

Warmer weather will be arriving! This is the time of year when more and more people are committing to being more active and are enjoying better health. Unfortunately, many of these people will not receive the full benefits from their exercise because they are experiencing a dangerous imbalance known as Short-Leg Syndrome.

Many people develop imbalance and sometimes subsequent pain as a result a leg-length discrepancy. If one leg is longer, it is similar to driving around with one car tire larger than the others. The center of gravity changes as weight is transferred to one side of the body. One shoe heel will usually wear away more than the other. One foot, ankle, knee and hip will be under more stress, and there will eventually be compensatory changes that take place above the pelvis as the balance of the spine is altered. Scoliosis may develop, with eventual premature joint degeneration on one side of the spine.

There are two types of leg-length discrepancies. The first type is anatomical; one leg bone on one side of the body is longer than the corresponding one. This is rather uncommon, with present research stating that one in 452 people have it. The condition usually develops from polio, rickets or a fractured bone early in life.

The other type of leg-length discrepancy is functional, and is present in three out of five people. The difference may be minimal or very great. If the difference is minimal, there are usually no symptoms from it. Over time, however, a minimal difference always becomes greater and gravity eventually wins if nothing is done to combat the imbalance.

How does a functional leg-length difference develop? Over a number of years, one side of the spine may become weaker than the other. Sleeping on one side; carrying items (such as a backpack) on one side; running clockwise on a track; using the phone on one side; lifting suitcases; carrying children; injuries as a child; or even a difficult delivery (such as a forceps delivery) just to name a few, that can all result in a functional imbalance.

A person with a large difference in leg-length (anatomical or functional) often first notices peculiar posture in photographs of themselves. One shoulder is higher, and the head is always tilted to the side. Some people state that they feel lopsided when walking, and many notice one heel usually wears away faster than the other. Sometimes the person that hems pants is the first to notice the leg-length discrepancy. Many people will notice a symptom that is exaggerated by running or long walks, such as low back pain, hip, knee, ankle or foot pain. A tendency to pull repeatedly the same muscle even though you have given it sufficient time to heal is a symptom commonly seen. Also, shin splints and sciatic neuralgia (inflammation of the sciatic nerve that produces pain in the buttocks and down the back of the leg) are very common symptoms.

Many runners with leg-length discrepancy tell me that when they run, they feel one foot impact the pavement more than the other. Some runners state that they feel lopsided

when running. Short-leg Syndrome is an enemy to runners because the stress on the body and legs during running progresses the imbalance more rapidly than in a non-runner. Correcting the Short-Leg Syndrome in the runner is imperative since the imbalance causes the body to use more energy and be less efficient, leading to inferior running times.

How can one detect a leg-length difference? The most efficient method is a combination of a chiropractic spinal examination and x-ray examination. The chiropractors job is to see if imbalance is present, and how that imbalance when stressed by gravity and daily activities leads to a decreased level of function, and then to correct the problem. The treatment of leg-length discrepancies involves specific chiropractic adjustments, appropriate spinal specific stretches, strengthening exercises/stretchers for only one side of the body and a heel lift if appropriate.

The best time to check for a leg-length difference is when a child is in elementary school. Examination by a chiropractor is recommended at this time not only for leg-length discrepancies, but also for early detection of scoliosis as well. At a young age, these conditions can be detected and corrected even before the onset of symptoms.

#### References:

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