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Effect of New Zealand blackcurrant on performance during the running based anaerobic sprint test in elite and non-elite football players

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New Zealand blackcurrant (NZBC) extract reduced slowing of the maximal 15 m sprint speed during the Loughborough intermittent shuttle test. We examined the effect of NZBC extract on performance of the running based anaerobic sprint test (RAST, 6x35 sprints with 10 seconds passive recovery) in elite and non-elite football players. Fifteen non-elite (University team) (age: 20±1 years, height: 174±19 cm and body mass: 80±13 kg) and nine elite players (English professional club youth team) (age: 17±0 years, height: 178±8 cm, body mass: 69±9 kg, mean±SD) participated in three testing sessions. Prior to the RASTs, participants consumed 2 capsules of NZBC extract (600 mgday-1 CurraNZ™) or placebo (P) (microcrystalline cellulose M102) for 7 days (double blind, randomized, cross-over design, wash-out at least 7 days). Ability difference between elite and non-elite players was shown by sprint 1 time. In the placebo condition, elite players had faster times for sprint 1 (5.00±0.05 s) than non-elite (5.42±0.08 s) ($P<0.01$). In elite players, NZBC extract reduced slowing of the sprint 5 time (P: 0.56±0.22 s; NZBC: 0.35±0.25, $P=0.015$) and this was not observed in non-elite players (P: 0.57±0.48 s; NZBC: 0.56±0.33, $P=0.90$). Fatigue index, expressed as a % change in maximum power to the slowest sprint, was overall lower by NZBC extract (P: 29.5±11.95; NZBC: 26.0±12.0%, $P=0.043$) with 12 participants (5 elite) experiencing less fatigue. New Zealand blackcurrant extract seems to benefit repeated sprint performance more in elite than non-elite football players.

Biography

Mark Willems has completed his PhD in 1994 from the Vrije Universiteit in Amsterdam, Netherlands. Since 2003, he has been working at the University of Chichester, UK. His current research interests focused on eccentric-contraction induced muscle injury, muscle fatigue and sports nutrition. He is on the Advisory Editorial Board of the *European Journal of Applied Physiology,* Editorial Board of the *European Journal of Sport Science* and the *Journal of Sports Medicine.* He is a Fellow of the European College of Sports Science.

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