



RESEARCH TO
PRACTICE 2018

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BRISBANE, QUEENSLAND

PROTEIN: THE WHY TO ENHANCE MUSCLE STRENGTH AND HYPERTROPHY WITH CONCURRENT TRAINING?

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The concurrent training 'interference effect' in strength and power adaptations has gained much attention since its discovery in the 1980's. Somewhat surprisingly, studies that have investigated exercise adaptation responses with concurrent training have neglected the established anabolic effects of protein ingestion to potentially negate this interference. Evidence from acute studies show protein ingestion can stimulate muscle growth responses following a single session of concurrent resistance and endurance exercise to levels comparable with resistance exercise. However, this hypothesis has yet to be tested over the course of longer periodised training programs.

Recent theoretical recommendations from existing literature focusing on concurrent training variables to prevent interferences to strength adaptations have also indicated that maximal muscle strength and hypertrophy responses with concurrent training can be achieved through the implementation of appropriate recovery periods between exercise sessions. Lengthening the recovery time or performing individual modes of exercise on a separate day's may alleviate residual fatigue although a clear consensus to the optimal recovery time between concurrent training sessions is yet to be established.

The presentation will focus on the interaction of protein ingestion with concurrent training to modulate exercise adaptation responses and improve both athletic performance and general health and wellbeing. The capacity for recovery time between concurrent exercise sessions to alter muscle strength and hypertrophy responses will also be a key point of discussion. This presentation will feature new results from a recently completed study that compared changes in lean body, one-repetition maximum strength, muscular power and muscle architectural changes between 12-weeks of either resistance or endurance exercise performed in isolation three days per week, and concurrent resistance and endurance exercise undertaken six days per week, with a combined 'high' protein diet.

Abstract number: 044
Session: The Conundrums of Concurrent Training
Date: Thursday, 29 March 2018
Time: 1:30pm – 3:00pm
Co-Presenters: Dr Vernon Coffey; Dr Donny Camera; Dr Jonathan Bartlett
Panel Practitioner: Mr Ryan Timmins
Session Chairperson: Dr Stuart Cormack