



RESEARCH TO  
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## MANIPULATING MACRONUTRIENTS AND EXERCISE TIMING TO IMPROVE METABOLIC HEALTH

**Dr Jonathan Little**

The healthy metabolic state is characterised by an efficient ability to transition between lipid and carbohydrate oxidation in response to nutritional and physiological cues. This capacity to adapt fuel oxidation to fuel availability is known as metabolic flexibility, which plays an important role in substrate partitioning and glucose control. Endurance athletes and healthy individuals typically have high metabolic flexibility whereas individuals with insulin resistance and type 2 diabetes are metabolically inflexible. In people with impaired metabolic flexibility, it may be possible to manipulate fuel availability and exercise timing in order to optimally improve glucose control and metabolic health. In this session attendees will gain a deeper understanding of metabolic flexibility and apply this concept to explore the latest research and theoretical concepts highlighting how manipulating carbohydrate intake and strategically timing exercise around meals can benefit individuals with, and at risk for, type 2 diabetes.

**Abstract number:** 028  
**Session:** Flexing Your Metabolic Muscle: Exercise Prescription for Metabolic Flexibility  
**Date:** Wednesday, 28 March 2018  
**Time:** 3:30pm – 5:00pm  
**Co-Presenters:** Dr Jonathan Little; Prof David Bishop; Dr Andy Philp  
**Panel Practitioner:** Mr Daniel Ryan  
**Session Chairperson:** Prof Martin Gibala