



ANTHOCYANIN-RICH SUPPLEMENTATION: EMERGING POTENTIAL FOR SPORT AND EXERCISE NUTRITION

Health Currency LTD

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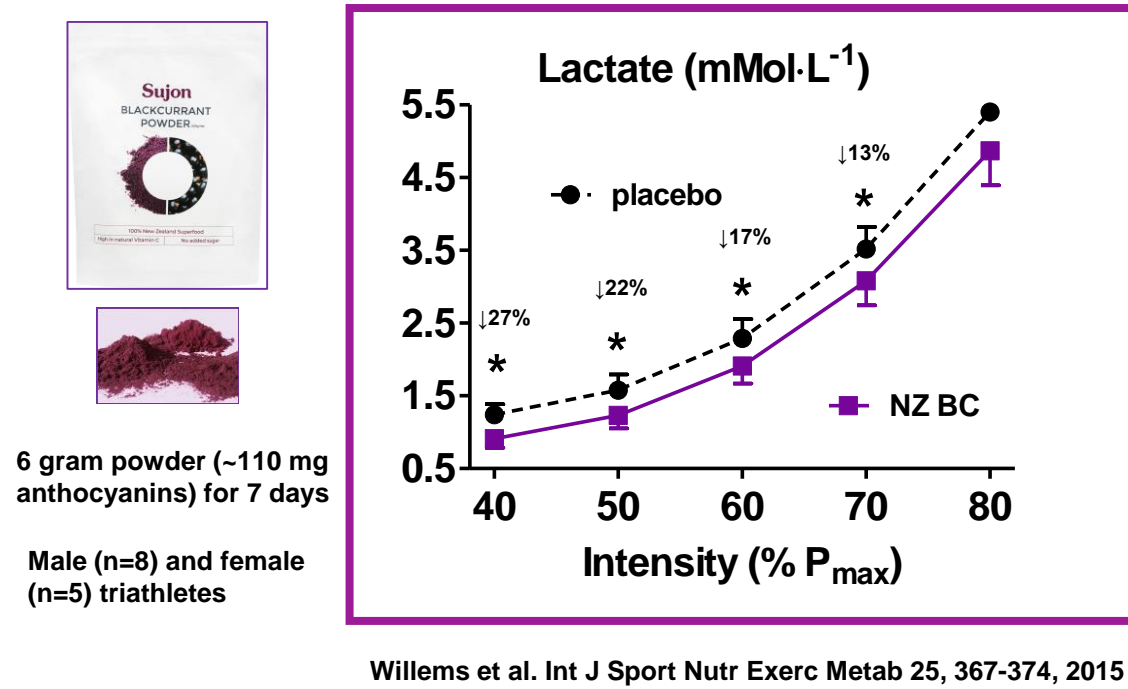
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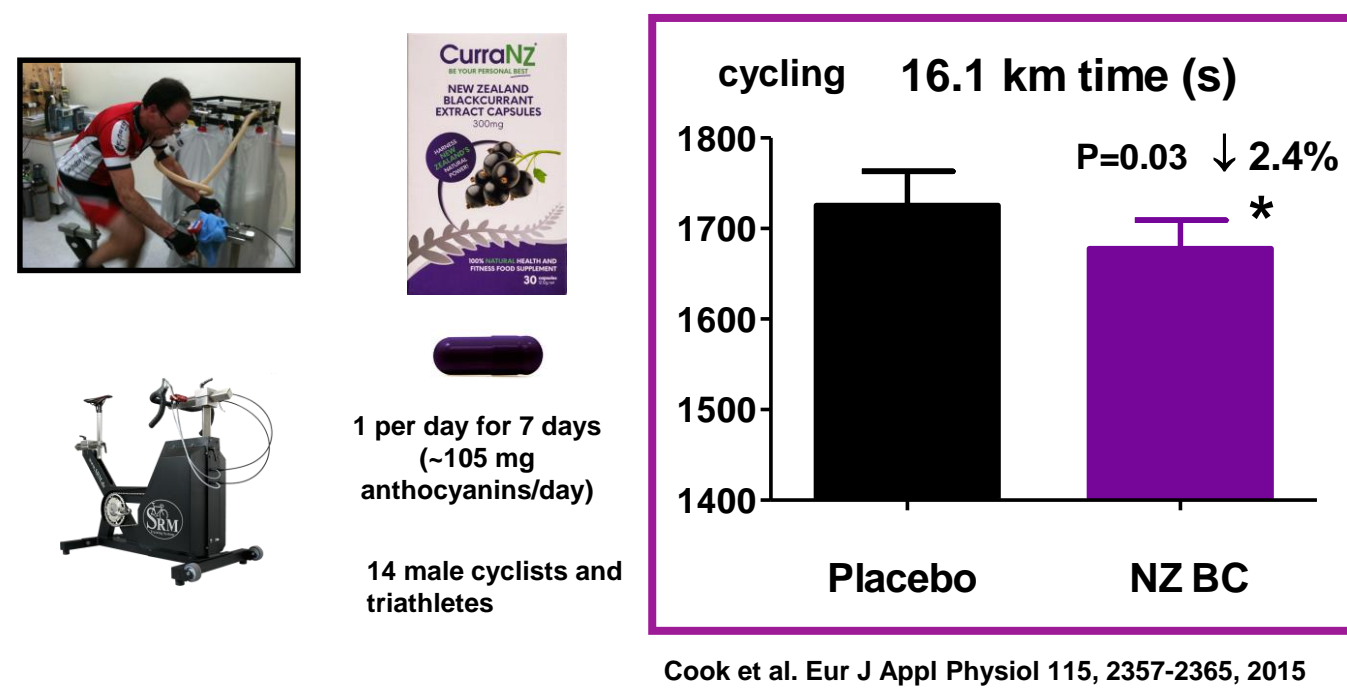


INTRODUCTION

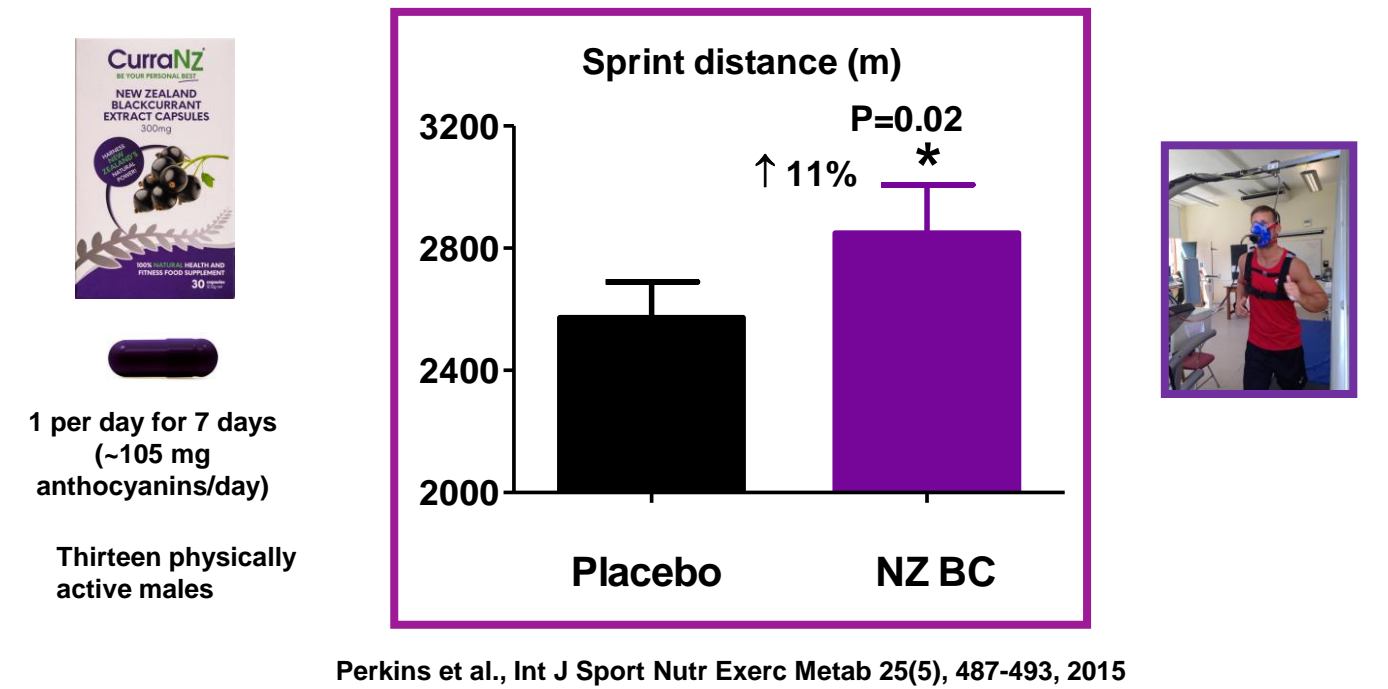
Intake of dietary supplements by athletes and recreationally active people is primarily aimed to enhance exercise performance, physical training adaptations and post-exercise recovery. The beneficial effects of the *single ingredient* supplements caffeine, nitrate, creatine, beta-alanine, and bicarbonate are recognized for specific exercise conditions. Evidence is emerging for the application in sport and exercise of the intake of *multi-ingredient* functional foods, e.g. cherries and berries. We present some observations from our studies on the effects of anthocyanin-rich New Zealand blackcurrant powder and extract that have implications for sport and exercise nutrition.



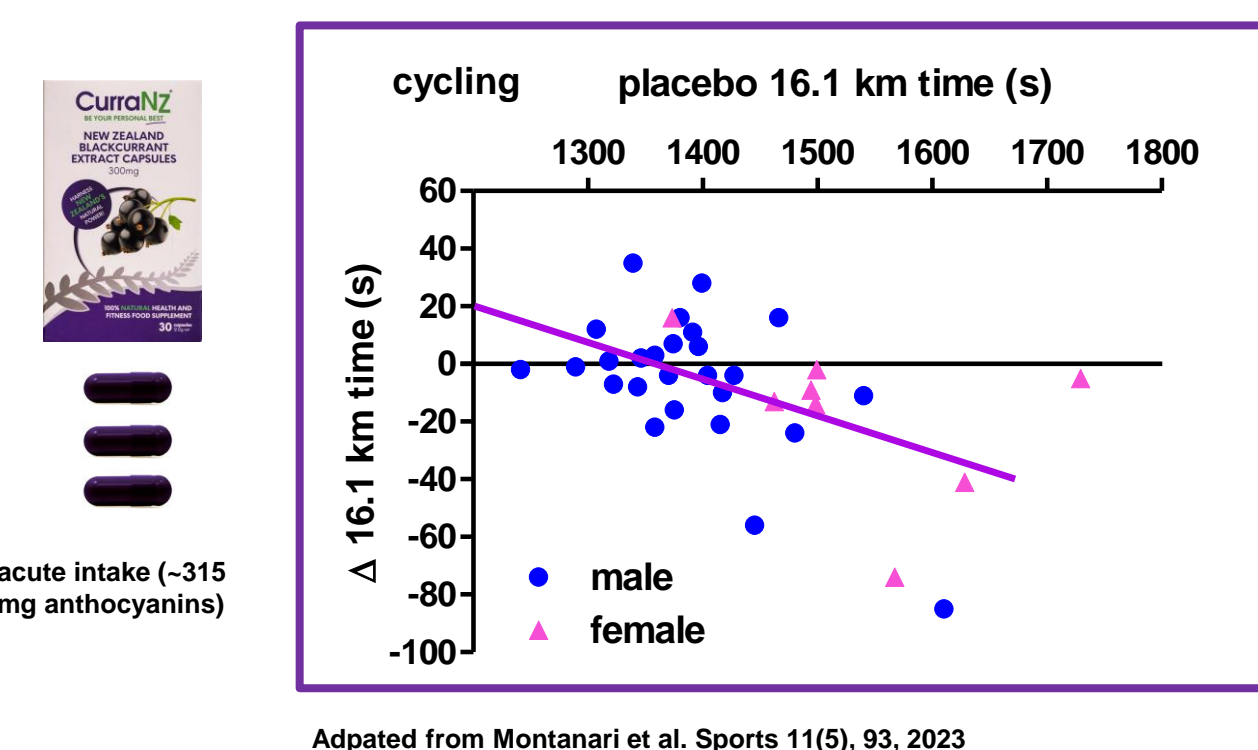
New Zealand blackcurrant powder resulted in a shift of the cycling intensity lactate curve



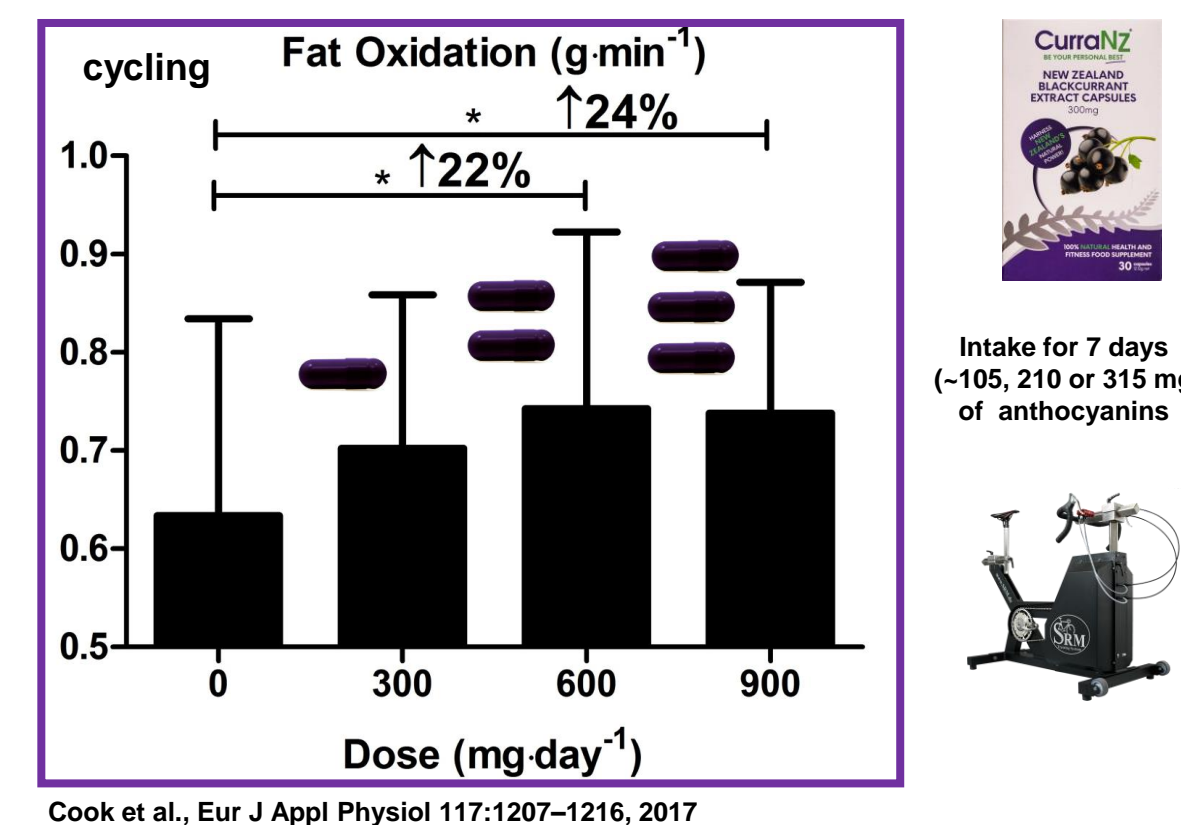
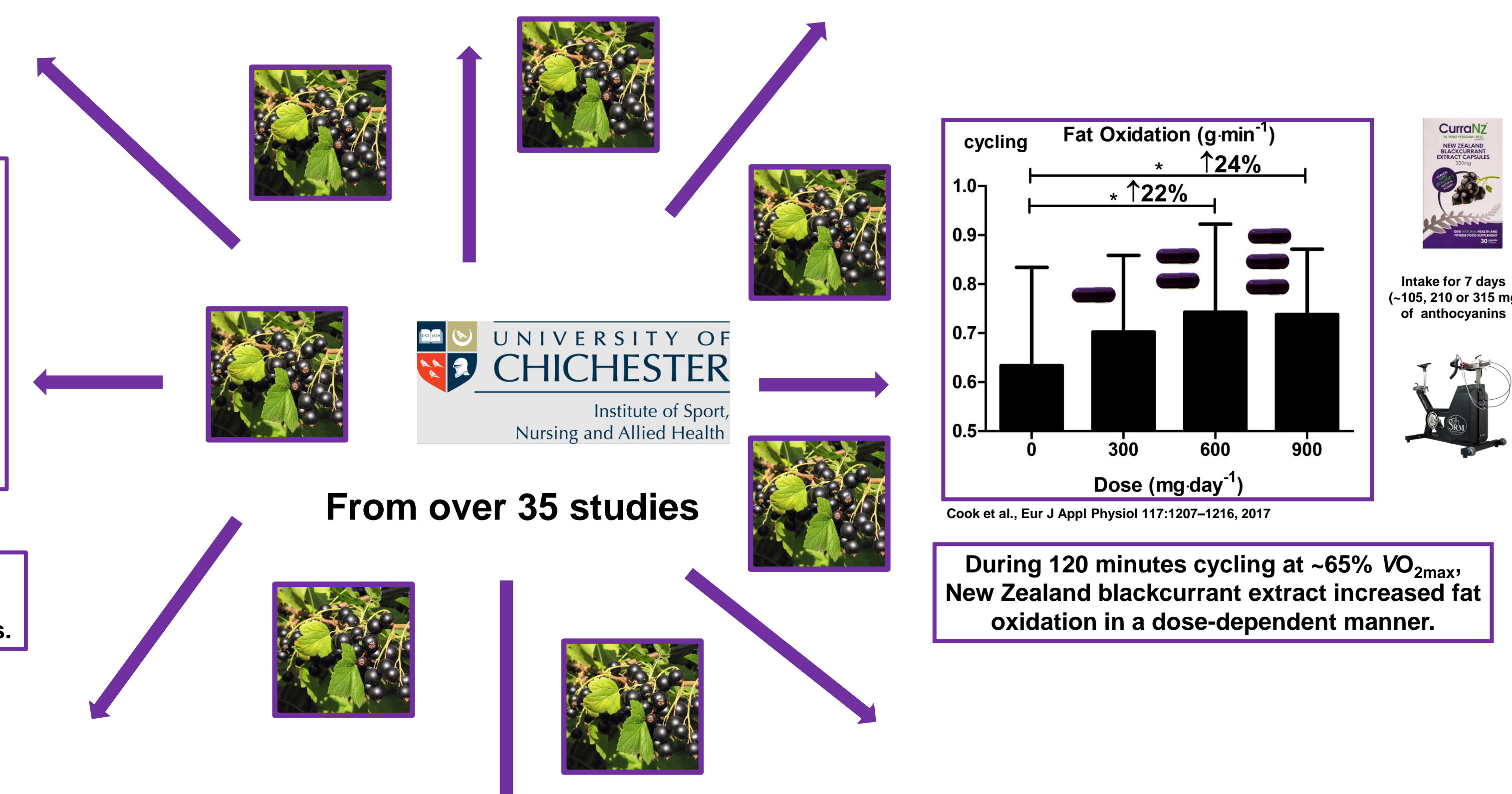
New Zealand blackcurrant extract enhanced 16.1 km cycling time trial performance



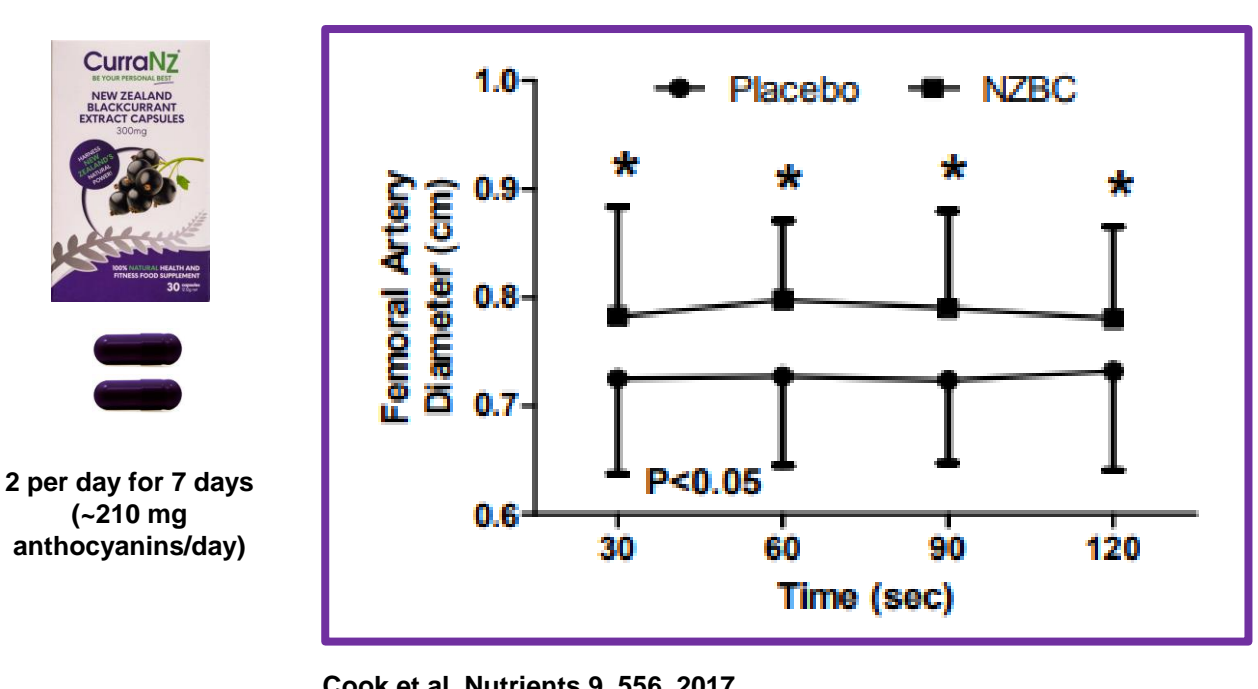
New Zealand blackcurrant extract improved distance covered during intermittent high-intensity running



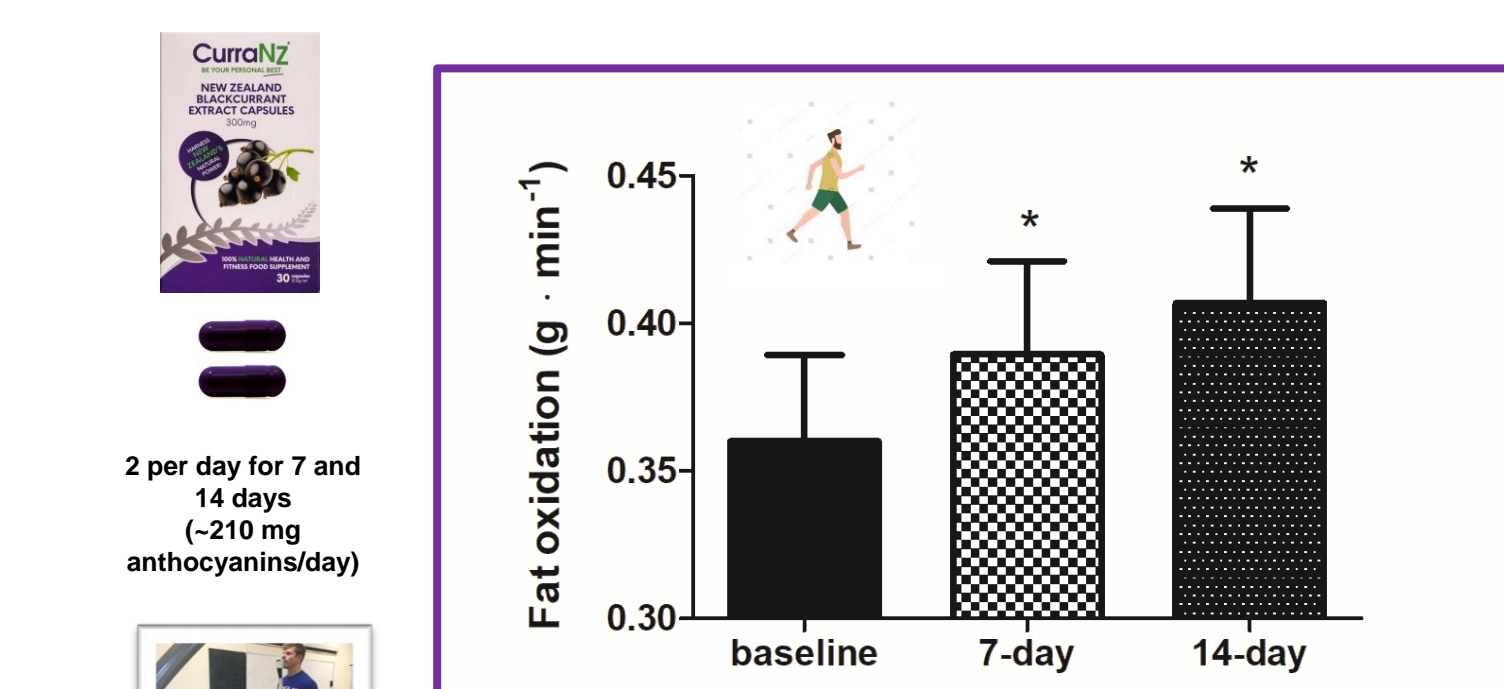
Acute intake 900 mg of New Zealand blackcurrant extract is beneficial for enhancing performance in male cyclists with a lower fitness level and in females.



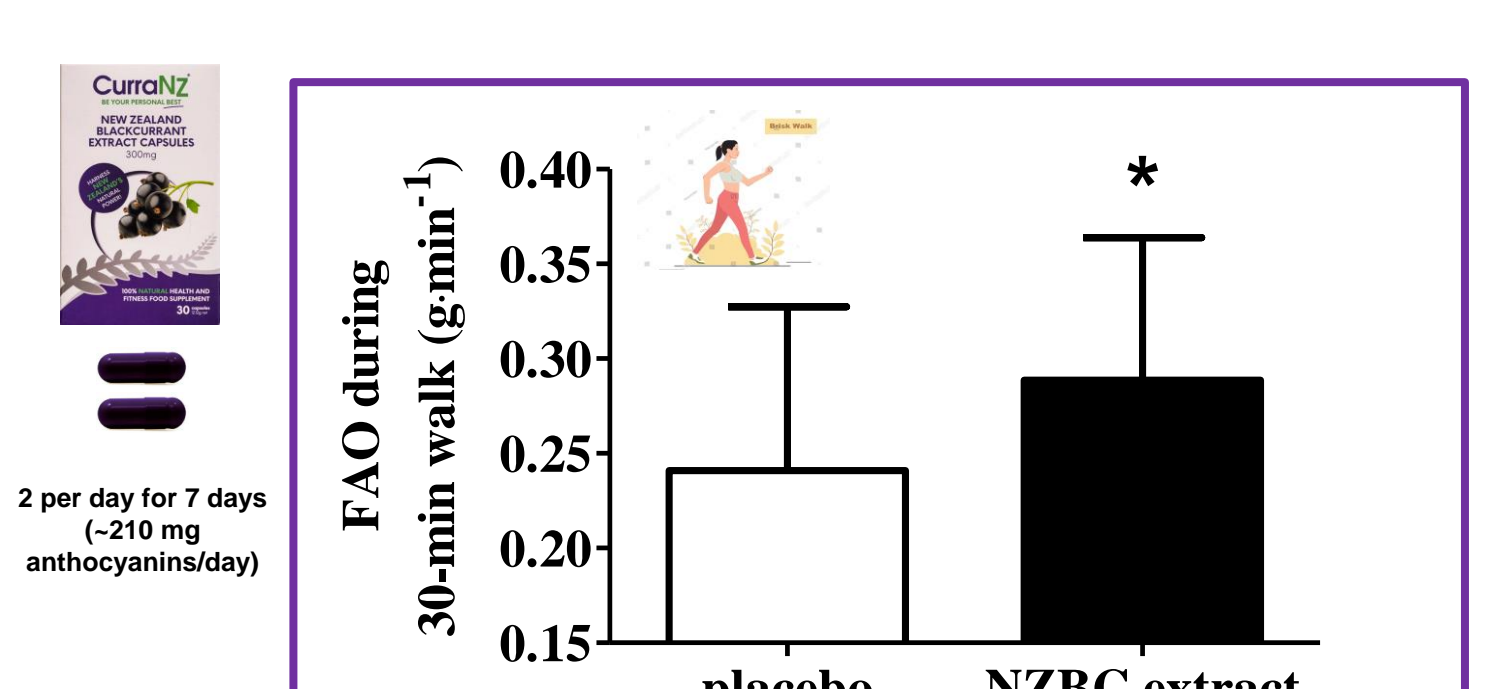
During 120 minutes cycling at ~65% VO_{2max} New Zealand blackcurrant extract increased fat oxidation in a dose-dependent manner.



New Zealand blackcurrant extract increased the femoral artery diameter during a 2-min submaximal (30%) isometric contraction.



New Zealand blackcurrant extract enhanced fat oxidation during 30-min treadmill walking at 5-MET at 7 days (+11%) and 14 days (+17%) in recreationally active males



New Zealand blackcurrant extract enhanced fat oxidation during 30-min treadmill walking at 5-MET at 7 days (+25%) in recreationally active females

CONCLUSIONS

Observations with anthocyanin-rich New Zealand blackcurrant powder and extract have provided meaningful observations for athletes and physically-active individuals. There are still many unanswered questions related to the optimal dosing strategies and specific mechanisms for the physiological, cardiovascular, metabolic and performance effects. However, New Zealand blackcurrant studies have provided a strong potential for anthocyanin supplementation in sport and exercise nutrition.

ACKNOWLEDGEMENTS

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