

# SSEH2290 PROMOTING LIFE LONG PHYSICAL ACTIVITY

## FINAL EXAM NOTES

### Semester 2 2015

#### Lecture 1 – Intro to Course

##### Physical Activity (PA)

- Now recognised as a key health issue
- 2<sup>nd</sup> most important risk factor, after tobacco use that contributes to the burden of disease, morbidity (being diseased) and mortality globally.

##### Australian PA Guidelines (previous edition)

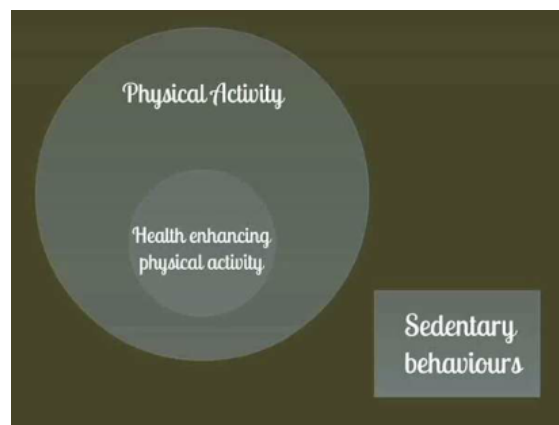
Regular PA can:

- Help prevent:
  - a. heart disease
  - b. stroke
  - c. high blood pressure
  - d. type II diabetes
  - e. some cancers
- Help build and maintain healthy bones, muscles and joints reducing risk of injury
- Promote psychological well-being

Vigorous activity is better than moderate intensity activity. But realistically any PA is better than nothing at all.

Think of movement as an opportunity not an inconvenience.

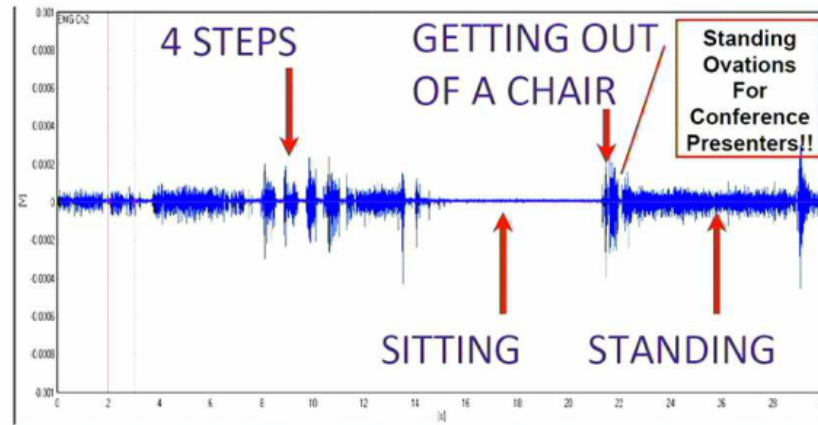
##### Turning our focus to Sedentary Behaviour:



- People used to focus so much getting more PA, but recently more attention has been directed to “Sedentary behaviour” and how this affects health. Maybe this is what we should be worrying about. What can we do about changing people’s sedentary behaviour?

- But how do we classify/differentiate sedentary behaviour from non-sedentary behaviour?
- There has also been research to suggest that ***perhaps the answer is constantly transition between sitting and standing***. Maybe this is the solution as suggestive by the spike in muscle activation.

## Sitting induces muscular inactivity



Source: Hamilton, M.T., Hamilton, D.G. and Zderic, T.W. (2007) *Diabetes*, 56, 2655-2667

## CONDUCTING AN EXPERIMENT

### Causality

3 criteria must be satisfied

1. **Correlation** – Cause and effect must vary together
2. **Time Sequence** – The cause must come before the effect
3. **Non-Spuriousness** – The relationship between cause and effect cannot be explained by any third variable.

*E.g. The number of ice-creams sold does not cause an increase in drownings. The 3<sup>rd</sup> variable is the temperature/summer day. Because when it's warm, more people want ice-cream and more people go swimming.*

### What is an experiment?

- A scientific procedure undertaken to make a discovery, test a hypothesis, or demonstrate a known fact.
- An experiment must have 2 (or more) conditions/variables, but those conditions can be arranged in a number of ways.

### Hypothesis

- **H1 (general hypothesis)** - Sitting requires less energy expenditure than standing
- **H0 (Null hypothesis)** – There is no difference in the energy expenditure between sitting and standing.

### Experimental Method

1. **Independent Groups** = Each participant receives only 1 condition
2. **Repeated Measures** = Each participant receives every condition.

### Results

- Only present a set of results 1 way! Don't present it in both a figure and a table.