Dynamic Chiropractic

DIAGNOSIS & DIAGNOSTIC EQUIP

What Are You Looking At? Five Red Flags That Indicate Postural Instability

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When I was a student in chiropractic college, I was constantly amazed at the skill displayed by the experienced doctors. They were able to read a patient merely by looking at them; there were telltale signs that had become predictable. People are generally the same. We all basically do the same things - we sit, stand, walk, run, jump and so on. Principles of anatomy and physiology are essentially constant, and gravity seems to be holding steady as she goes. With all the similarities, there are things we observe over and over again, and people, in general, become predictable.

I can recall an elderly patient of mine who called in for an appointment one day because she woke up with a stiff neck. When I saw her, I said, "You fell asleep in your recliner last night watching TV, didn't you?" She looked at me with astonishment, as if I had been looking in her window, and said, "Why yes! How did you know?" Honestly, it was a lucky guess, because people are predictable. It's not some magical diagnostic ability, although it becomes so familiar to us that it may seem almost magical to the uninitiated.

Under the guidance of some of the mentors I have acquired over time, I was given some clues to look for. As I began to study these clues, I started to see recurring patterns associated with some very predictable findings: low back pain, knee pain, restricted movement patterns associated with joint fixation of the hips and pelvis; compensation mechanisms that may or may not result in aches or pain, at least not yet. There are postural changes that translate all the way up to the cervical spine, often in the absence of trauma. These are not random circumstances that just happen to befall the poor and unsuspecting; they are the result of biomechanical changes that start inside your patient's shoes. Yes, that's right, the feet - the foundation of all biomechanical function.

It was not a habit to look at patients' feet in the early stages of my practice, but the more I did, the more I was able to make the connections between the different elements of the kinetic chain: foot, ankle, knee, hip, pelvis and spine. I made two basic conclusions about the human body: Balance is better than imbalance, and mobility is better than immobility. When I started paying attention to the details, I was able to see the imbalances that led to premature wear and tear, chronic degeneration, and intermittent flare-ups. If we only concentrate on relieving pain, we miss many of the preventable causes of permanent degenerative changes.

I encourage you to conduct research in your own office. If it isn't already a part of your routine exam procedure, look for the five red flags of postural instability. These are visual clues that will open up a whole new world of understanding about biomechanics, spinal instability and the potential cause of degenerative arthritis, pain and joint instability. If you identify the presence of any of these five red flags early enough in a patient's life, you have a chance to prevent a great deal of unnecessary suffering.

Red Flag #1: Foot Flare During the Gait Cycle

As your patient is walking down the hall toward the exam or treatment room, take a look at what is going on with their feet. Ideally, the toes should point straight forward while walking, but during

the swing phase of the gait cycle, you will often see the toe of your patient's foot point laterally away from the midline. It may be one or both feet. What does this mean? It could be several things. It's primarily an indication that you need to investigate further, but there are a few things to consider.

Toeing out of the foot is one of the compensation mechanisms for a functional leg-length inequality - the notorious short leg. It also could be hip or knee involvement. You need to continue looking, so file that information away and move to the next red flag.

Red Flag #2: Excessive Shoe Wear

The key consideration here is the wear pattern of the posterior lateral heel area. This area is naturally going to show signs of wear because it is the point of contact during heel strike in the stance phase of the gait cycle. The key question to ask is, do the shoes wear evenly on the heel area? If they don't, we have an indication of asymmetry or imbalance. Also look for a broken-down heel counter. This is a common finding and is usually worse on one side compared to the other.

Red Flag #3: Bowed Achilles Tendons

Have the patient stand with their back to you and with their lower legs exposed. Take a look at the medial aspect of the Achilles tendons. If the Achilles bows medially, it indicates that the calcaneus is rolling to the inside, which is a strong indication that the foot is pronating excessively. This distortion is often present with foot flare and the next red flag.

Red Flag #4: Low Medial Arch

The medial arch is, well, an arch. If you look at the medial aspect of the foot from big toe to the heel, the center of the foot should be higher than the front and rear of the foot. You should be able to slide your fingers under the arch up to the distal interphalangeal joint of your middle finger. If you can't, you have a positive finding for this red flag, and it's time to look for the next red flag.

Red Flag #5: Internal Knee Rotation

Stand in front of your patient with their knees and lower legs exposed. Observe the position of the patellae. If you had a plumb line positioned at the center of the kneecap, the line should fall vertically to a point over the second metatarsal bone. Often, we see an internal deviation of the knees, with the patellar line falling medial to the second metatarsal bone. Another thing to take notice of is whether the knee rotation is symmetrical. Asymmetries of this nature are the cause of accelerated degenerative changes. A digital picture is also an excellent way to evaluate the knees. It is easy to draw the vertical lines on the knees using the paint function on your computer. This gives you a permanent digital record. While you're at it, take an AP and lateral picture of the patient standing with no shoes on. Now you have a record of the patient's pretreatment posture.

Any and all of these red flags point back to a very common finding in approximately 80 percent of our patients: bilateral, asymmetrical, excessive pronation of one or both feet. The foot-ankle-knee-hip connection is the foundation for the spine and pelvis. When instability exists in any of these components, the basic integrity of the structure of the spine is compromised. Don't let pain alone dictate your response.

The five red flags are indicators of structural compromise that can lead to joint fixation. Joint fixation inhibits the type I, II and III proprioceptive nerve fibers in the joints, stimulating type IV nociceptive fibers. This stimulation causes sympathetic nervous system stimulation or pain production. Restoring joint mobility to reduce pain without addressing the underlying cause of the

instability is a short-term solution with long-lasting consequences. Structural imbalances accelerate degeneration according to Wolfe's Law.

The most effective way I have found to address instability, as indicated by the five red flags, is to stabilize the feet. Custom-made, flexible stabilizing orthotics affect the entire kinetic chain. They enhance neuromuscular response, reduce the harmful shock forces that are absorbed by the articular cartilage, and create a symmetrical, balanced foundation. If structural imbalances accelerate degeneration, it makes sense that structural balance slows that process down. Not only does this make common sense, but it is also the reality that our patients experience. These theories are backed by research and results.

The five red flags are a tremendous tool to visually evaluate your patients for structural instabilities, and set the stage for you to make recommendations that will have a positive, long-lasting influence on optimal joint function and structural preservation.

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