

## **Sore Feet for Summer?** **by Ryan and Joanna Sleik**

Now that summer is here and we are getting outside to walk, golf, and run, our attention turns to the problem of foot pain. One of the most common complaints we see in the clinic is characterized by pain on the bottom of the foot and heel especially first thing in the morning and often relieved somewhat after a few minutes of hobbling around. The problem we are described is medically known as *Plantar Fasciitis*. With such a name one would think it might be some kind of foot devouring fungus but in fact it is merely a problem with the connective tissue on the bottom of the foot.

The foot has the challenging dual task of being both mobile and rigid during walking and running. When we strike the ground, our foot needs to be mobile enough to adapt to the ground and absorb our body weight in order to provide adequate shock absorption. However, the foot also needs to provide a stable platform to propel our body efficiently forward. The plantar fascia is the connective tissue on the bottom of the foot that helps create a rigid structure for us to push off from. As our calf muscles contract with push-off, our plantar fascia is tightened and our muscular force speeds us away to our destination.

Plantar Fasciitis occurs when the tissue becomes damaged by the repetitive strain and overuse of our daily lives. For those runners out there think of this: A 150 pound runner who runs 10 miles a week will hit the ground with 10 million pounds of impact per week! As the plantar fascia becomes strained, small tears occur within the tissue or at it's attachment at the heel creating painful points of inflammation. When we step on our foot after some time of inactivity, such as after a good night's rest, the scar tissue tears again creating pain and irritation. Although the symptoms may lessen after a few minutes, as the plantar fascia warms up with movement, the problem itself takes a bit more to resolve. This cycle of healing and re-injury explains why your foot pain goes away with rest but is painful as soon as you step on it again.

The mechanism of healing is a process we call tissue remodeling where damaged tissue slowly becomes more durable and eventually returns to the required strength to handle activity. In order for tissue remodeling to occur, the stress to the tissue needs to be relieved and the plantar fascia must be allowed to stretch back to normal length and achieve normal strength.

Tips for managing (and preventing) plantar fasciitis symptoms:

- Wear shoes and sandals that provide adequate support to prevent your foot from flattening under your body weight and becoming over-stressed on hard surfaces
- Consider supportive inserts or custom orthotics to help correct your foot mechanics
- Begin new activities gradually to allow your tissues to become strong enough to handle the new stresses; remember to warm up and stretch before and after activity
- If you are symptomatic, stretch your foot *before* you put your weight on it; cross one leg over the other and pull your toes and ankle upward and hold for at least 1 minute

- Massage the bottom of your foot before activity (use a golf ball or foot massager) to loosen the plantar fascia
- Check your calf strength and flexibility and stretch, stretch, stretch those calves!
- See a physiotherapist to assess your problem and prescribe treatment and exercises to help keep you moving