plates, capsules, nerves ligaments, muscles, tendons. This reflects the weight that they must bear, along with complex motions and forces to which they are subject.

Biomechanically speaking, the lesser toes and MP joints 2-5 do not bear much weight when things are well. Most of the forces are instead accommodated and mediated by the 1st ray, consisting of the great toe or "hallux", along with the sesamoids, 1st metatarsal and medial cuneiform, along with the surrounding tissues.

Complexity and size of the structures themselves, internal foot forces, external pressures and our movements themselves can, over time, develop into wide range of problems, including - but not limited to - decreased joint range of motion, deformities like bunions or hammer toes, Morton's neuromas, skin break down or excess accumulation.

Combine these things with inherent peculiarities of a short 1st ray or a long second metatarsal and "metatarsalgia" is just the beginning.

Knee Pain

Like the joints of our feet, the knee joint is wonderfully complex, with added bits and pieces to help stabilize an otherwise relatively unstable union. Our femurs balance of the heads of two pins, the larger tibia and smaller fibula. The

knee is perfect for standing. And then we bend, unbend, pivot, leap and land to make matters worse. We do these things millions of times during our lives. Or we sit for long periods and things start to atrophy.

Names of these extra bits and pieces have become well known to us through sport and injuries it can produce. Knees, along with the main bones, muscles and joint capsules, have collateral ligaments, two encapsulated cruciate ligaments to inhibit posterior and anterior translations, meniscal extensions to extend surface contacts, a protective patella bone for mechanical advantage and much more. No wonder they can often hurt, whether you play football or not. There are a great many parts squished inside!

Sometimes the capsules and articular surfaces deteriorate. We get arthritic. Sometimes we injure ourselves due to repetitive strains. Sometimes we land hard. Sometimes we are stuck in the wrong positions due to work.

Whatever the case, one thing is certain. Our knee bones literally ride on our feet. The tibial and fibular “pins” mentioned earlier - along with our femurs - rotate internally and externally with each step in the knee joint. And our knees are not designed for excessive rotations, unlike how our elbows can accommodate forearm rotations. Sooner or later, if our feet are misbehaving below from poor biomechanics, our knees can begin paying for it. For example, medial knee pain is common with excessive over pronation due to the twisting and “opening” of medial knee stabilizing structures. Patellofemoral syndrome is associated with improper quadricep muscle pulls on the patella due to malalignment, which often begins with the feet.

And are a great many other things that can and do go wrong with our knees. (They just can seem to stay still.)

Heel and Metatarsal Pain

We typically walk heel to toe. It is generally how we run as well. While greatly simplified, we land and transition from a large well-padded bone “though” arches and on to the front of our feet, ending up at the toes to start the whole process over again. How we land, how we move and how we absorb shock are affected by a host of factors, such as foot shape, our weight, diet, exercise, activity, footwear, health conditions & more. Then there are “misbehaving” feet themselves.

These two areas - the front and the back of our feet - do a lot of work. Most of the time they do it well... Until they don't. Another section here gets into details about heels, like our metatarsal information did above.

“Calf,” “Triceps surae,” or Gastrocnemius and Soleus Pain

You know things can get complicated when a painful area has three or four names! Pains at the back our legs are an indication something is going wrong. As usual. Pain is a great early warning system... Unless we ignore it. Or it shuts down in the case of peripheral neuropathy, but well save that for another page. The largest calf muscles are responsible for one thing, for the most part. They lift us... Our heels. Or point our foot/toes downward, if you prefer. Biomechanically, it is very close to what our arms do when we lift the handles of a wheelbarrow.

The two important things to remember here are 1) that these large muscles need warm ups before we work them; and 2) they like to pull the heel straight up and down with a spring-loaded rope, our Achilles tendon. When not pulled straight up and down, when we make the calf engines do extra work, they get tight, they get weak, they get sore.

Unfortunately, very high heels don't help calf muscles either, contributing to muscles shortening to shorten over time, knees aching and posture suffering. Nor do growth spurts help, when bones out pace muscles and calf muscles ache, especially at the calcaneal insertion. Young boys, more than girls, often develop Sever's Disease, also called calcaneal apophysitis. (Which sounds worse?)

Our calf muscles are the “heavy lifters” of our feet... And if your base alignment is off, the whole system can be affected.