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Mismatch in weight loss goals between patients with obesity and healthcare practitioners

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Background: National guidelines for the treatment of obesity consider weight loss of 5—10% a successful outcome, as it is associated with improvements in weight-related comorbidities [1]. The average weight loss achieved with lifestyle interventions and pharmacotherapy is in this range [1], but the results envisioned by people seeking treatment for obesity often exceed this [2]. We evaluated weight loss goals among participants enrolling in a dietary weight loss study.

Methods: 100 adults with obesity undertook an 8-week modified very-low-energy diet (VLED) program, which involved replacing 2 meals per day with a commercially available formulation (*Optifast* VLCD, Nestlé Nutrition) and consuming one low-carbohydrate meal per day (total daily energy intake approx. 3350 kJ/800 kcal per day), followed by a structured transition to regular foods and 12 month follow-up. Prior to starting the program, participants' weight loss goals were assessed using the Goals and Relative Weights questionnaire [2], which asks participants to nominate a dream weight, and weights they would be happy with, accept, or be disappointed to achieve.

Results: The participants were 61 women and 39 men with (mean ± SD) age 48.2 ± 12.5 years, weight 113.5 ± 25.9 kg and BMI 39.8 ± 7.3 kg/m^2. The average reported ''dream'' weight was 78.0 ± 12.3 kg, and ''disappointed'' weight 101.7 ± 21.6 kg. Mean percentage weight losses required to achieve ''dream'', ''happy'', ''acceptable'' and ''disappointed'' weights were 29.8 ± 9.5, 22.3 ± 8.3, 16.5 ± 7.5 and 9.9 ± 5.7% respectively.

Conclusion: Weight loss of 10%, which would be considered a successful outcome by healthcare practitioners, is viewed as disappointing by people with obesity starting a weight loss program. Participants' weight loss goals greatly exceed the average results achieved with even the most intensive non-surgical interventions.

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Reference

[1] National Health and Medical Research Council. Clinical practice guidelines for the management of overweight and obesity in adults, adolescents and children in Australia. Melbourne: National Health and Medical Research Council; 2013.
[2] Foster G, et al. What is a reasonable weight loss? Patients' expectations and evaluations of obesity treatment outcomes. J Consult Clin Psychol 1997;65:79—85.

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Prediction of body mass index for the adult population of Australia: Age-cohort trend analysis

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An upward trend in body mass index has been observed in the Australian adult population for over three decades. This trend may not continue, as recent evidence for high-income countries suggests decelerating rates of increase or even a plateau. The objective of this paper is to evaluate the predictive performance of an existing two-factor age-cohort regression model and estimate it with the addition of new data.

Population-based cross-sectional datasets from 1980 to 2012 are used in the analysis, including Risk Factor Prevalence Surveys from 1980, 1983, and 1989, National Nutrition Survey 1995, Australian Diabetes, Obesity and Lifestyle Study 2000, National Health Survey 2007—2008, and National Nutrition and Physical Activity Survey 2011-2012. Previous analysis included data up to 2000, i.e. two additional datasets have been included in this study. Body mass index (BMI) is calculated from measured weight and height, for Australians aged 18 years and older who were not pregnant at the time of evaluation.

Age-adjusted trend is projected to be 2.47% increase per decade for males and 3.18% increase per decade for females, compared to 2.74% and 3.91% from earlier predictions. The respective mean BMI for men and women in 2025 is predicted to be 28.51 kg/m^2 (95% CI 27.90—29.13) and 28.13 kg/m^2 (95% CI 27.36—28.92), when age-standardised to population level in 2012. It is found

that the average female BMI will become surpass that of males starting from the year 2045, rather than 2021 as predicted before. Due to the increase in sample size, the uncertainty around the point estimates has been reduced by approximately 30%.

Validation results indicate that previous predictions are fairly accurate when compared to the observed values in the latest surveys. There is evidence for a slowing trend for both genders. Further research is required to explicitly model the slowing down of BMI increase.

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Can weight gain be prevented in women with breast cancer? A systematic review of intervention studies

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Weight gain is a common among women treated for breast cancer, particularly among women who are pre-menopausal at diagnosis and those undergoing chemotherapy. Obesity and weight gain have been associated with poor disease-specific and health-related outcomes. This review aimed to evaluate the effectiveness of weight gain prevention interventions for women diagnosed with breast cancer. Studies were identified through a systematic search of Pubmed, Embase, CINAHL and Scopus from inception to April 2016. A search of clinical trials registers was also conducted. Completed and ongoing trials evaluating a behaviourally based dietary intervention with or without physical activity and with a focus on weight gain prevention in women with breast cancer were reviewed. Weight change and body composition data were extracted. Within-group weight change of $\pm$1 kg and between-group weight differences of $\geq$2 kg was defined as successful weight gain prevention. Five completed trials and six ongoing trials were identified. All completed trials were conducted in women undergoing chemotherapy treatment and recruited exclusively premenopausal or both pre- and postmenopausal women. Studies were primarily underpowered pilot trials, and all considered to have a moderate or high risk of bias. Within-group weight gain prevention was achieved in two studies, with intervention groups in two studies losing >1 kg. Between-group (intervention vs control) weight change of $\geq$2 kg was achieved by two studies. No trials assessed outcomes following the end-of-intervention or cost-effectiveness. Ongoing trials will further contribute to the evidence base by addressing some of the limitations in the existing evidence. This small but growing number of studies reviewed provides preliminary and promising evidence that weight gain can be prevented in women with breast cancer undergoing chemotherapy treatment. Future studies should assess outcomes following the end-of-intervention, promote resistance training, assess bone density and assess cost-effectiveness.

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Can we change diet and physical activity in time-poor populations?

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Background: Adopting and maintaining healthy diet and physical activity (PA) behaviours can be difficult in populations like nurses, who have a stressful job, with long working hours and shift work. Irregular meal patters, frequent snacking on energy-dense nutrient poor foods (EDNP), and inactivity is common in this group, with 62% of Australian and New Zealand nurses being overweight or obese. The aim of this study was to deliver a 3-month workplace intervention study to improve diet and PA behaviours in nurses, given the paucity of such studies in the literature.

Methods: The intervention was developed with input from the target population, and included pedometers, a smartphone app, and a dedicated Facebook group as intervention materials. Primary outcomes included diet (food frequency questionnaire) and PA (accelerometer). Secondary outcomes included weight, BMI, waist circumference, and blood pressure. All measurements were taken at baseline, end of the intervention (3-months) and follow-up (6-months).

Results: 47 nurses, 41.4 $\pm$ 12.1 years old and 87% female working at two hospitals in Brisbane (Australia) participated in the study. At 3-months, total energy intake coming from fruit and vegetables increased by 3.8%, while it decreased for EDNP foods (- 0.8%). There was a -0.5% decrease on time