Changing Weight Gain Trajectories for Young Adults

Wendy J Brown
BSc (Hons) MSc PhD FASMF, FACSM
National Obesity Summit
Canberra
15th February 2019

Outline

1. Overweight and obesity in Australian adults
2. Using data to inform prevention ideas - trajectories of weight change in the Australian Longitudinal Study on Women's Health
3. How and when to change the trajectories?

% overweight and obese in Australia

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-11</td>
<td>7.5</td>
<td>7.0</td>
</tr>
<tr>
<td>12-17</td>
<td>17</td>
<td>31.9</td>
</tr>
<tr>
<td>18-34</td>
<td>35</td>
<td>33.8</td>
</tr>
<tr>
<td>35-54</td>
<td>20</td>
<td>24.3</td>
</tr>
<tr>
<td>55-74</td>
<td>8.5</td>
<td>8.6</td>
</tr>
<tr>
<td>75+</td>
<td>17.3</td>
<td>31.9</td>
</tr>
</tbody>
</table>

AIHW 2014-2015

The Australian Longitudinal Study of Women's Health

www.health.gov.au
Methods – weight and height

At every survey:
- Weight and height self-reported (women asked to check their weight on a scale)

Burton et al. Aus NZ J Pub Health 2010

Patterns of change in BMI

21% overweight/obese
45%
Determinants of 10 y weight gain

- Average rate of gain 0.93% of initial weight/year
- 605g (580-635) per year for 65kg woman
- Partnered gained 1 kg more (than not)
- Partner + 1 baby gained 4kg more (than not)
- Physical activity, sitting time, energy intake
- Education, hours paid work
- Smoking, initial BMI

Weight and time

4,881 women
healthy BMI at baseline (1996: 18-23y)
healthy, overweight, or obese BMI after 16-years (2012: 34-39y)

Weight and time

Weight change over time

Rates of weight change

Focusing on the healthy weight women
Maintaining a Healthy BMI
Data From a 16-Year Study of Young Australian Women

4,881 women
healthy BMI at baseline (1996: 18-23y)
healthy, overweight, or obese BMI after 16-years (2012: 34-39y)

Weight and time

Weight change over time

Rates of weight change
Determinants assessed in 2003 and 2009

GEE (adjusted models)

<table>
<thead>
<tr>
<th>Weight Gain (%)</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 kg</td>
<td>11%</td>
</tr>
<tr>
<td>15.5 kg</td>
<td>29%</td>
</tr>
<tr>
<td>3 kg</td>
<td>59%</td>
</tr>
</tbody>
</table>


ORs for maintaining healthy BMI

MORE LIKELY
- University degree: 1.50 (1.14-2.00)
- Low alcohol: 1.25 (1.10-1.41)
- Physical activity: 1.23 (1.03-1.47)
  - Mod: 1.44 (1.20-1.72)
  - High: >1000 MET.min/week

LESS LIKELY
- Separated/widowed: 0.77 (0.66-0.89)
- Smokers: 0.64 (0.50-0.81)
- Sitting time: 0.87 (0.77-0.99)
  - 5-8h: 0.78 (0.68-0.91)
  - >8h: 0.76 (0.68-0.91)
- Energy Intake: 0.76 (0.58-0.99)
- OCP: 0.89 (0.80-0.99)

High PA is the strongest behavioural determinant of healthy weight maintenance
- >1000 MET.min/week
  - 50 mins x 5 days x 4 METs
  - 25 mins x 5 days x 8 METs
  - 16 mins x 5 days x 12 METS

(This is the upper end of current guidelines)

Outline
1. Overweight and obesity in Australian adults
2. Using data to inform prevention ideas - trajectories of weight change in the Australian Longitudinal Study on Women’s Health
3. How and when to change the trajectories?
**Identify gainers early**

- Annual weight change (kg/year)
- Weight gain should be limited to <0.5 kg per year

**Changing the trajectories?**

- **Primary Care**
  - Identify those with weight gain <500g/1kg/>1.5kg/year at age 18-20
  - Develop accessible, culturally appropriate resources and education/training for all health professionals
  - Chronic Disease Prevention Scheme → 5 referrals to allied health professionals (Exercise and Nutrition)

- **Scale up effective interventions** (eg Help-her)
  - (non-prescriptive simple health messages, small changes to behaviour, low participant burden, group-based/individual/phone, SMS reminders etc)
  - Integrate weight gain prevention into routine antenatal care (esp first birth at <26y) – incorporate AEPs and Nutritionist/Dietitians for management of gestational weight gain and post partum healthy weight
  - Sustain participation in sport in the transition from school-tertiary education-work and families

- **Changing the trajectories?**
  - If eating and activity behaviours could be changed in women at this life stage . . .
  - and if weight gain progression could be prevented . . .
  - there would be potential for carry over to men and children as well.

- **www.alswh.org.au**