

Rocker bottom shoes help reduce chronic low back pain

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Credit: Asociación RUVID

Researchers of the Sports Physiotherapy master's degree at Valencia's CEU Cardenal Herrera university report that unstable rocker shoes improve the strength of back muscles in order to maintain balance and stability when walking. This muscular strengthening contributes to

reducing low-intensity chronic low back pain, which can be disabling for those who suffer it. The results of this new study, headed by CEU UCH teachers Juan Francisco Lisón and Pablo Salvador, co-authors of the first international study on this matter, have been published in the Q1 edition of scientific magazine *Clinical Rehabilitation*.

Researcher Pablo Salvador says, "Patients with chronic low back [pain](#) are usually advised to perform exercises to strengthen the muscles in their backs, which improves stability of the spine in the lower back area, although it is always hard to make sure they comply with this type of exercise. What this new study shows is that the use of unstable shoes for several hours during a patient's day-to-day life, without any other specific exercises, effectively contributes to the muscular strengthening of the back and improves the degree of curvature of the spine in the lumbar area, thus helping to reduce chronic pain."

Forty patients with low-intensity chronic low back pain took part in the CEU UCH's study. Half of them wore this type of shoes with curved soles for four weeks, and the other half used their normal shoes. Researchers evaluated the degree of activation of the back muscles that stabilise the lumbar area with electromyography, specifically, the rectus abdominis, external oblique and internal oblique of the abdomen, as well as the erector spinae.

The research team also evaluated the curvature degree of the lower spine while wearing rocker bottom shoes compared to shoes with flat soles. These physical results were then contrasted with the degree of pain and disability reported by the patients, using via the Roland-Morris Disability questionnaire.

CEU UCH teacher Pablo Salvador says that the results of their latest work, now published in *Clinical Rehabilitation*, "have allowed us to confirm that everyday use of rocker bottom shoes for several hours a day

reduces the disability suffered by patients with chronic [low back pain](#). The next step is to increase the number of participants and confirm these effects over a longer period of time in future studies within this same line of research of the Master of Sports Physiotherapy degree of the CEU UCH."

More information: Juan Francisco Lisón et al. Effects and underlying mechanisms of unstable shoes on chronic low back pain: a randomized controlled trial, *Clinical Rehabilitation* (2018). [DOI: 10.1177/0269215517753972](#)

Provided by Asociacion RUVID

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