



Newsletter

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Publisher

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**Educated - Safe - Effective
Spine Care**

Many patients consider this newsletter as a reminder to come in for their monthly good spinal health check up. Now is a good time to book your "tune up" appointment.

Clinic Hours

Mon 10am - 7pm
Tues 9 am - 12pm
Wed 10am - 6pm
Thurs 3pm - 7pm
Fri 9am - 4pm
Sat 9:30 am - 12:30pm

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The advice in this newsletter is to be used in conjunction with chiropractic care and not as a substitute to professional care.

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Short Leg Syndrome

is a diagnostic term referring to pain and disability as a result of having one leg shorter than the other. 90% of the population has one leg 5mm or more shorter than the other. In one study, 2/3 of the people with a leg length inequality (LLI) of 5+mm had a history of low back pain. The greater the LLI the more likely the individual will experience low back pain or notice that they need to get the length of their trousers hemmed to different lengths. LLI is one of many causes of scoliosis, a lateral curve of the spine, figure 1. A scoliosis due to LLI is called a postural or a pelvic tilt scoliosis.

There are two types of leg length inequalities: functional and structural. **Functional leg length inequality** means the leg bones are the same length but one appears shorter than the other and the body functions as if one leg is short. Functional leg length inequalities are commonly due to pronated feet or twisted spines subsequent to injury.

Figure 2 is an example of a feet scan. Notice the right foot is flatter, more pronated, relative to the left foot. The medial arch of the right foot has dropped by 5mm more than the right one. This loss of height in the arch of the foot translates into a loss of total leg length while standing. Placing custom made orthotics into this patients shoe helped to correct their leg length inequality.

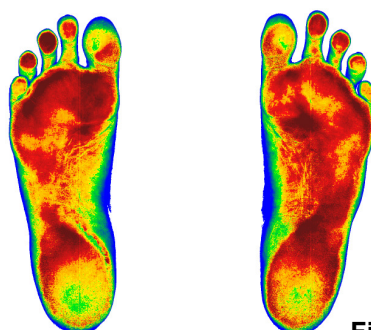


Figure 2

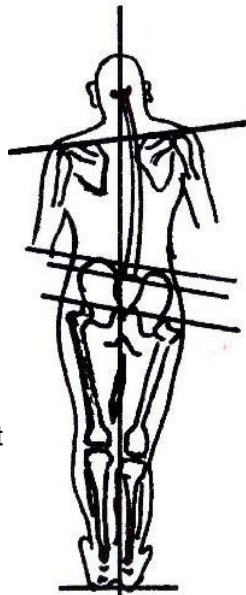


Figure 1

Figure 3 is an x-ray of a person with a short leg. In this case the majority of their leg length inequality was due to marked difference in foot pronation. **Correcting their foot pronation with customs made foot leveler orthotics dramatically reduced the leg length inequality, figure 4.**

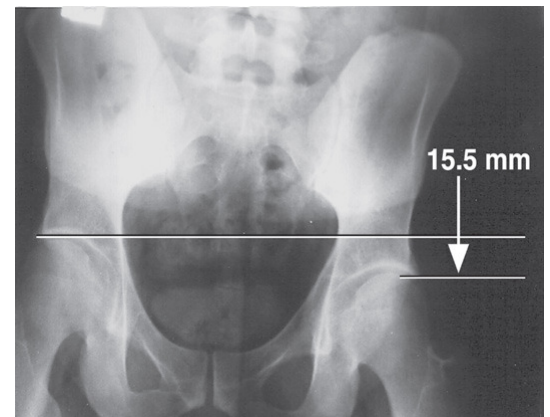


Figure 3

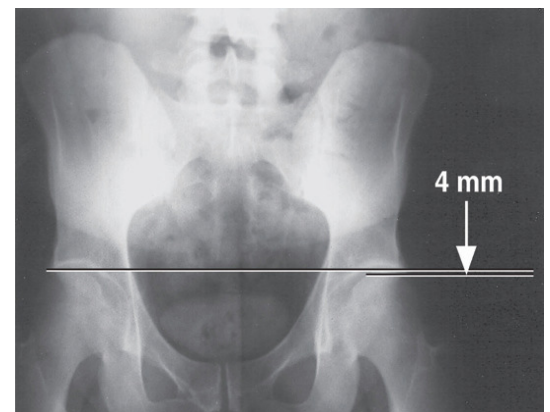


Figure 4

Custom made orthotics are useful for a variety of conditions including foot, ankle, shin, knee, hip and low back pain. I have been wearing Foot Levelers Orthotics for 10 years. I have 5 pairs of them and transfer them from shoe to shoe when needed. Without them I develop foot, shin, knee, hip and mid back pain. I can't dance without them. Some patients can't stand at work all day, run or play sport well without their orthotics.

We offer a free computerized feet scan to every patient. Just let us know when you would like to have your feet scanned and we will allow more time for your next consult.



Foot Levelers Orthotics: Here is what one patient had to say about his orthotics.

"After having had knee pain every time I ran for the last three months - and spending hundreds on new shoes with no improvement - I called Patrick Shwaluk my trusted Chiropractor. He designed and ordered a custom made pair of orthotics that were very affordable. They were designed especially for me and my own foot issues, as I tend to roll my ankle fairly regularly. My knee pain was gone within two days and I haven't rolled my ankle since purchasing them. What a great investment!" John Schuh, Personal Trainer. The Foot Levelers Orthotics support all three arches of the foot. They are custom made making them eligible for rebate with some private insurance companies as MBP, AHM and Australian Unity. They also come with a one year money-back guarantee. **So, if they do not help you, you can have your money back!**

Anatomical Leg Length Inequality (ALLI)

Not all legs are equal. Some are anatomically unequal due to having shorter bones in one leg. **Most commonly, the legs are different lengths because they grew at different rates.** In some cases the long bones of a leg have been fractured and have not been set at exactly the same length as the bones in the other leg.

Unequal leg lengths means unequal weight bearing through the feet, ankles, hips, pelvis and spine. **The end result is premature hip and low back degenerative arthritis and pain.**

Ideally, the spine balances from the top of a level sacrum. In figure 5, line "D" illustrates sacral base un-leveling (SBU). Line "D" should be horizontal like line "C". If the foundation is not level it is difficult for the rest of the spine to be straight or to function optimally. There is a strong correlation between SBU and scoliosis. In figure 5, **a heel lift equal to distance "E" may be prescribed to level the sacrum and straighten the spine.**

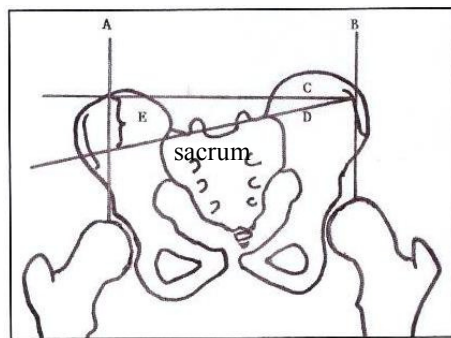


Figure 5

It is virtually impossible to accurately measure SBU and LLI without the x-ray calculations. Clinical evaluations with tape measures or eye ball estimates are used to determine whether or not the x-rays should be ordered but should not be used to determine the size of the prescribed heel lift.

We recommend using a heel lift anytime the ALLI is greater than 4mm. The lift should be equivalent to the height needed to reduce the ALLI, distance "E", to 4mm or less.

Heel lifts of 7mm or less can be glued to the inside of the shoe. If distance "E" is greater than 7mm you will need the assistance of a shoe repair person who will make modifications to the heel and or the sole of your shoe. We never make a correction greater than 50mm as it alters gait too much and will cause mechanical problems with the ankles. Anatomical LLI of more than 50mm may benefit from surgical intervention.

LLI detected in childhood, while the bones are still growing, can be altered by the judicious application of a heel lift. **Differences corrected during childhood often become smaller over time. Uncorrected differences grow larger.**

Here is the protocol to determine whether or not you have a LLI and if something should be done about it: Get an erect / standing x-ray of the lumbar spine and pelvis and have your chiropractor measure the degree of sacral base un-leveling. **If distance "E" is less than 4mm it is unlikely that a LLI is the cause of your low back or hip pain.** If the distance is more than 4mm the cause of the LLI should be determined and the appropriate heel lift / orthotic applied.

The navicular drop test measures the drop / pronation of the medial arch when you move from sitting to standing. Comparing the two feet determines which arch drops more. If you are a pronator we will scan your feet on a Foot Levelers Foot scanner to determine the degree of foot pronation and compare the difference between the two feet. Buy orthotics if there is more than a 1% difference in the degree of pronation between the two feet. **Correcting pronation may be sufficient to eliminate the associated symptoms and correct the LLI.**

If your feet are good or if you still have significant pain and a LLI after the application of orthotics it is wise to add a heel lift to the inside of the shoe. **If you need more than 7mm of correction get your shoe maker to add extra thickness to the sole of your shoe.** Do not increase the height of the sole and heel of the shoe by more than 50mm.

A follow up x-ray should be ascertained to verify proper correction. Do not worry. Your chiropractor will help determine whether or not heel lift intervention is right for you.

Newsletters

Due to the cost of printing and postage we prefer to email the newsletters whenever possible. If you have received this newsletter in the mail and have an email address we would appreciate it if you would send us an email to: **chiropractor@bytesite.com.au** and ask us to email future newsletters to you. The newsletters are in pdf format and can easily be saved to your computer. Thank you for your consideration.

Heel lift intervention protocol

Some patients will note a mild but transient increase in the pain while adjusting to lift / orthotic intervention. This is normal. It may take up to 6 weeks for your body to adjust to the change. If the lift is greater than 6mm it may be wise to do a gradual "build-up" of the lift to allow the muscles to accommodate to the new height. Ultimately you are better off using the lift size that feels best. Everybody's capacity to accommodate to change is different. Older bodies tend to have more difficulty accommodating to change.