

**Aim:** To assess the safety, efficacy, and mechanisms of the DJBS in 4 pilot patients with obesity and type 2 diabetes who had failed all previous conservative interventions.

**Methods:** The DJBS was placed endoscopically and left in situ for 48 weeks. Subjects received medical and dietetic support throughout. Metabolic, functional, psychological and dietary intake investigations were performed at baseline, and monthly or bi-monthly thereafter.

**Results:** All patients completed the 48 week period with devices in place. No device-related events were observed. The median weight loss was 27.85 kg (21.5–32.4), or 23.17% (19.76–26.51) of body weight. During the study period, mean daily energy intake was reduced as compared to baseline (baseline mean 6737 kJ (range 5156–7750) as compared to week 48: 3845 kJ (range 3442–5871)). Liver function tests substantially improved (median alanine transaminase baseline 37 U/L (15.5–73.5) as compared to week 48: 17 U/L (12.5–22.5); median aspartate transaminase baseline 25.5 U/L (21.5–51.5) as compared to week 48: 18 U/L (15–22)). In parallel, median glycated haemoglobin decreased from 6.8% (range 5.9–7.9) to 5.8% (range 5.7–6.0) at week 48. No significant decrease in circulating micronutrient concentrations was observed. Dietary quality did not change.

**Conclusion:** Weight loss during treatment with a DJBS in the setting of a multi professional team approach is clinically meaningful and appears to be largely explained by decreased energy intake. The small pilot study did not provide evidence for malabsorption of micronutrients.

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### Do making habits or breaking habits influence weight loss and weight loss maintenance? A randomised controlled trial



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**Background:** Despite the significance placed on lifestyle interventions for obesity management, around 40% of weight loss is regained over the first year following treatment, and much of the rest

over the next three years. Two psychological concepts (habitual behaviour and automaticity) have been suggested as the most plausible explanation of this overwhelming lack of long-term weight loss success.

**Method:** We evaluated the efficacy of two interventions that explore these theories: Ten Top Tips (10TT) and Do Something Different (DSD). 10TT promotes automaticity; this is the ability to perform tasks without awareness or deliberation. Therefore, diet and exercise related behaviours become automatic or habitual. Conversely DSD promotes behavioural flexibility. This program disrupts daily routines by assigning an individual with unstructured tasks to perform. Behavioural flexibility therefore has an inverse relationship with automaticity and is defined as the measure of an individual's range of mindful behaviours. In previous studies, both interventions have achieved significant weight loss with results suggesting potential for maintenance of the weight lost. The research however is limited and long-term (12 month) results are yet to be explored. Men and women ( $n=75$ ), aged  $51+6$  (s.d.) years with body mass index  $34.5+4.1$  kg/m<sup>2</sup> were randomised to 12-week 10TT, DSD or no treatment control. Active intervention participants underwent 12 weeks of the program with 12-months follow-up.

**Results:** We collected data for weight, BMI, waist circumference as well as habitual behaviour and wellbeing. After 12 weeks intervention, weight loss averaged 4.6 kg in the 10TT group, 4.1 kg in the DSD group and 1.3 kg in the control group. There was significant improvement in wellbeing in the 10TT and DSD groups.

**Significance of research:** Results from this RCT have the potential to help in understanding the mechanisms relating to weight loss maintenance.

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### How many Australian women will be obese in twenty years' time?



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Successive generations of Australians are becoming fatter. The prediction of future trends in obesity is necessary in order to plan for future health service needs to manage the medical consequences of obesity, such as type II diabetes.

We used data from the Australian Longitudinal Study on Women's Health to predict trends in the prevalence of obesity among Australian women taking into account: generational or cohort differences in mean levels and life course trajectories; general long-term, secular or period effects; and age-related weight gain. We combined these estimates with population projections from the Australian Bureau of Statistics under a range of scenarios of different rates of immigration, fertility and increases in life-expectancy.

We estimate that the proportion of obese women will increase from 25.5% in 2015 to just over 38% in 2035. Taking population increases into account this amounts to an increase from 2.3 million women in 2015 to between 4.5 and 4.8 million in 2035. Consequentially the proportions of health service costs associated with obesity are predicted to increase by about 46%.

These estimates are higher than might be inferred from the multiple cross-sectional National Health Surveys, which cannot fully account for generational differences.

The strong generational increases in the prevalence of obesity highlight the importance of reducing childhood obesity and then maintaining lower BMI throughout the life course, as well as reducing overweight and obesity among adults.

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### **LiveLighter mass media campaign is associated with reduced sugary drink consumption**



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**Background:** The *LiveLighter* 'Sugary Drink' (SD) campaign, originally produced in WA, was launched in Victoria in October 2015. The campaign targeted adults 25–49 and aimed to reduce SD consumption as part of a systems approach to preventing obesity-related chronic disease.

**Methods:** Using a pre-post cohort design, population surveys ( $N=900$ ) were undertaken in the campaign (Victoria) and comparison state (SA) with 78% followed-up after the campaign (Vic  $N=673$ ; SA  $N=730$ ).

**Results:** Almost half (48%) of Victorian adults were aware of the campaign and parents were more likely to be aware. Awareness was equitable between socio-economic groups and metro

versus rural adults. Almost half (47%) perceived the campaign was self-relevant, and more so among those with higher baseline SD consumption and BMI. Tests of interactions between state (Vic, SA) and time (pre-, post-campaign) showed among overweight/obese adults, there was a nonsignificant trend towards increased awareness of the health effects of SD consumption in Vic (64% cf. 72%) but not SA (63% cf. 64%) and increased self-referent thoughts about its relationship to weight gain in Vic (50% cf. 55%) but not SA (50% cf. 47%). The campaign was associated with a significant reduction in frequent sugary drink consumption (4+ cups p/wk) in Vic (31% cf. 22%) and not SA (30% cf. 29%). This was accompanied by a nonsignificant trend towards an increased proportion of overweight/obese SD consumers who consume 4+ cups water p/day in Vic (66% cf. 73%) and not SA (68% cf. 67%).

**Conclusions/implications:** These findings provide compelling evidence that the *LiveLighter* campaign reduced SD consumption among Victorian adults. This outcome is notable in a context where public health campaigns occur against a backdrop of heavy commercial product advertising promoting increased consumption. With continued investment, *LiveLighter* should yield further improvements in public knowledge and behaviour, which could ultimately contribute to reducing obesity-related chronic disease over the longer-term.

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