

## Foot Postural Assessments are Outdated and Inaccurate

Static foot postural assessments give us information about the static foot, but beyond that I don't believe such assessments give a good indicator as to what happens during gait. Therefore, using both static and dynamic assessments with someone with a suspected ankle and/or foot driven problem is necessary. Relying solely on static information is all well and good but probably won't reflect the changes and movements that occur to both the foot and ankle when moving.

That is not to say foot postural assessments are worthless. Completely the opposite, just that we need to extract the correct information from the assessment that will help improve that person's problem. For example, an athlete might present with an 'over pronated right foot' in a static standing position. If just this information was used, this athlete might be fitted with an orthotic to prevent over pronation. This might fix the over pronation but could cause a magnitude of other issues. The orthotic, causing a blocking into pronation, will reduce the necessary stretch of the ankle and foot supinator's thus reducing their ability to propel the body forwards supination of the foot. In essence, the orthotic acts as a block to the stretch shortening cycle necessary for optimal foot and ankle mechanics. We know that a reduction in stretching length during the stretch shortening cycle will limit the ability of the tissue to generate force during the shortening phase. That means for the system to produce the same amount of force, additional work will have to occur elsewhere in the system. A lack of supinatory force might mean the knee, hip and/or pelvis musculature have to pick up the slack and could cause overuse issues within these areas. These issues will be magnified within the athletic community, once we add more function into the system i.e. running, cutting, jumping etc.

I am not against orthotics in any way although I do believe sometimes they are incorrectly prescribed without function and movement in mind, particularly so in athletic populations. Part of the reason stems from how the foot and the foot arches in particular are viewed.

### One foot bigger than the other?

**It is a well-known 'fact' that one foot is bigger than the other.** Whilst this might ring true for some, for the majority it is the difference in foot position that is giving the appearance of a foot length discrepancy.



Image from [sectionhiker.com](http://sectionhiker.com)

Take for example someone that is oriented into their left hip i.e. weight is distributed more over their left side than their right side. This would be reflected with a relative position of the feet like that shown in the image below. With weight shifted left, the left foot is in a relatively supinated position whilst the right foot is in relative pronation. A supinated foot, largely due to lifting of the medial arch, could appear shorter in such a standing position, whilst the pronated foot, with a more lengthened medial arch relative to the other side would appear longer. **Therefore, foot position may be driving a foot length discrepancy and as a result such a discrepancy in foot length might be positional and not structural.**



Image from [walkwellstaywell.wordpress.com](http://walkwellstaywell.wordpress.com)

## Arch Profiling

In addition I believe arch profiling to be outdated and often not reflective of what the foot actually is doing. Largely arches, generally the medial arch, are either profiled as being high arched (pes cavus or over supinated) or flat (pes planus or over pronated). Usually those with 'over pronating' feet are considered to have 'floppy' feet whilst those with 'over supinating' feet have 'rigid' feet. Whilst this may be true for some, feet can also have a mixture of the above i.e. a high arched foot can be both 'rigid' and 'floppy.'

Therefore, a more accurate profile might include the following foot postures:

- **Flat flexible foot**
- **High arch rigid foot**
- **Flat rigid foot**
- **High arch flexible foot**

By not considering the above it could be seen that someone presenting with a flat flexible foot and another with a flat rigid foot, both 'over pronation' patterns might be deemed the same and hence treated the same. But giving a flat rigid foot an orthotic to limit movement is only likely to feed the pattern and as such make a rigid foot more rigid. We want the foot during pronation to adopt its mobile adapter function so why would we block that with an orthotic?

In summary, static foot assessments give what they say on the tin, static foot assessment. They don't consider what the foot needs to do or indeed what it actually does during gait. Thus, any static assessment should be part of an assessment that also involves dynamic foot movement to ensure both the static and dynamic functions of the foot are addressed correctly.

Thanks for reading

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