Progression from healthy weight to overweight or obesity is associated with numerous health problems in young adult women. The aims were to track BMI over 16 years in women who had a healthy BMI in 1996 (when they were 18-23), to calculate rates of weight change associated with maintenance and/or change in BMI, and to examine the determinants of these changes.

Methods
4881 women with healthy BMI at baseline, and either healthy, overweight or obese BMI at 16-year follow-up, reported demographic characteristics, weight, height, health and health behaviours in six surveys of the Australian Longitudinal Study on Women’s Health between 1996 and 2012. Associations between sociodemographic and behavioural determinants of BMI maintenance and change were estimated using bivariate logistic regression and generalised estimating equations (GEE).

Results

Figure 1: 16 year change in weight and rates of weight change in young adult women
A: Average weight (kg) of women in each BMI transition group, at each survey, from 1996 to 2012. Dashed horizontal lines show BMI of 25 and 30 kg/m², for all women.
B: Average annual rate of weight change (kg/year) in each survey interval.

Table 1: GEE analyses showing odds ratios and 95% CIs for maintaining a healthy BMI from 1996 to 2012 (N=2903), compared with progressing to either overweight or obese BMI at year 16 (2012; N=1414+564). (Total N= 4881).

Conclusions

- Weight gain trajectories appear to be established early in young adulthood and are characterised by distinct and fairly constant rates of weight gain at this life stage.
- Early detection of higher than optimal rates of weight gain (around 0.2 kg/year), and associated behavioural determinants (physical activity, sitting time, energy intake, smoking) might help to avert progression to overweight and obesity in young adult women.
- Women who are separated, divorced or widowed could be a priority target group for early intervention to prevent weight gain.