

# Do Barefoot Science™ Insoles alter Foot Function?

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*Background:* Barefoot Science™ insoles (BSI) are marketed as “reforming gait and reducing injuries”. The manufacturers claim that a graded metatarsal dome is novel and it is said to promote intrinsic foot muscle activity, improve balance and alter the shape of the arch. However, as such there is no evidence to support such claims.

*Aims:* The aim of this study was to investigate the effect of wearing BSI on foot posture and overall balance.

*Methods:* 17 factory workers with no foot pathology were recruited to use these insoles with the shoes issued as a part of their uniform. Baseline data for navicular drop, plantar pressure of the midfoot and sway analysis during quiet standing were recorded. This data was then recollected after 8 weeks of wearing BSI with dome height changed in positive increments every week.

*Results:* After 8 weeks navicular drop significantly reduced ( $p > 0.05$  Left and Right), no significant change in midfoot pressure ( $p = 0.832$  Left,  $p = 0.293$  Right) and sway ( $p = 0.323$  Medial Lateral,  $p = 0.862$  Anterior Posterior)

*Summary/Conclusions:* Using BSI for 8 weeks does alter arch height but has no effect on posture and balance. Further work is warranted in patients with specific foot and ankle conditions.