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**Walking into older age: findings from the Melbourne Longitudinal Studies on Healthy Ageing (MELSHA)**

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**Content**

- Background
- MELSHA
- Methods
- Results
- Discussion

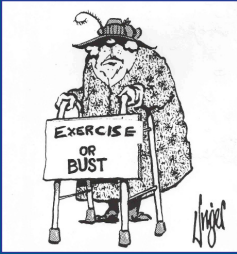


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**Background**

- **Less than half of older Australians do enough physical activity to produce a health benefit**
- **National Physical Activity Recommendations for Older Australians 2009**



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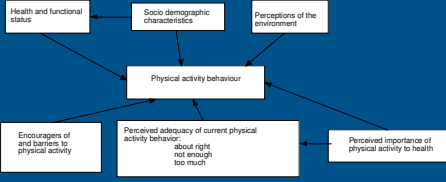
**The Melbourne Longitudinal Studies on Healthy Ageing (MELSHA) Program**

- To discover modifiable determinants of healthy ageing to inform population level and clinical interventions
  - Commenced 1994
  - 1000 people aged 65 years and over living in non-institutional settings in Melbourne
  - Data on demographic, health, psychosocial characteristics

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**Health Action Model**



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**Protective factors for healthy ageing**

- **engaging in social and productive activities**
- **moderate alcohol intake**
- **not smoking**
- **moderate levels of physical activity**

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### Measures

- Walking Difficulty: degree of difficulty the person had in walking 1 km on the flat
- Walking capacity: farthest the person can walk on the flat without stopping for a rest (Human Activity Profile, Fix 1988)
- Self rated health
- Morbidity (McArthur studies)

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### Walking behaviour

- Time spent walking**
  - how many days do you usually go walking?
  - time spent walking (in minutes)
- Combined to produce an independent variable estimating overall time spent walking in a week**
  - walking activity

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### Analyses

#### Structural Equation Modelling

**Stage 1) lagged regression model**  
1994 predictors of 1996 walking difficulty

**Stage 2) cross-lagged panel model**  
Three measurement waves 1998,2000,2002  
Bi-directional pathways

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### Results

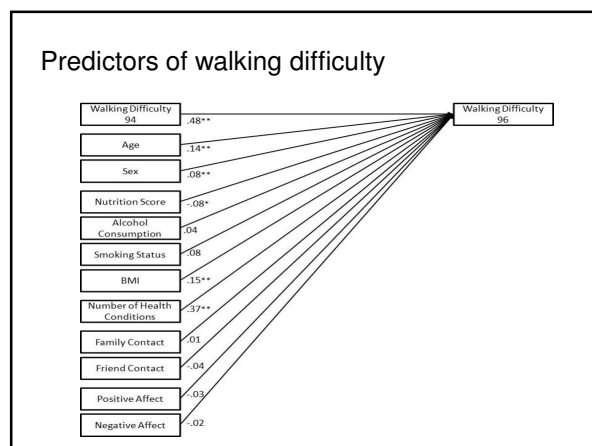
- The average time spent walking tended to decrease as the cohort aged, reflecting the age -related decline at each time point.
- Women and the oldest old (85+ years) walked the least.

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### Walking Activity

Walking behaviour (minutes/week)	Age (yrs)	1998 (n = 646)	2000 (n = 540)	2002 (n = 360)
		Mean (SD)	Mean (SD)	Mean (SD)
<b>Men</b>	69-74	195.21 (194.86)	261.08 (380.32)	262.17 (323.36)
	75-84	176.09 (241.45)	202.13 (234.65)	232.16 (308.86)
	85+	118.24 (128.04)	123.41 (131.87)	99.71 (99.05)
<b>Women</b>	69-74	135.77 (156.90)	231.47 (262.59)	205.59 (301.01)
	75-84	126.11 (147.36)	153.69 (304.34)	170.40 (177.73)
	85+	86.95 (86.52)	97.03 (103.15)	128.39 (118.71)

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### Results

- Walking difficulty in 1994 was related to walking difficulty in 1996
- Age and gender were associated with walking difficulty
- High BMI, morbidity and poor nutrition were also linked to walking difficulty

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### Pathways of walking and health

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### Results

- Functional status, measured as walking difficulty was a key influence on walking behaviour at each time point.
- Health status in 2000 influenced walking difficulty in 2002.
- Walking difficulty in 2000 impacted health status in 2002.

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### Pathways of walking and health

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### Implications for health professionals

- Optimising functional capacity promotes health and enables ongoing physical activity

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### Implications for health professionals

- Alternatives to walking may be needed to promote physical activity amongst older people with forms of disability that limit walking capacity

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### Recommendation 2 (evidence level II)

Older people should be active every day in as many ways as possible, doing a range of physical activities that incorporate fitness, strength and balance.



### Where to next?

We need to :

- Recognise the heterogeneity of the ageing experience
- Introduce interventions and services that address behavioural, social and environmental influences upon ageing



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