

# Correcting foot pronation (collapsing arches) with corrective exercise

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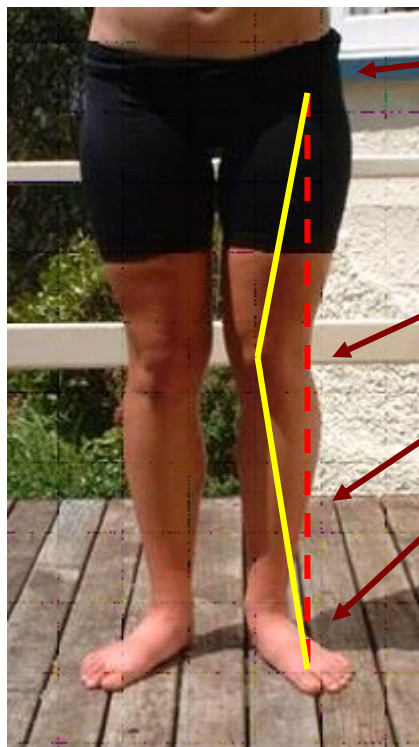
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Foot pronation is the most common foot problem affecting sports people and the population in general. As the foot and calf muscles tire, the arch of the foot steadily drops and the feet poke out like a duck's.

The athlete may suffer excessively tired feet, loss of impact absorption, foot cramps, ankle pain and swelling, blisters and calluses, ankle tendonitis, heel spurs, shin splints and stress fractures. Furthermore, as the foot collapses, the knee caps squint inwards with the altered mechanics causing knee and hip pain. This alteration of foot mechanics may even be a factor in low back and even neck pain and headache!

Instead of there being a straight plumb line from hip to foot, the legs present an angulated line of pull. These poor biomechanics set the athlete up for a raft of performance limiting injuries. For a start, the knee caps "squint" at each other and the result can be chronic pain under the knee cap. This is commonly called "runner's knee".



○ Hip pain and pelvic and low back strain (note the protruding tummy), including premature arthritic degeneration

○ Knee pain, including premature arthritic degeneration

○ Shin splints, calf strain, stress fractures of the tibia and fibula

○ Ankle and foot pain, stress fractures, heel spurs, plantar fasciitis, Achilles tendon injuries, calluses and bunions

When the foot collapses the knees consequently squint inwards and the pelvis must compensate by rotating forwards. This gives the appearance of a small pot belly and sway back. Further up, the shoulders must become stooped and the chest flattened. The neck becomes kinked. Standing height may be reduced by 1-2cm.

Arthritis affecting the knees, hips and spine; back pain, neck pain, headaches and shallow breathing may all be the consequence of poor foot posture.



By correcting the feet through exercises that strengthen the muscles that dynamically hold up the arches of the feet, the realignment of the muscles, tendons and bones from hip to the ball of the foot is spectacular.

Note carefully that the muscles and tendons that produce the power to drive the athletic body forwards (or in any other direction, for that matter) are perfectly aligned from the hip joint to the point of drive just to the outside of the big toe.

This correction rotates the pelvis backwards to assume a healthy neutral postural position. The tummy button lifts slightly, the tummy flattens and the low back has a reduced sway, thus alleviating lumbar strain. Furthermore, the spine straightens, reducing postural slumping. The chest lifts and the neck flattens. Overall standing height increases.

By correcting foot posture, the young female athlete in these photos is now highly resistant to premature fatigue and injury.

Overall athletic performance is improved due to improved training and competition work capacity and efficient transmission of power.

This correction is made through special foot exercises and the judicious use of special **Formthotics** inner soles which can be purchased via my online mail order store. Fit **Formthotics Active** soles into training shoes and everyday footwear. Fit **Formthotics Low Profile** soles into tighter, low cut competition and training shoes like cycling shoes, court shoes and golf shoes. **Do not neglect** the essential foot exercises that follow:

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## Video Presentation of foot exercises

For the video presentation of the exercises that follow, [go here](#)



**Have you got the latest version of this free E-Publication about correcting foot pronation?**

**Last updated: May. 28, 07**

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## A healthy foot

Moderate musculature of the arch, no signs of excessive vascularisation (proliferation of blood vessels) of the arch muscle and no areas of excessive callus anywhere on the foot and toes.



## The Tibialus Posterior Muscle and tendon

Originates deep in the lower calf muscle and

Inserts on the bone at the very top of the arch.

Its prime purpose is to maintain the arch during dynamic activity like running. When it tires, the foot's arch progressively drops and the muscle may even begin to pull at the bony origin (shin splints) and huge strain goes on the small muscles of the foot. These may also fail, causing plantar fasciitis, heel spurs, excessive callousing, bunyans and other foot injuries.



## The solution is to strengthen the Tibialus Posterior with this special exercise:

### Step one

Stand with feet exactly in line, knees slightly bent and with the kneecaps facing straight ahead.

Place the weight on the outer borders and towards to small toe, so that the arch of the foot lifts slightly.

It helps to do this exercise in front of a mirror and to have a bench or wall to place a finger on to assist initially with balance.



### Step Two

Without allowing the knees to protrude outwards, rise up onto the toes with the weight progressively coming onto the small toe. You will notice that the arch is lifting.

Do this exercise barefoot on a soft surface like carpet. Shoes, once you have perfected the moves



### Step Three

Raise right up onto your toes like a ballet dancer, except that you roll up and out right over onto your small toes. Keep the knees in. You will notice that the arch curls up with the skin wrinkling. Lower under control and then repeat.



You may find that your calf muscles cramp quickly, indicating just how weak the tibialis posterior muscles are! During a 40 minute run, each foot may strike the ground 5,000 times, so how many times do you think you should be able to do a simple calf raise? Start with 20-50 per day and build it up carefully from there.

### **Beach walking**

A further essential exercise is to walk barefoot on a sandy beach 1-2 times per week. Stride straight uphill from the water line to the dunes, allowing the soft sand to spread the toes and forefoot and to stretch the tendons in the foot and back of the ankle. You do not need to run. Take care to keep the feet in line with the kneecaps and not to splay outwards. Repeat several times until the feet and ankles are feeling quite fatigued.

As the weeks and months pass by and you practice these exercises, you should notice an improvement in foot posture, less fatigue and pain and you should notice the return of that “spring” in your stride!

### **Further reading**

Training for a Marathon by Gary Moller and Lorraine Moller.  
[Download this comprehensive training guide here.](#)



### **Ask Gary a Question**

If you have a question about a health, injury or training matter, write to [Gary Moller here](#) (A modest fee may apply).



Ensure foot stability and comfort with custom-fitted Formthotics inner soles – purchase them through the Myotec Online Mail Order Store [www.myotec.co.nz](http://www.myotec.co.nz)

For information about injury prevention and treatment and much, much more, [go here](#).

