



Run on tiptoe

HUMANS living millions of years ago were runners, but how did they do it without air-cushioned soles?

Daniel Lieberman at Harvard University and colleagues compared the gait of a in the US and Kenya and found that more than two-thirds of those who grew up running barefoot or had trained themselves to do so as adults ran on their tiptoes, landing on the balls of the feet first. The trend is unusual: 80 per cent of b land heel-first.

The result suggests that our ancestors were c. This may simply reduce pain. In racetrack tests, the team showed that the impact on the foot is seven times as great in d. "It's like someone hitting you on the heel with a hammer three times your body weight," says Lieberman.

This is because the collision force depends on how much mass comes to a dead stop, Lieberman says. The lower leg stops suddenly on impact in addition to part of the foot.

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Tekst 11 Run on tiptoe

De onderstaande woorden zijn uit de tekst verwijderd:

endurance runners, heel-first runners, toe-runners.

- 2p 41 Geef aan waar deze woorden oorspronkelijk in de tekst hebben gestaan.
Noteer het juiste woord achter elke letter op het antwoordblad.
De woorden mogen meerdere malen gebruikt worden.

Bronvermelding

Een opsomming van de in dit examen gebruikte bronnen, zoals teksten en afbeeldingen, is te vinden in het bij dit examen behorende correctievoorschrift, dat na afloop van het examen wordt gepubliceerd.