Reducing Prolonged Sitting: Stand Up Victoria

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The Sitting Generation - USA

“Although sedentary behavior may arguably be conceptualized as no more than the other side of the physical activity (exercise) coin, we see it as a class of behaviours that can coexist with and also compete with physical activity (exercise)”

“Thus it may be helpful to explore sedentary behavior as a unique attribute it its own right and to examine what is known about some of its outcomes”

‘Understanding and Influencing Sedentary Behaviour in Adults’

‘Hypothesis generation’
- Epidemiology
  - AusDiab
- Clinical
  - Sedentary Physiology Studies

‘Efficacy/effectiveness’
- Translational
  - Stand Up Australia
- Public Health Policy

VicHealth Fellowship (DD) – 2006-2010
High Television Viewing (2-4+ hrs/d)

- Overweight/ Obesity\(^1\)
- Abnormal glucose\(^2\)
- Dyslipidemia\(^3\)
- Metabolic syndrome\(^3\)

\(^1\) Cameron et al. 2003; \(^2\) Dunstan et al. 2004, \(^3\) Dunstan et al. 2005
Measuring Sedentary Time

Accelerometers

- Small, lightweight, unobtrusive
- Record the time, duration, frequency, & intensity of walking or running movements
How Australian Adults’ Overall Daily Behaviour Patterns Are Distributed Between Physically-Active and Sedentary Time

- Sedentary time: 9.3 hrs/day (60%)
- Light-intensity: 6.5 hrs/day (35%)
- Moderate-vigorous activities: 0.7 hrs/day (5%)

Mix of working & non-working adults aged 30-87 years

Healy et al., 2008
It is also important how sitting time is accumulated!

These two people have exactly the same sedentary time

More breaks from sitting time associated with lower average waist circumference, BMI, triglycerides, and 2-hr plasma glucose

Interrupting Sitting Time – Impact on Health Markers

- **↑** Blood glucose control (Dunstan et al. 2012)
- **↓** Plasma fibrinogen (Howard et al. 2013)
- **↓** Blood Pressure (Larsen et al. 2014)
Translation – The ‘Rise and Recharge’ App
Centre of Research Excellence on Sitting Time & Chronic Disease Prevention

Theme 1  Measurement  Theme 2  Mechanisms  Theme 3  Interventions

Healy  Trost  Kingwell  Dunstan  Salmon  Eakin

Winkler  Lambert  Timperio

+ a number of International & National Associate Investigators
1. Further clarify relationships of sedentary behaviors with multiple health outcomes

2. Improve device-based and self-report measurement of sedentary behaviors

3. Characterise the prevalence and variations of sedentary time in populations

4. Identify the environmental and social determinants of sedentary behaviors

5. Conduct trials of interventions to influence sedentary behaviors

6. Synthesize evidence to inform broad-scale initiatives, regulations and policies
Translation & Dissemination

**Stand Up Australia**
Sedentary behaviour in workers
August 2009

**Heart Foundation**
Sitting less for adults

**Blueprint for an active Australia**
Government and community actions to increase population levels of physical activity and reduce sedentary behaviour in Australia, 2014-2017
Second edition

**The CSIRO and Baker IDI**
Diabetes: Diet and Lifestyle Plan

5 Active living
Sit less, move more, move more often.
SEDENTARY WORK
EVIDENCE ON AN EMERGENT
WORK HEALTH AND SAFETY ISSUE

Report
29 February 2016

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Policy & Practice


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