EXERFLY | JOHN CRONIN Strength & Conditioning

Improve Your Running Economy

Flywheel vs Traditional Resistance Training

Background

Running economy simply put refers to an individual’s ability to use oxygen efficiently and is typically measured via gas analysis, and is thought critical to performance particularly in endurance events. Strength and conditioning can play an important part in improving running economy through improving muscle strength and stiffness, and reducing injury risk.

Enter, Flywheel

Eccentric strength is thought a major contributor to muscle stiffness, flywheel resistance training (FRT) therefore might be an ideal training method given it’s eccentric emphasis, this contention providing the focus of this research (Weng et al., 2022).

What they found

FRT with comparable training volume to traditional resistance training (TRT) proved to be more effective ($p < 0.05$) in improving a swag of strength/power measures as well as the high intensity (85% VO2 max) running economy of well-trained distance runners.

Take home messages

FRT appears better placed to improve strength/power and running economy of elite middle distance runners, as compared to TRT methods.

Weng, Y., Liu, H., Ruan, T., Yang, W., Wei, H., Cui, Y., ... & Li, Q. (2022). Effects of flywheel resistance training on the running economy of young male well-trained distance runners. Frontiers in Physiology, 13, 2549.