Abstract

Energy intake and energy expenditure are two major components of human energy balance. Prolonged positive energy balance, i.e. increased energy intake or/and sedentary behaviours leads to weight gain. Therefore, weight management often incorporates strategies that regulate food intake and promote energy expenditure. Since eating is imperative, finding foods and dietary components that can both suppress appetite and increase diet-induced thermogenesis (post-ingestive effects) is crucial. In addition, it is equally important to consider various external (pre-ingestive) factors that influence food choices and portion selection to prevent weight gain and support weight loss. My presentation will provide an overview of findings from selected previous studies, ranging from the pre-ingestive regulation of intake to the post-ingestive effects of dietary manipulations on energy intake and expenditure.

About the speaker

Dr. Sze-Yen Tan is a dietitian by training. He completed his undergraduate degree at the National University of Malaysia, and his Masters and PhD in nutrition at the University of Wollongong, Australia. His PhD thesis examined the effects of dietary protein and polyunsaturated fat manipulations on body weight management and metabolic health. Upon the completion of his PhD, Dr. Tan was awarded a post-doctoral fellowship by the Ingestive Behavior Research Centre and worked in Professor Richard Mattes’ lab at Purdue University (USA) for 3 years. While his PhD work focused primarily on the diet-induced thermogenesis and metabolic health, his post-doctoral research concentrated on the regulation of human appetite and food intake. After his post-doctoral training, he worked as a Lecturer at the University of South Australia before joining the Clinical Nutrition Research Centre in Singapore as a Senior Research Fellow. He also serves as an Associate Editor for the Nutrition & Dietetics, the official journal of the Dietitians Association of Australia. Dr. Tan’s primary research area is in the regulation of human energy balance especially in the context of obesity prevention and treatment. His research seeks to understand how various dietary and non-dietary factors affect human food intake and energy metabolism, and how these translate into measurable clinical outcomes such as body weight and body composition, blood glucose control, cardiometabolic health, and cognitive function over a longer period of time.