

Researchers Question Racket Science

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A tennis racket accessory designed to prevent 'tennis elbow' does not work and serves no scientific purpose, University of Birmingham research reveals.

Current top ten players Rafael Nadal and Andy Roddick both attach anti-vibration string dampers to their rackets - a plastic device invented to reduce racket frame vibration to the forearm in order to avoid injuries. But during a season when tennis equipment sales are particularly buoyant, Birmingham's study shows all dampers really do is alter the sound of the racket and provide players with a 'lucky' charm.

A study by Dr Francois-Xavier Li and Dr Mike Jenkins reports there is no difference between rackets with and rackets without dampers when it comes to reducing frame vibration transfer to the forearm. Their research concludes that dampers are too small in comparison to the tennis racket to absorb the vibrations.

"String dampers do not reduce the amount of racket frame vibration received in the forearm. They remain a popular accessory among tennis players because of their acoustic effects and psychological support rather than any mechanical advantage," said Dr Li, of the university's School of Sport and Exercise Sciences. Dampers act on the racket strings like a light touch of a finger affects the high frequency vibration of a guitar string. The low damaging vibrations pass through, but the high audible though harmless vibrations are stopped.

Invented in 1960 by legendary tennis ace René Lacoste, anti-vibration string dampers are a popular part of tennis kit. Andre Agassi famously used rubber bands as a string damper on his racket during his Wimbledon reign while today the likes of Lleyton Hewitt and Martina Hingis are also fans of the damper, along with thousands of tennis players at all levels across the world.

Although there is no scientific basis to support the use of the device, Dr Li is quick not to dismiss the psychological importance of the damper. He said:

"Some professional tennis players may use lucky devices to increase their confidence. However, the colour and the shape of the device, as well as the manufacturer's logo may be more important than any of its claimed mechanical properties."

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Media Information: Anna Dingley, University of Birmingham Press Officer: 0121 4158134/07769 952763, email a.j.dingley@bham.ac.uk

Ben Hill, University of Birmingham Press Officer: 0121 4145134/07789 921165, email benjamin.r.hill@bham.ac.uk

www.bham.ac.uk (<http://www.bham.ac.uk/>)

Notes to Editor

String vibration dampers do not reduce racket frame vibration transfer to the forearm was published in the Journal of Sports Sciences in 2004 by Dr Francois-Xavier Li, D Fewtrell and Dr Mike Jenkins

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