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Performance enhancer: Sports compression stockings a winning advantage

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A scientist from James Cook University in Australia has found sports compression stockings are so effective they might be considered performance enhancers for soccer players.

Associate Professor Anthony Leicht from JCU's Sport and Exercise Science discipline took part in a study that measured the fatigue levels of female soccer players with and without the tight-fitting stockings, which are designed to apply pressure to the lower legs and enhance blood circulation.

"We found that compression stocking use during an amateur female soccer match positively influenced agility and lower limb muscular endurance following the match," he said.

"The benefits were clearly higher with the compression stockings than with regular socks. They confirmed that there is a protective effect with compression stockings that may be crucial for performance in soccer matches."

Dr. Leicht said the study showed that the stockings were comfortable and unlikely to impede players during a match, and while the extent of their benefits needs to be further investigated, they could be considered a potential performance enhancer.

He said the finding that the stockings increased calf muscle endurance was important as soccer players often covered more than 10km per

match, with more than 2.5 km of that at high speeds of more than 14kmh. In addition to performing multiple changes of direction, and with constant acceleration and deceleration.

"Soccer is a demanding sport in terms of fatigue-related muscle damage that can significantly influence match performance. Anything that can prevent or delay this damage and/or change in performance could be an advantage," he said.

Dr. Leicht said compression stockings may have other beneficial effects too.

"Fifty-seven percent of on-field injuries during soccer matches are related to fatigue and compression stockings may provide a simple method of injury prevention."

He said similar studies had been done with male soccer players but the current findings were unique because of the methods used and the sex differences in match performance and match-induced muscle damage.

"The study provides evidence of the practical benefits of compression stockings that may assist specifically female athletes" he said.

More information: Larissa Neves Pavin et al, Can compression stockings reduce the degree of soccer match-induced fatigue in females?, *Research in Sports Medicine* (2018). DOI: 10.1080/15438627.2018.1527335

Provided by James Cook University

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