

Understanding Lower Body Mechanics and Its Relationship to Chiropractic Principles

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The lower kinetic chain, comprised of the foot, ankle, knee, hip into the inominates and lower back, is largely responsible for the majority of lower back pain syndromes chiropractors see in our offices. While this is indeed true and largely reproducible, many of us still do not examine our patients' feet during a normal exam.

Some companies have spend many dollars trying to educate doctors with regards to the benefit of evaluating posture from the feet up, yet not a day goes by that I speak to many of my colleagues who do not do evaluate feet or use orthotics. I have heard such comments as, "I only give them to patient who really need them." I cannot understand how a doctor can treat back pain, which in most cases is due to poor lower body mechanics, and not check the patient's feet during the initial examination.

When I was in school, we learned about the basic pelvic distortion pattern and its role in spinal subluxation patterns. On x-ray, these patients usually have one hip significantly lower than the other one, with rotation also seen in the spinous processes. Years ago when I was in school, I can remember seeing x-rays of patients with and without orthotics; in many of those same patients, the pelvic unleveling we saw initially was reduced.

What does this mean to our patients and their pain? Pelvic unleveling is a common x-ray finding on patients with overpronation. This correlates with the basic pelvic distortion pattern we learned in school. Unfortunately, pelvic unleveling is a biomechanical symptom of foot overpronation problems, and unless we apply some correction to these patients' feet, they will always have problems from poor foot posture.

The secondary muscular changes which occur over the years from pelvic unleveling also important for the chiropractor to address. A foot orthosis is only part of the solution to help people with foot-related back pain. Since foot posture is inherited and generally seen at the age of three or four, the muscles on the side of overpronation will tend to be significantly shortened and lack flexibility, creating a pattern of muscle tightness and joint dysfunction I have termed the "basic pronation accommodation pattern," since overpronation has a predictable effect on the function of the leg and back. When overpronation is present, depending on the severity, the patient may experience hip cracking or clicking, back pain, sciatica, knee soreness, leg cramps, or shin pain.

What is the most sensible way to manage this type of patient?

Patients with foot overpronation should all have custom molded foot orthotics made. To be successful in your subscription, you must fit it to your patients lifestyle. If the device does not fit in your patients shoes, they will not wear it. As the patient continues to wear the orthotics, it becomes just a part of their daily routine.

You must also treat the pattern of muscular dysfunction. If you just treat the leg or the lower back, weakness in the lower kinetic chain can begin to create problems again. I find that myofascial

release is one of the most effective way of reeducating the lower kinetic chain because it restores normal soft tissue flexibility in a predictable fashion. Properly used, it can decrease treatment times and greatly enhance results, while eliminating the need for physiotherapeutic. Once the tissues are loosened up, specific lower back exercises (roman chair) and gluteal exercises (stepper, posterior kicks) can be used to strengthen the tissues over a 3-4 week period.

It is also important to adjust the patient. I have found that when you fix the muscular aspect with myofascial release and the foot posture with orthotics, the patient requires far fewer spinal adjustments to resolve their problems, as the muscles and foot posture are two of the most important causative factors in those chronic lower back spinal subluxations we typically see in many of our patients.

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