



RESEARCH TO  
PRACTICE 2018

27-29 MARCH 2018  
BRISBANE, QUEENSLAND

## THE ROLE OF COMPENSATION AND SEDENTARY BEHAVIOUR IN THE PROMOTION OF PHYSICAL ACTIVITY

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There has never been such a lack of necessity to move as there is currently. Physiologically, humans evolved to resist gravity and the ability to engage in locomotor and strength activities (eg, climbing, digging, moving/lifting objects, high-intensity locomotor movement in short bursts, low-intensity locomotor movement for longer periods, and rest to conserve energy, especially in periods of famine) was critical for survival. In spite of over 50 years of research into the benefits of exercise and testing strategies to promote physical activity, less than half the adult population and even fewer children in Australia meet current physical activity guidelines of 30 minutes most days of the week and 60 minutes every day (respectively). This presentation will consider two different issues that may provide insights into underlying reasons for low moderate-to-vigorous activity levels, with a particular focus on youth. Firstly, evidence of compensation (the ActivityStat) will be presented. The ActivityStat proposes that when physical activity increases in one part of the day, there is a compensatory decrease at other, later, periods of the day. The second issue to be considered is the role of sitting or sedentary behaviour and light-intensity physical activity as a potential 'gateway' to higher intensities of activity. Physical activity occurs along a spectrum of intensity, however, few intervention approaches have targeted long-term reductions in sitting time as a means to increase light- and higher intensities of physical activity.

**Abstract number:** 018  
**Session:** Why Can't We Get People Physically Active?  
**Date:** Tuesday, 27 March 2018  
**Time:** 1:30pm – 3:00pm  
**Co-Presenters:** Prof Stuart Biddle; Dr Natasha Schranz; Prof Jo Salmon  
**Panel Practitioner:** Ms Rachelle Foreman  
**Session Chairperson:** Dr David Dunstan