



# » NEWS

## » Welcome

Every time it comes to preparing the newsletter another two months flies by and I wonder what have we been doing? Its 70 more days to the World Cup and we are half way through the year! Winter sports are in full swing and going by our clients we are certainly seeing our fair share of the sprains and ruptures! Lets hope all our All Blacks are fit and rearing to go. For all you hard training runners preparing for the Auckland marathon or the Taupo ironman winter training can certainly be a downer but remember quality is better than quantity and if you want an interesting read go to Terenzo Bozzone's blog on cross training when injured [www.terenzo.com](http://www.terenzo.com). This months newsletter is jammed packed with the team conquering the Panmure King of the Mountain, and Monique attending the Australasian Podiatry Conference.



**Bigfooter Charlotte places 3rd in the Kids minimarathon**

A sunny morning welcomed the team for the **Panmure King of the Mountain**. With only Mt Wellington to conquer we all headed out on various distances – 21km, 11km, 5km and the Bigfoot sponsored Kids Minimarathon. Congratulations to Dan Crowther for placing 3rd in the mens 21km (with no training – Legend!), and Charlotte Martin-Scobie for a 3rd in the Kids minimarathon. A great day for everyone who participated and we will certainly be back again to conquer the 'Big' Mt Wellington. See our Bigfoot Facebook page for photos that capture the day.

Monique attended the **Australasian Podiatry Conference**, held in Melbourne in May. This is the largest podiatry seminar in Australasia and runs over 4 days. The range of topics was diverse and quality of presentations outstanding. A summary of the key research papers that Bigfoot thought relevant to share with our colleagues include **Gait retraining and Barefoot Running, Scott Waring's histology of damaged tendon, Oestrogen influences on knee stability, Medial knee osteoarthritis and Restless**

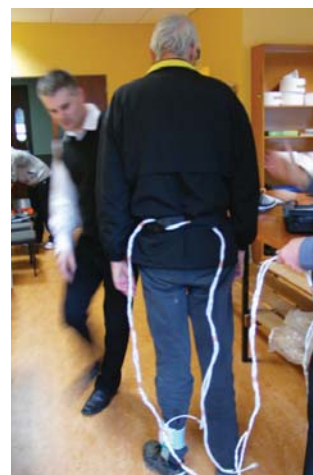
**leg syndrome**. These are summarised in the newsletter. The conference was mainly attended by podiatrists, but there was a solid representation by physiotherapists as well as a few shoe retailers. This overlap of professions can only be good for clinicians as we can understand each others perspective and work together for the good of the patient.

Angela Evans, a world renowned paediatric researcher presented a day seminar at AUT on the **latest research when managing children**. Attended by 20 podiatrists the key topics included flat feet, growing pains, in toeing, club foot, conditions not to miss, and key developmental milestones. There is a scarce supply of good research on lower limb children's development and Angela's presentation provided Bigfoot the latest and best research on these topics.

On the diabetic front a case study was conducted with **AUT and Bigfoot Podiatry** to assess the effects of a commercially available rocker soled shoe on reducing pressures over the forefoot (ball of the foot). Research has shown rocker soled shoes can reduce pressures and help prevent ulceration. The preliminary data has been interesting to say the least. The Rocker shoe increased the length of time on the forefoot and did not alter the peak pressure when compared to the non rocker soled shoe. The opposite to what we had expected! However, we did find a insole that could reduce pressure by 50% under the big toe joint and this looks promising for insole design in the future.

**Bigfoot clients in the news...** Congratulations to the NZ Breakers on there amazing achievement – well done Bigfoot clients Kirk Penny and Thomas Abercrombie for MVP of the series, Terenzo Bozzone for placing 2nd at the Rev3 Quassy Conneticut – you will nail it at the next one 'T', The NZ U20 footballers who qualified for the World Cup in Columbia (July) – well done to Bigfoot clients Nick Branch (captain), James Musa, Sean Lovemore, Cory Chettleburgh, and Luke Rowe – good luck in July!

From the Bigfoot Team



**Diabetic Pressure testing at AUT**

## » ISSUE 28 June 2011

### THIS ISSUE

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Tendon Histology

Knee Stability and Oestrogen

Knee OA

Restless Leg Syndrome

Asics Tigreor Boot

### CLINICS

#### Northcote

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## >> Tendon Research & Knee Stability

I found Scott Waring to be the most impressionable speaker to listen to. His 2 papers discussed the **histology of damaged tendon**. I found it interesting to hear the statistics of injury at the Queensland Institute of Sport – 70% of athletes get injured each year, 30% are injured at any one time, 76% are soft tissue in origin and 50% are in the lower limb. After eccentric loading training is completed within a damaged Achilles tendon, the tendon recovers at 7% per hour. Water diffuses out of the tendon on exercise and slowly returns on rest. Eccentric loading is preferable over concentric as the former forces more water in and out of the tendon whilst under load. Increased water movement equates to increased healing as proteoglycans are contained within the water content of the Achilles tendon.

Simon Bartold presented a quality paper which suggested fluctuating levels of **oestrogen influences knee stability** in women runners. Over a group of 36 women, 18 were on the mono-phasic oral contraceptive pill (MOCP)

and 18 were not. They performed a series of strides on a treadmill and an accelerometer measured their tibial acceleration. This was taken at menstruation and ovulation times within the month. Those subjects on the MOCP had no difference in tibial acceleration during these times but the non-MOCP users demonstrated gross differences. It was suggested that at menstruation phase there may be poor motor control strategies which gave the result of increased mediolateral knee movement during gait. This may give rise to clinicians considering preventative sports taping for at-risk knees prior to high loading activities (such as netball or soccer).



## >> Medial Knee Osteoarthritis & Restless Legs



A thorough research paper conducted by Craig Payne et al which challenged the practice of **lateral wedging in patients with medial knee osteoarthritis**. It has recently been established that clinicians can safely trial laterally wedging orthotics to reduce load over the medial joint space of OA knees. This study of 200 subjects forces us to re-think this. 100 patients wore a standard off the shelf insole and 100 wore laterally wedged orthotics – both wore them everyday for 12 months. Results showed no significant

difference between groups in pain reduction. There was also no significant change in medial tibial cartilage volume between groups, signifying that laterally wedged insoles give no real short or long term improvement –

contradictory to studies which we have read in the past. Bigfoot's position is currently to inform patients and monitor closely for at least 12 months if we use lateral wedging as a management protocol. We are also waiting for a study to be released from Melbourne University on the same subject to see whether their results suggest similar findings.

**Restless legs** is often undiagnosed, yet it affects 2% of Australian children. It is associated with decreased iron stores, dopamine dysfunction, lack of sleep, and is familial. These children often have to constantly move, have increased symptoms on rest, have difficulty sleeping and often have learning difficulties or behavioural issues due to constant tiredness. 30% often find relief by rubbing their legs. Angela Evans is working with a taskforce within Adelaide University to develop a diagnostic questionnaire for practitioners. This will help identify and understand more about the condition with the view to developing management tools for patients to use.

## >> Asics Tigreor

Asics originally developed this boot 4 years ago and it has quickly risen as a favourite amongst soccer, rugby, rugby league and Aussie rules players. Its design has focused on reducing hamstring and calf overload as well as increasing comfort levels. Tigreor was the first boot to carry a midsole. Asics use a midsole material named SoLyte and this model incorporates a 10 mm heel pitch. Most running shoes have a 10 mm heel gradient and it makes sense to continue this to the football environment. Studies show that when a runner strikes the ground at heel contact phase, a 10mm heel gradient reduces strain to the hamstring and calf muscles. These common injuries are often experienced at the beginning of the 2nd half game of play when the tired – yet cooled - body begins work again.

Tigreor's removable sockliner allows Podiatrists to insert low profile orthotics. This is an important feature as we see higher rates of Sever's condition in young athletes, a condition which we know responds well to orthotic therapy. Underneath the sockliner is a SoLyte last. This comfort feature stops the player complaining from feeling the boot's studs under the metatarsal heads.

The base plate is variable – Tigreor comes in a 4:2 stud pattern or a cleat option. The cleat design allows the foot to grip the ground and then rotate under acceleration. Pitches are often variable in their water retention qualities so this option gives the wearer a choice depending on the pitch quality they intend playing on during the season.



The vamp upper is made of high quality Kangaroo leather. This gives perfect wrap around grip and superior ball control. The tongue is connected to both the sole and the laces, giving maximum proprioceptive feedback and a slipper like fit. The heel counter is wrapped in suede to reduce heel slip and give durability to a high stress area within the boot.

The Tigreor is designed for the player who likes the boot to feel like an extension of the foot. This boot offers strong grip, yet allows the foot to move without restriction and change direction quickly, kick a ball whilst allowing the foot to feel a full connection, and reduce the likelihood of acute muscle strain to the posterior leg muscles. It is a boot that continues to focus on injury reduction and comfort – a combination that will increase performance in football players.