



Exercise as Medicine in Aging and Type 2 Diabetes

by

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Date : August 18, 2016 (Thursday)
Time : 12:15 – 13:30
(sandwich lunch from 12:15 to 12:30; seminar begins at 12:30)
**Venue : Mrs Chen Yang Foo Oi Telemedicine Centre (MTC), 2/F, William MW
Mong Block, LKS Faculty of Medicine Building, 21 Sassoon Road,
Pokfulam, Hong Kong**

Abstract:

Physical inactivity is now considered as one of the most important risk factors for chronic diseases in developed countries, arguably greater than tobacco smoking. Unfortunately, most adults do not meet the minimum requirements of physical activity for health, and this proportion is considerably higher in older individuals. A sedentary lifestyle increases total mortality, doubles the risk of diabetes and obesity, cardiovascular diseases, and substantially increases the risk of high blood pressure, lipid disorders, colon cancer, osteoporosis, depression and anxiety. Moreover, recent studies have confirmed an inverse relationship between physical activity levels and age-related cognitive decline.

In this talk I will present some exercise interventions we conducted in the last few years focusing on both older and individual suffering of T2D. In the elderly population we adopted different approaches based on both multicomponent training and traditional resistance training and observed that both types of training promoted functional mobility but the observed improvement in cognitive function (executive) was mediated by different mechanisms. Regarding the intervention for T2D we aimed at establishing the therapeutic benefits of training targeted at optimising fat metabolism ('Fat-Max') compared to traditional training. It was hypothesised that 'Fat-Max' training will improve responses in Type II diabetics, with respect to metabolic outcomes and cardiovascular health.



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Finally, one major problem we are currently investigating is in respect to long term participation and adherence to physical activity. Ideally, exercise/physical activity should be performed independently (or with minimal supervision after an initial assessment) so becoming a normal component of daily living but still inducing positive adaptations in functional ability and general health status in both healthy and diseased individuals.

Bio-sketch:

Professor Giuseppe De Vito is medically qualified with a post-graduate clinical specialisation in Sports Medicine and a PhD in Human Physiology. Before joining UCD in 2007, he held academic positions in Glasgow (1996-2005; University of Strathclyde) and in Rome at the University Institute of Movement Science (2005-2007). Professor De Vito is an active researcher with more than 100 research papers published to his name, having attracted personally and as a member of collaborative groups, funds from many sources. He is member of the editorial board of the *Journal of Electromyography and Kinesiology*, and an elected member of the Council of the International Society of Electrophysiology and Kinesiology; and Associate editor of the *Journal of Aging and Physical Activity* (the official journal of the International Society for Aging and Physical Activity). In the last 15 years his main research interest has involved muscle function and ageing in health and disease. More, recently his research focused at developing innovative approaches to rehabilitation, particularly in relation to sarcopenia and metabolic health (i.e. in type 2 diabetes), based on exercise combined or not with nutritional interventions. As specialist in Sports Medicine, he has acted as Team Physician to the Italian Olympic Committee, being from 1994 to 1996 the physician/physiologist of the Italian Olympic Sailing team. In the past, he represented Italy in Modern Pentathlon. In 2018, his School will host the annual conference of the European College of Sport Science.

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