

Exercise is Medicine in the 21st Century – Emphasis on Efficacy, Dosing, and Safety/Toxicity

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Substantial evidence has established the value of physical activity (PA), exercise training (ET), and overall cardiorespiratory fitness (CRF) in the prevention and treatment of cardiovascular diseases (CVD). The role of low PA as the fundamental cause of obesity will be discussed, as well as CRF explaining the obesity paradox. The potential benefits of PA/ET and increases in CRF to protect against CVD will be discussed, especially the impact on psychological risk factors and stress-induced mortality risk. Most of the evidence indicates that the ET benefits especially occur at low doses, whereas very high levels of ET (e.g. marathons and triathlons) are associated with potential cardiotoxicity. Exercise is Medicine and optimal dosing for this potentially beneficial therapy will be discussed.

Paradoxical Obesity – Is It True or False?

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Substantial evidence indicates that overweight and obesity have been increasing in epidemic proportions in much of Westernized World. Although overweight/obesity is typically categorized by body mass index (BMI), this measurement includes both fat and muscle mass. Also, although overweight/obesity is associated with adverse cardiovascular disease (CVD) risk factors and increased risk of CVD, considerable data, including from Korea, suggests that optimal BMI may be higher than previously reported. Additionally, in cohorts with an established CVD, we and others have demonstrated a powerful "obesity paradox", where especially overweight and at least mildly obese are having a better short- and medium-term prognosis than those with "optimal" BMI. Additionally, considerable data indicates that fitness may be considerably more important than fatness for the prevention and treatment of CVD. Considering the obesity paradox, consideration should be given to optimal BMI and weight loss strategies, which will be discussed.