

Intermittent fasting for Health, Weight Control & Performance

This plenary symposium will focus on the consequences of periodically abstaining from the intake of key nutrients (i.e., intermittent fasting). All four speakers will contribute to a single interactive discussion that will take a perspective on fasting as a physiological stimulus in itself, as opposed to a passive non-caloric control (i.e., the absence of a stimulus). To facilitate thinking in this way, we will structure the session by imagining how various tissues and organ systems would respond to the ingestion of a hypothetical non-existent nutrient 'medenose' (from the Greek cardinal prefix for zero; i.e. $C_0H_0O_0$). Our journey will begin with the brain, where we will consider how physiological response can be affected by the knowledge (or belief) that nothing of any nutritional value has been ingested. We will then move on to discuss how the gastrointestinal tract and other splanchnic organs (such as the liver) react to extended periods without macronutrient intake. Finally, we will consider the response of peripheral tissues (such as adipose and skeletal muscle) that are the primary sites of disposal for ingested macronutrients, whether for non-oxidative storage or to meet ongoing metabolic requirements despite the complete absence of any exogenous substrate. It is hoped that, by covering all these various tissues and organ systems, we can address a wide-range of practically relevant endpoints: from perceptual and appetitive measures; to systemic and anthropometric markers of cardiometabolic health; through to behavioural and performance outcomes.