

**PHYSICAL ACTIVITY AND FITNESS:  
CHALLENGES AND NEW PERSPECTIVES**



August 24-27, 2016, Kaunas, Lithuania

**Keynote Presentation**

**Effective Exercise Interventions for Obesity and Type 2 Diabetes**

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Lifestyle interventions, with a focus on increased engagement in physical activity and exercise, have often been described as public health's 'best buy' or 'best bet.' In this context, such interventions are potentially potent for the prevention and management of obesity, type 2 diabetes (T2DM) and related chronic conditions. Despite a growing body of evidence to support the physical, social and mental health benefits associated with participation in regular physical activity and exercise, lifestyle practices of many individuals in developing and developed countries are suboptimal. Poor lifestyle characteristics typically include low levels of habitual physical activity, increased sedentary time and a poor diet in combination with overweight and obesity - in short, a recipe for T2DM. High-risk groups for T2DM include the obese, those with high blood pressure, existing heart disease or strong family history of diabetes, Indigenous populations, women with a history of gestational diabetes, and various ethnic groups, including south Asians. A major challenge is to propose the optimal combination of exercise and diet, including modality of exercise and composition of diet, to provide the greatest therapeutic benefit. This presentation explores lifestyle modification, specifically exercise intervention approaches for obesity and T2DM, in the context of various sociocultural and environmental challenges.

**Keywords:** *exercise, overweight and obesity, physical activity, type 2 diabetes*