

## Class One Patient:

To a greater extent, these patients have or can be immediately placed into nearly perfect symmetry and have excellent flexibility bilaterally. The symmetry is noted by observing:

1. **The position of the ankles** off weight bearing vs. weight bearing noting mild to no real noticeable ankle valgus. If there is any ankle valgus it will be symmetrical bilaterally and easily reducible to a “neutral” position.
2. **The angle and base of gait** will be nearly symmetrical with no notable variation between the angulations of the feet in relation to the mid line of the body. This is to say that, upon weight bearing, one foot will not be more externally rotated than the other.
3. **The position of the medial and lateral arches** off weight bearing vs. weight bearing will demonstrate a dropping of the arches or a functional range of motion that will be symmetrical bilaterally. This is of course with the proviso that the arches and ankles do not collapse into an extreme or pathologic position.
4. **X rays** will show clean and symmetrical joint spaces with no bony changes present such as lipping, spurring or other general arthritic bony changes.

**Orthotic Indications:** If pathology is noted, these are your “slam dunk” patients as they will be able to easily tolerate any corrective forces and positional changes that you apply to their feet. This applies to both their feet and their entire kinetic chain as they have a range of motion in which to move or “adjust” when placed into a more correct and stable position. This is to say that these patients won’t be the ones to come in post dispense complaining of unilateral hip pain, SI Joint pain, “my right knee bothers me” etc... This patient is smooth sailing.

## Class Two Patient:

These patients will have some noticeable degree of asymmetry noted sometimes off weight bearing but always upon full weight bearing. The asymmetry although notable is reducible to a greater degree to a point where there is a great similarity between both of their ankles and arches. They exhibit fair to good overall flexibility of the arches of the feet. The asymmetry is noted by observing:

1. **The position of the ankles** off weight bearing vs. weight bearing noting mild to moderate ankle valgus, usually with one side more notable than the other. The ankle valgus may not fully reduce but you must definitely note a range of motion or a degree of flexibility with their ankles or they would become the Class Three patient described on the next page.
2. **The angle and base of gait** will be to some degree asymmetrical with some notable variation between the angulations of the feet in relation to the mid line of the body. One foot will invariably be more abducted or externally than the other. Usually the side with the more severe ankle valgus will be the one more abducted.
3. **The position of the medial and lateral arches** off weight bearing vs. weight bearing will demonstrate a dropping of the arches or a functional range of motion that will be to some degree asymmetrical. Although they will not “reduce” or drop symmetrically upon weight bearing, they will both have at least fair to good flexibility / range of motion, again despite the fact that this flexibility and position will not be symmetrical.
4. **X rays** will show either clean or symmetrical joint spaces with no bony changes or there may be some mild arthritic bony changes present. Sometimes we have been very surprised by what the X-rays look like verses the clinical presentation in terms of pain free motion. I have also seen mild changes with severe loss of function so there is no set rules here.

**Orthotic Indications:** If pathology is noted, these patients are capable of obtaining traditionally very good to excellent results. For the most part they will be able to tolerate any corrective forces and positional changes that you apply to their feet but this is the patient you really make sure that they break in the orthotics properly and that you really educate on muscle or joint “discomfort” during the first two to four weeks post dispense. This is simply because their entire kinetic chain is adjusted to their collectively “bad” foot position so, when you “straighten out” their feet, the rest of the kinetic chain will of course be affected as the joints above the foot will slowly and gradually balance themselves during the break in period. This is why these patients will possibly be the ones to come in complaining of unilateral hip pain, SI Joint pain, “my right knee bothers me” etc... post dispense. These patients will do well, they just need a bit more attention, and telling them in advance of any discomfort they may experience only serves to make you someone who really knows what you are talking about.

## Class Three Patient:

The Key Note with the Class Three patient is Rigid, Non Reducible, and Asymmetrical. With this being said, we are not speaking of Cavus feet, whether flexible or rigid here. For the most part patients with cavus feet are treated as a subset of the Class One Patient described on the previous page.

Typical examples of the class three patient are those patients with gross and severe unilateral or bilateral bunions and who present with a bilateral or unilateral permanently subluxed navicular or medial cuneiform. Severe and rigid ankle valgus also falls into this category as does any rigid arthritic deformity. These patients will almost always have some noticeable degree of asymmetry which is definitely more challenging to treat verses a relatively symmetrical and flexible deformity. Whether asymmetrical or not, there is usually little hope of reducing the observed deformity as they usually exhibit only little to no flexibility. In short, from a functional standpoint, if you note these things when considering orthotics, unless you are well versed and comfortable with adjusting and manipulating your orthotics, it may be wise to take a pass on a functional orthotic device with this particular patient.

Class three patients are noted most easily by the following:

1. **The position of the ankles** off weight bearing vs. weight bearing will traditionally demonstrate moderate to severe ankle valgus, usually with one side more notable than the other. The ankle valgus generally does not reduce to any significant degree. This is to say that there is a severe absence of flexibility with respect to frontal plane motion at the ankle joint.
2. **The angle and base of gait** will be asymmetrical with some notable variation between the angulations of the feet in relation to the mid line of the body. Similar to the Class Two Patient, one foot will invariably be more abducted than the other; usually the side with the more severe ankle valgus. Again, the key difference between Class Two and Three in this respect is the absence of flexibility or ROM. This is to say that the class two will reduce to a large degree whereas the class three patient will not.
3. **The position of the medial and lateral arches** off weight bearing vs. weight bearing will demonstrate a very limited dropping of the arches. There may be a small functional range of motion that can be and usually is asymmetrical, but again, they traditionally will not “reduce” to any significant degree and when they reduce you usually get a low average arch morphology at best. Being able to affect a change with these patients orthotically really depends on the ability to manipulate or move the segments of their foot and ankle through a ROM to at least to some degree.
4. **X rays** will generally show asymmetrical joint spaces with moderate to severe arthritic bony changes present. With this being said, we have sometimes been very surprised by what the X-rays looks like verses the functional clinical presentation; sometimes in a good way but mostly not. This is to say that the X rays may look terrible but yet they are able to move their medial arches through a surprisingly large ROM. This of course happens but is a some what rare clinical finding. .

**Orthotic Indications:** If pathology is noted, these patients are capable of obtaining traditionally good or positive results if you are very adept with your orthotics. The key here would be to make them more stable and balanced without necessitating a dramatic corrective force via your orthotics. This is to say that if you have to manipulate the various segments of their arthritic feet, most of the time you will make them so uncomfortable during this process they will not tolerate the correction despite the fact that you did place them into a much better position. Additionally, the rest of their kinetic chain has likewise compensated and when you reposition the feet, many times these patients complain about significant discomfort up and along the kinetic chain. This is the frustrating aspect of treating these patients orthotically as you can do everything correctly but they want their money back because it did not “work” for them.

In our facility we tell these patients that the best that we can do for them is to get them about 75 percent better and this usually takes several orthotic adjustments over approximately a six month period of time. These patients are definitely a longer term endeavor and if you lay this out for them and you have the skills and patience to do so, you can usually make these patients more comfortable. This would of course be considered a very positive result as you can be sure that they have seen many people before they hobbled into your office and no one has been able to do literally anything for them besides agree that they have terrible feet.