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- chiropractic/active release technique
- nutrition consulting
- physiotherapy
- acupuncture
- registered massage therapy
- naturopath
- laser hair removal
- orthotics

## WOMAN'S STRUGGLE WITH FOOT PAIN LEADS TO HEALTHIER BACK AND FEET

By: Mark McFadden, Physiotherapist

Long standing pain in Ms. Julie's\* feet and arches was becoming increasingly debilitating. For this young professional the situation was significantly affecting her work, fitness and leisure, and simply unacceptable. Ms. Julie's efforts to fix the problem had provided temporary benefits but were unsuccessful in resolving the problem. She sought physiotherapy care for an assessment, care recommendations and ultimately to resolve the pain.

Standing on her feet all day for work, running, cycling, distance walking, fitness workouts and walking in heels were the priorities for her recovery.

Like most people seeking physiotherapy, Ms. Julie was in pain and was restricted in her daily activities and responsibilities. The first step in physiotherapy was, as always, the assessment with historical analysis and movement analysis appropriate to specific difficulties. When assessing a problem in the lower half of the body the movement assessment involves structures from the bottom of the thoracic spine and below. The movement analysis selectively tests the various structures of bones, joints, muscles, tendons, ligament and capsule, fascia and nerves in an effort to identify the problem source and the influences that both local and distant structures may be having. Interpretation of the patterns and difficulties identified during the assessment generates a clinical impression or physiotherapy diagnosis and a care plan can be established.

### AT ISSUE:

The pain Ms. Julie felt was in both feet. It was distributed along the arches and on one of mid foot bones, called the navicular, found on the inside of the foot and just below the ankle. For Ms. Julie, there was a structural change in both naviculars. They were both larger and had more notable grooves than usual that support surrounding tendons. This is common when there is a dropped arch, known as mid foot pronation. Ms. Julie's history patterned quite closely to that typically observed with plantar fasciopathy and this was further reinforced

when the primary pain in both feet was easily reproduced with clinical tests. But the problem was more complex and became clearer during the movement analysis of the spine and legs. Testing found impaired function, increased tension and sensitivity of muscles along the back of calf the control the foot movements. There were two areas of her back that were painful and had compromised movements. Although very fit, she had asymmetric strength deficits in her abdominal and back muscles, elevated tension in some of her back muscles and also had habitual movement patterns of her back and hips that were not ideal. Additionally, there were also restrictions in the freedom of movement of the nerves that travel from the back to the feet.

### CLINICAL IMPRESSION:

The clinical impression developed was that Ms. Julie did have bilateral tendinopathy in muscles that controlled the foot, flexor digitorum, flexor hallucis longus and posterior tibialis. Additionally, there were biomechanical dysfunctions at the lumbosacral junction and thoracolumbar junction of her spine having influences on muscles and nerve mobility. What remained to be seen was how influential that back difficulties were to the pain in her feet.

### CARE PLAN:

Ms. Julie had three parts to her care plan. Individual treatments sessions would often include components of two parts and evolved quickly.

**Part 1:** Reduction of pain in her feet to more comfortably get through the day and to reduce the stress caused by pain was the first priority. Treatments included such measures as massage, shockwave, electrotherapy, taping, activity modification, ice and footwear recommendations. The reduction of pain and improved function of muscles and tendons of the foot was helpful and encouraging for Ms. Julie. The progress was a key motivational factor in Ms. Julie's ongoing ambition to get rid of the pain once and for all.

\*The patient's name has been changed as per privacy requirements.

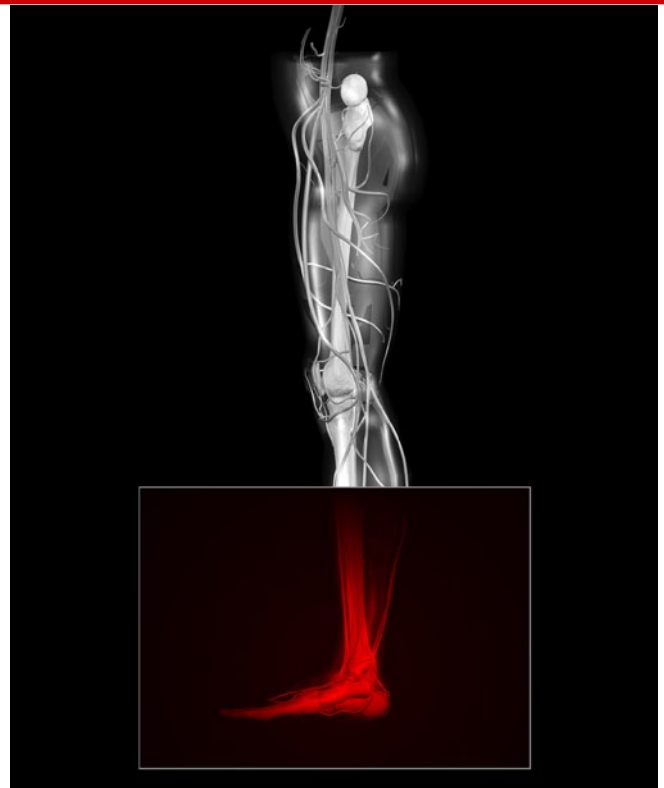
**Part 2:** Addressing the movement impairments in her spine and restrictions in nerve mobility. Posture training and spine movement technique coaching were used to prevent her from falling into bad movement habits. Manual therapy techniques were used to restore motion of the spine that had been restricted and gentle nerve mobility exercises were done. Ms. Julie found this combination of treatment techniques had remarkable impact on the pain in her feet. Immediately, she would have a reduction in pain and improvements were sustained after treatments were over. In physiotherapy, this is quite often observed and it relates to the principle of how structures removed from the area of pain can directly influence the pain and impairments that people are experiencing. In this situation, Ms. Julie had a significant level of referred pain.

**Part 3:** Comprehensive exercise program and progressive integration into normal activities. The exercise program was created to correct the imbalances of muscles that were hypertonic and those that demonstrated weakness at the level of the spine and in the calf and foot. A progressive program of strength and stretching with an emphasis on the imbalances at the level of the spine was used and continues to evolve.

Activity reintegration has been progressive. Ms. Julie has been able to use activity modification and symptom recognition to determine the activity, its intensity and frequency that she can do without aggravating the problem. In the same way she is able to progressively increase her participation.

#### **STATUS REPORT:**

Ms. Julie has a significant overall reduction in foot and arch pain limited to when participating in moderate to high intensity activities. Her pain is intermittent only and low in intensity and is able to restore and recover when it does occur. She is able to work all day standing and walking with mild discomfort only and not every day. Her workouts include some modifications but are not causing any discomfort or compromising her fitness objectives significantly as had been the case initially. Cycling and even some running have been integrated but she has been encouraged to modify the intensity and frequency still. As for her stilettos....we are working on that!



The road to complete resolution continues in a very positive and progressive manner. Ms. Julie is well aware that the body takes time to restore and recovery when longstanding pain and impairments have been present.

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Foot and ankle pain and movement difficulties are very common and are often shrugged off until the pain or impairments become unbearable and are affecting normal day-to-day activities. The compensations needed for everyday loading and usage can be significant and can create long-term changes both to the area of your foot and ankle and to the entire body.

Don't wait. Don't shrug it off. Early care can make a difference to your long-term health.