



# FootScope

A foot health message from  
Proactive Podiatry

## SPORTS SERIES - FOCUS ON RUNNING

# Barefoot Running



Barefoot running has become very popular lately, but there is controversy over the benefits vs drawbacks of this activity. Fans of the sport praise 'natural running', saying that humans have been running barefoot for hundreds of thousands of years and that modern-day equipment like running shoes leads to more injuries. People who are against barefoot running say we aren't accustomed to getting around without the support and cushioning provided by running shoes anymore, so injuries still happen when running barefoot, just in different forms. The natural running style forces runners to strike the ground in a forefoot-first pattern, while running shoes promote a heel-first pattern. The main difference here is that shoe-wearing runners are more likely to suffer heel injuries, and barefoot runners suffer more injuries to the toes and the bones of the feet. Most popular sports shoe manufacturers have now produced a barefoot running 'shoe', sometimes looking like a glove for the feet, with a rubber sole to provide a layer of protection between the bottom of the feet and the ground. Below are some of the injuries common to barefoot runners.

### STRESS FRACTURE

- **Cause:** a stress fracture is an overuse injury caused by prolonged pressure on the bone. For runners, stress fractures usually occur in the feet or shins. Stress fractures can affect all runners, however studies have shown that they are more common in barefoot runners due to the increased pressure placed on the bones of the feet at ground strike.
- **Treatment:** always follow the RICE protocol — Rest, Ice, Compression, Elevation — stop running, place an ice pack on the injured area and wrap it tightly with a bandage to reduce swelling, try to lift the leg so that the foot is above waist height. Seek medical attention immediately to assess the severity of the fracture. These injuries usually heal well with proper medical treatment.

- **Prevention:** A proper warm-up is crucial to the prevention of stress fractures. The body needs time to adjust to new activity, particularly where sustained pressure and impact is involved. A full warm-up and cool-down before and after running sessions can go a long way towards preventing these sorts of injuries.

## ANKLE SPRAIN

- **Cause:** while ankle sprains are a common injury amongst all runners, barefoot runners have an increased risk of a sprained ankle due to the lack of support provided by running shoes.
- **Treatment:** always follow the RICE protocol — Rest, Ice, Compression, Elevation — stop running, place an ice pack on the ankle and wrap it tightly with a bandage to reduce swelling, try to lift the ankle so that it is above waist height.
- **Prevention:** strapping to help stabilise and support the joint, and complete rehabilitation of any existing ankle sprain as most of these injuries occur on already injured ankles.

## SHIN SPLINTS

- **Cause:** shin splints are a common injury across all runners, however studies have shown that barefoot runners are at increased risk of shin and calf pain.
- **Treatment:** rest and ice will relieve immediate discomfort. Ease back into running gradually to give the muscle and tendon time to heal.
- **Prevention:** stretching exercises can be effective to better prepare the tendon for high-impact activity. Also try varying terrain so that some training sessions are on surfaces that provide a higher level of cushioning, such as grass or sand.

## ACHILLES TENDONITIS

- **Cause:** inflammation of the Achilles tendon due to overuse and/or excessive rolling of the foot, which forces the tendon out of alignment. For barefoot runners, the increased pressure of uncushioned-impact, combined with lack of a supportive shoe, mean that the Achilles and the muscles supporting the ankles have to work significantly harder to keep the ankle stable. This can lead to serious wear and tear, with increased likelihood for injuries such as tendonitis.
- **Treatment:** non-steroidal anti-inflammatory drugs to reduce swelling, rest and ice. If the Achilles actually tears, surgery is required immediately.
- **Prevention:** strengthening exercises can significantly reduce the risk of damage to the Achilles tendon.

## WOUNDS AND SKIN INJURIES

- **Cause:** running barefoot leaves the feet exposed to hazards underfoot, making cuts and scrapes a quick route to injury.
- **Treatment:** clean and dress the wound and refrain from barefoot running until the wound has healed to prevent the risk of infection.
- **Prevention:** consider the use of barefoot running shoes to provide some protection between hazards on the ground and your feet.

Studies have shown that the best way to prevent barefoot running injuries is to take up the sport gradually, and under proper instruction in regard to running technique. Correct running form can significantly reduce the risk of injury, particularly in combination with stretching and strengthening exercises to bulk up support for unprotected joints.



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