

# FROM THE SOLE

Tips to keep you running at your best



# intraining

running injury clinic

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# LACING TIPS

Changing the way you tie your laces can help customise the fit of your shoes. Modern running shoes have variable width rather than parallel lacing. This gives you the scope to adjust your lacing around specific fit issues with your feet. Some examples are to skip the second last eyelet and use the extra eyelet at the back of the shoe to make the hole your foot comes out of smaller and grip your heel better. Another good one can be to skip one set of eyelets to reduce pressure on

By Steve Manning  
intraining Podiatrist and Coach

top of your foot where there might be a bony prominence or pinched nerve. By skipping the first set of eyelets all together you can increase the width across the forefoot which is particularly good for bunions. One problem with elastic laces for triathletes is that their laces need to be loose enough to slip them on but then can make them too loose to run in. One way around this is to have two sets of elastic laces. The bottom three eyelets have a firmer fit to grab the foot while the top eyelets are looser to allow quick slip on in transition.

# RECOGNISING YOUR LIMITATIONS.

Training is in full swing now as everyone is preparing for the upcoming events. The mileage is increasing, speed is becoming easier to do but harder in intensity and the weekend racing over longer distances is starting to become more serious. It is around now that you will find that you have improved in your fitness and speed, but also may be feeling a little tired from the increased load of training. This is a fun time in the running plan, but also a time to be cautious.

Whether you are a new runner or an experienced runner, being in tune with how your body is responding to training and racing is a skill to learn. This will change too depending on what is happening in your life and if you have

had a history of injuries. These become your limiting factors. As a runner, you have to be able to recognise your limitations and modify your training accordingly. This may mean running speed more conservatively, taking a few extra days to recover after a race, not wearing racing shoes for the next few races, running Park Run easy, and cutting your long short. As long as you are not doing this regularly, you can remain confident that what you have done in training should help you achieve the realistic goal you have set for the season.

Working towards a goal is about training and racing smart, and being adaptable to what you are able to manage physically and timely in a week. Never lose heart when the program is interrupted. Instead look at how to

manage your running to best suit your needs.

**Customise your Running Program:** If you are experiencing difficulties with your training plan, or keep getting injuries or life interruptions, book in to see one of the intraining coaches to help customise your training plan. (Private Health Insurance may apply through the intraining Running Injury Clinic).



By Margot Manning  
intraining Podiatrist and Coach

# USING STAIRS TO STRENGTHEN YOUR ACHILLES

Stairs can be a useful way to build strength in your Achilles tendon and calf muscles - helping to potentially reduce injury.

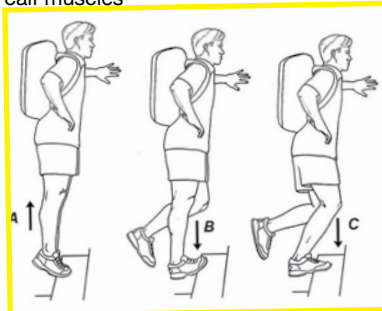
### Directions:

- Position yourself with the balls of both feet on the edge of a step
  - A)EASY: Slowly raise up and down using both feet
  - B) HARDER: Slowly raise up using both feet, lower using one, alternate sides
  - Increase the difficulty of exercises A and B by adding a backpack with 5kg of weight in in.
  - C) SOLEUS (deeper calf muscle): Repeat A and B with a bent knee.
- Aim to do these exercises once a day. Perform 10 in a row and repeat 3 times.**

**Gradually increase to 3x20.**

Care should be taken with eccentric (lowering under tension) movements can irritate an Achilles with degenerative tendonosis. In these instances, a different technique should be used.

By Doug James  
intraining Physiotherapist and Podiatrist



# WINTER TRAINING

By Liz Lovering, dietitian, runner and chef

Winter sees a lot of runners training for various events. If you train in the evening, by the time you get home you may not feel like preparing or eating a regular evening meal. Hearty soups are just perfect in the cooler months as they are not too heavy on the stomach if you get home late but more importantly they can also provide you with the nutrition your body needs after a tough training session. If you are busy with work, home life and training a little bit of meal planning can make the difference between going home and not really bothering with recovery nutrition or going home to a prepared meal that is good for recovery and tastes great! Whether it's for health, pleasure or performance food should taste good, so why not try making this delicious warming **Butter Bean, Chicken and Kale Soup!**

**Tip** - You can bulk cook soups at the weekend and freeze portions so that when you get home you just have to heat the soup through.

To make an appointment to see Liz Lovering, contact 33673088 or email: [intraining.com.au](mailto:intraining.com.au)

Liz Lovering, dietitian, runner and chef

## Butter Bean, Chicken and Kale Soup Serves 6

### Ingredients

- 2 tablespoons olive oil
- 2 cloves garlic, crushed
- 1 medium red onion, chopped
- 1 leek, washed and chopped
- 1 large carrot, washed and chopped
- 2 sticks celery, washed and chopped
- Pinch dried oregano, 1 bay leaf
- 1 x 400g can chopped tomatoes
- 1.25L chicken stock
- 1 cup (190gm) Risoni or soup pasta
- 300g chicken breast, cut into bite size pieces
- Large bunch Kale washed and chopped
- 2 tablespoons tomato paste
- 1 x 400g can butter beans, rinsed and drained
- Small handful Fresh basil, large handful fresh parsley, washed and chopped
- Salt and pepper to taste

### Method

Heat olive in a large pan over a medium heat Add garlic, fry for a couple of minutes, then add onion, leek, carrot, celery, oregano and bay leaf and cook for 3-4 minutes, stirring occasionally Add chopped tomatoes, stock, pasta and chicken and simmer for about 5 minutes Then add kale, tomato paste and butter beans and continue to simmer until everything is cooked through Stir in herbs and season to taste

### Serving Suggestions

This soup is easy to make and freezes well. It makes a great winter recovery meal after training. Tip: You can use any kind of canned beans (legumes) and use any small pasta shapes. Increase the carbohydrate by serving with bread. If the soup seems a little thick, just add a little water.

### Nutrition

This dish contains a mix of protein and carbohydrate to assist with recovery. Each serve contains approximately 56g carbohydrate, 23g protein, 9g fat, 5g fibre and 1,600kJ (385 Calories).



# FUN FACTS

Research has proven that red shoes are faster. A study calculated the colour of shoes in major races relative to their position in the field and found a significant correlation between red shoes and faster finishing times. While this might seem like some colour magic it is actually a good example of a confounding variable in research. Red is a more popular colour for racing shoes as it is seen as looking faster. Because people who wear racing shoes are more likely to finish at the front of races then red shoes prove to be faster.



# ANTERIOR SHIN PAIN

Anterior shin pain is common amongst runners and can manifest in many ways depending on the type, severity and mechanism of injury. More prevalent anterior leg injuries include anterior tibial stress fractures and overuse of the Tibialis Anterior muscle. Differentiating between these and other injuries is essential to determine recovery prognosis and the best course of treatment.

Good anatomical knowledge and key information about the pain (type, nature, location, duration, onset, etc.) can greatly assist diagnosis. The lower leg contains two long bones – the larger tibia, and fibula, which is non weight-bearing. Tibialis Anterior is a major muscle contained within the anterior compartment of the leg. Its tendon runs across the anterior ankle and slips insert to various locations on the dorsal aspect of the foot. It acts to dorsiflex the ankle (pull the foot towards the head) and thus controls forefoot strike during gait.

**Risk Factors for Anterior Shin Pain**  
Overtraining is the most commonly cited reason for running injuries – particularly overuse injuries such as stress fractures, muscle strains and tendinopathies.

Biomechanical factors surrounding gait and foot structure can influence injury risk. People with a more rigid (cavus) foot type generally have less movement and less shock attenuation capabilities and are therefore at greater risk of bone stress and stress fracture. Conversely, those individuals with more joint laxity/flexibility generally require more muscle strength to control excessive movement and therefore are at greater risk of muscle overuse injuries.

Footwear choice can significantly affect injury risk. Shoes that are too stiff or too flexible can alter foot strike patterns, particularly during forefoot loading. Pronation is the body's way of deferring force, and excessively rigid shoes will not allow sufficient movement through the ankle and foot, and thus will compromise natural shock attenuation. Shoes with too much heel pitch can encourage premature heel strike and also result in forefoot slapping, which increases the risk of anterior stress fracture.

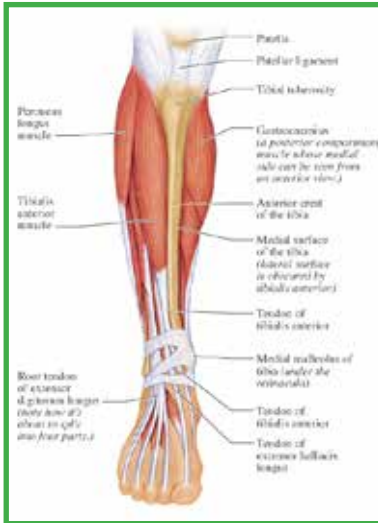
Shoes with insufficient cushioning (either due to aging or design) can also increase injury risk as they offer inadequate protection from ground reaction forces both at ground contact and forefoot loading.

### Stress Fracture

Pain along the anterior tibial border can indicate bone stress or stress reaction, which can progress to stress fracture if left untreated. Diffuse bone pain is less concerning and likely to suggest a stress syndrome (characterized by inflammation along the bony periosteum), whereas focal bone pain is more likely to indicate stress fracture. Early signs and symptoms of bone stress can progress to stress fracture if left untreated.

Stress fractures on the anterior tibial border (particularly central 1/3 of the anterior cortex) are high risk injuries. Due to poor blood supply, they have a longer recovery time and poor prognosis, with a high risk of delayed or non-union. As such, anterior tibial stress fractures require aggressive treatment. Complete rest from aggravating activities and offloading is essential, particularly during the initial phases of recovery. Many studies recommend complete immobilization (using a pneumatic walker or similar), but other offloading strategies include use of non weight-bearing boots or casts, braces, crutches or orthotics.

With proper treatment, uncomplicated stress fractures of the tibia (affecting the medial/posterior border) usually resolve in 6-8 weeks. However, those affecting the middle anterior cortex require up to 3-6 months of aggressive offloading and multiple sources have suggested an average recovery time



of 6 months. Surgical intervention is often necessary for delayed or non-union fractures, and should be considered if the injury is unresolved after 6 months.

Stress fractures of the anterior tibial border typically develop secondary to excessive force being transmitted up the anterior tibial shaft. As an overuse injury, this usually results from incorrect and excessive loading at forefoot contact/loading – repeated many times during training.

### Tibialis Anterior Overuse

Tibialis Anterior acts within its normal range of motion throughout walking and gait, and its activation is typically more controlled and less affected by impact and ground reaction forces compared to the calf muscles (Gastrocnemius and Soleus). Therefore, Tibialis Anterior injury is more likely from overuse and tightness than from acute muscle strain or tear.

Tibialis Anterior is active throughout gait, particularly between initial strike and forefoot loading, and to a greater extent in

runners who heel strike. It is responsible for controlling forefoot loading. In heel strikers, it acts eccentrically to prevent forefoot slapping and encourage a smooth transition through midstance. Poorly controlled forefoot loading can result in pathological gait such as forefoot slapping. Eccentric muscle contractions require much greater strength and control, so without sufficient muscle conditioning, injury risk is increased.

In runners who midfoot or forefoot strike, there is typically less eccentric load on Tibialis Anterior, but instead the muscle is contracted throughout strike, midstance and forefoot loading to oppose the eccentric actions of its antagonist muscles in the calf muscles. This prolonged concentric muscle contraction can also result in overuse.

In some cases (individuals with weak or compromised Tibialis Posterior muscle), Tibialis Anterior also assists in maintaining good arch height and can help to control midfoot pronation. Functioning in this capacity significantly increases load on the muscle and the subsequent risk of overuse.

Muscle overuse typically develops over time and worsens without intervention. Dull, aching pain in the muscle belly (proximal anterior leg) is most common, and whilst it can warm up with exercise, typically overuse-type muscle injuries will progressively become more painful with fatigue towards the end of a long or more intense session. Tightness, stiffness and pain is also common after periods of rest.

Relieving muscle tension will often relieve the pain suffered from overuse. This can be achieved through massage and dry needling or acupuncture. When combined with pain relieving treatments like anti-inflammatories (NSAIDs), icing and rest, the symptoms will improve quite dramatically. However, biomechanical issues (structural or gait-related) and footwear should also be addressed to completely resolve the injury.

Tibialis Anterior tendon injuries are less common due to the muscle's activation patterns, but they can occur. The tendon can become irritated, inflamed or impinged as it passes across the anterior ankle, and insertional tendinopathy can also develop on the medial side of the foot at the navicular.

Perfecting the balance between rest, treatment and rehab is essential to resolving tendon injuries. It requires rest from aggravating activities, but not complete rest. Low impact activities and specific strength exercises should be combined with pain relieving strategies such as NSAIDs, icing and offloading with orthotics or insole/shoe modifications. In the case of more chronic tendon injuries, biomechanical and gait factors may need to be addressed to achieve resolution.

If you experiencing ongoing shin pain contact intraining Running Injury clinic to make a booking Ph: 33673088 or email: clinic@intraining.com.au

By Emily Donker  
intraining Podiatrist and Coach

# CROSS COUNTRY & RACING SHOES

There are two elements to cross country racing that makes it different from track or road running. The first and most obvious is the continually changing surface. With every step the muscles and tendons of the foot and leg have to be able to respond to the unevenness of the ground to maintain balance and co-ordination. The reduced cushioning and lower profile of racing shoes allows the receptors in the tendons to be able to sense these changes more easily and give faster feedback for muscle control. Apart from reducing the chance of injury, the runner is able to run more freely and less likely to fatigue as fast.

The second element is in relation to racing versus training. As the speed of a runner increases more power is generated at the Achilles tendon. This enables a higher leg turn over (cadence) while maintaining a decent stride length. You will see this in the faster runners who appear to still be running strongly and smoothly at the end of a race. Using a lighter and more flexible shoe as in the cross country waffles and racing shoes, helps maintain the strength required by the Achilles tendon.

Kids and teenagers should be using waffles and racing shoes for cross country. Not only does it give them a boost in confidence to feeling 'fast', but it can actually improve their performances. The only time that these shoes should be avoided is when there is heel pain or Achilles injuries and the foot needs more protection. If your child has injuries, then it is worth talking to one of the intraining staff members for more advice about the shoes, or seeing an intraining podiatrist / physiotherapist who can help manage the injury with the correct racing shoe selection.

### CHOOSING a Cross country shoe:

Waffles are the most common Cross country shoes. These have small rubber studs to increase the traction on grassy surfaces. Most primary school children will use waffles, as they are more affordable for growing feet and come in smaller sizes. Racing shoes come in many different weights and fits. They are more versatile to be used for road racing, and offer more cushioning. This is particularly useful for the older primary and secondary students whose feet have grown or who suffer from foot and ankle niggles.

By Margot Manning  
intraining Podiatrist and Coach



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