# **Trainer insoles 'don't prevent running injuries': Review finds that foam inserts offer no protection against stress fractures**

* **The foam inserts are designed to prevent stress fractures or muscles injuries**
* **The team from La Trobe University in Melbourne, Australia, pooled seven studies previously conducted on shock-absorbing insoles**
* **Sports scientists believe less padding encourages a better running style**

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Trendy shock-absorbing insoles do nothing to ward off running injuries, a scientific review has concluded.

The foam inserts, which cost up to £20 a pair, are designed to prevent stress fractures to the leg bones or injuries to the muscles and ligaments.

But a review of all existing evidence, published last night in the British Journal Of Sports Medicine, concluded there was no evidence they could prevent any injury at all.

The Australian review team, from La Trobe University in Melbourne, pooled the findings of seven previous studies, conducted between 1974 and 2006, which each assessed the use of shock-absorbing insoles.

The studies, which assessed inserts made by companies such as Sorbothane, Poron and Spenco, were tested during military training in Britain, the US, and South Africa, as well as on a group of football referees in Denmark.

The review team wrote: ‘Shock-absorbing insoles were not found to be effective in preventing overall injuries, stress fractures or soft-tissue injuries.’

The data from one trial indicated they actually increased the risk, the authors said.

But they found foot orthotics – tailor-made foot supports which tend to made of harder materials - work well to reduce the risk of injury.

In a further 11 studies on foot orthoses, the supports were linked to a 28 per cent reduction in the risk of developing an overall injury and a 41 per cent reduction in the risk of developing a lower limb stress fracture.

But the contoured devices, which are used with the intention of supporting the foot arch and heel, were not found to reduce the risk of developing a soft-tissue injury.

They also did not stave off the risk of tendon or muscle injury or knee and back pain.

Exercise-related injuries are common - with injuries including stress fractures of the shin bone, heel pain, knee pain and Achilles tendinopathy - a condition that causes pain, swelling and stiffness of the Achilles tendon.

Foot orthoses and shock-absorbing insoles are ‘commonly used for the prevention and management of many musculoskeletal disorders of the lower extremity’, the team added.

They added that the findings of the study need to be interpreted with ‘some caution’ as the ‘methodological quality’ of the included trials was generally low.

But they concluded: 'The findings of this systematic review demonstrate that foot orthoses are effective for preventing overall injuries, shin pain and stress fractures of the metatarsals, tibia and femur.

‘Shock-absorbing insoles were not found to be effective in preventing overall injuries.’

It comes after a separate study, published last month by Exeter University, found that running shoes with extra padding are worse for the feet than trainers with minimal cushioning.

Humans evolved to run barefoot – and sports scientists believe less padding encourages a better running style.

Runners using cushioned footwear tend to land on the heel – known as a ‘rearfoot strike’ – while those who are barefoot tend to land on the ball of the foot, a ‘forefoot strike’.

The forefoot is better adapted to cushion the blow.