the general population and also specific groups such as night workers

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Roux-en-Y Gastric bypass in the management of Prader-Willi Syndrome: An Australian Perspective

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Three patients (one female and two males) with Prader-Willi Syndrome (PWS) due to a micro-deletion on chromosome 15p have received a Roux-en-Y gastric bypass (RYGB) in Adelaide since May 2013. Length of follow up is between 3 years and 6 months with two being greater than 2 years.

The first patient was a female (age 40, BMI 55.2 kg/m^2) who had obstructive sleep apnoea (OSA) and central sleep apnoea (treated with BiPap), type 2 diabetes mellitus (T2DM) (treated orally with Metformin), hypogonadism (treated with topical testosterone) and chronic lower limb oedema. The second patient a male (age 30; BMI 46.7 kg/m^2) had poorly controlled T2DM, OSA, and chronic lower limb oedema with recurrent ulceration and infection. The third patient, a male (age 22, BMI 47.7 kg/m^2) had hypogonadism (treated with topical).

Patient	Pre surgery			12 months Post Surgery[a]		
	Weight (kg)	Height (cm)	BMI (kg/m^2)	Weight (kg)	Height (cm)	BMI (kg/m^2)
1	116	145	45	82	145	39
2	121	161	46.7	74	161	28
3	119	157	48.3	102	157	41.7

[a] Patient 3 data is 4 months post surgery.

All patients have shown a marked decrease in leg oedema, much improved diabetes control (patients 1 and 2) and self-reported improvements in satiation. Bariatric surgery is not currently considered a treatment for PWS however the degree of success seen within these patients should allow for national trial.

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Utility of the oxygen uptake efficiency slope in participants with overweight/obesity and type 2 diabetes

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Background: Higher cardiorespiratory fitness is associated with a reduced risk of all-cause and cardiovascular disease mortality in healthy individuals. This relationship is also true for those with type 2 diabetes (T2D). Cardiopulmonary exercise tests to determine cardiorespiratory fitness (measured as peak oxygen uptake [$V^{\bullet}O_2$peak]) may not always be achievable in those with T2D. Intrinsic factors such as lack of motivation or peripheral fatigue, along with limitations in personnel required to supervise the exercise test in high-risk individuals, limit the utility of the test. The oxygen uptake efficiency slope (OUES) represents the efficiency of the body to extract oxygen from ventilation and measuring this during submaximal efforts may be a valid measure of cardiorespiratory fitness. The aim of this study was to compare the association between submaximal OUES and $V^{\bullet}O_2$peak in participants with T2D.

Methods: Eight adults (59 ± 7 years) with overweight/obesity (BMI = 37.5 ± 6.1 kg/m^2) and T2D (glycated haemoglobin [HbA_{1c}] 63 ± 11 mmol/mol) completed a maximal graded cardiopulmonary exercise test on a treadmill. $V^{\bullet}O_2$peak was determined as the mean of the three continuously high ten second measurements attained during the test. The OUES was calculated as the slope of oxygen uptake against the logarithm of total ventilation for the entire test [$V^{\bullet}O_2$ (L/min) = m(log$V^{\bullet}$E) + B, where m = OUES]. Correlation between $V^{\bullet}O_2$peak and the OUES was determined via Pearson's correlation coefficient. Statistical significance was set at $p < 0.05$. Values are reported as means ± SD.

Results: Participants' $V^{\bullet}O_{2peak}$ was 2.4 ± 0.5 L/min and OUES 2.1 ± 0.9. The correlation between $V^{\bullet}O_{2peak}$ and the OUES was strong and significant ($r = 0.8$; $p = 0.019$).

Conclusion: The OUES displayed a strong and significant association with $V^{\bullet}O_2$peak. This suggests that the OUES may offer a valid submaximal

measure of cardiorespiratory fitness in overweight and obese participants with T2D.

Trial registration: Australian New Zealand Clinical Trials Registry ACTRN12615000475549.

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How do very low energy diet brands available in Australia compare in terms of nutritional content and cost?

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Very low energy diets (VLEDs) effectively induce rapid weight loss but may not contain adequate macronutrients or micronutrients for individuals with varying nutritional requirements. Adequate protein intake during weight loss appears particularly important to help preserve fat free mass and control appetite, and low energy and carbohydrate content also contribute to appetite control with VLEDs. As obesity disproportionately affects those of lower socioeconomic status, cost is also an important consideration. Therefore, the purpose of this study was to compare the cost and nutritional content (with a focus on protein) of all available VLED brands in Australia. Cost was determined by averaging the price (in Australian Dollars) of all flavours for each brand, and then calculating the cost proportionally to expected consumption (e.g. higher ratio of shake to bar or soup intake). Nutritional content was extracted and compared between brands and to the Recommended Dietary Intake (RDI) or adequate intake (AI) of macronutrients and micronutrients for men and women aged 19—70 years or >70 years. Eight brands of VLED products were identified (KicStart™, Optislim®, Optifast®, Proslim, Tony Fergusson®, Dr MacLeod's®, Cambridge®, Vita Diet). The average cost per product varied widely, from $2.33 for KicStart™ to $4.43 for Cambridge®, which would result in a weekly difference of $44.10 if three products are consumed per day. All brands contained less protein than the requirements for males, larger individuals (BMI > 35 kg/m^2) and adults >70 years. Even brands with the highest daily protein content, based on consuming three products/day (KicStart™ and Optislim®, ~60 g/day), only met protein requirements of the smallest and youngest women for whom a VLED would be indicated. Considering multiple options to optimise protein content, we propose that adding pure powdered protein is the most suitable option because it minimizes additional energy, carbohydrate and cost of VLEDs.

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Parental body shape at midlife and its association with adult offspring weight measures

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Parental weight has been shown to be a strong determinant of offspring weight status. This study used cross-sectional self-reported and measured data from Stage 3 (2008—10) of the North West Adelaide Health Study (baseline 1999—2003, $n = 4056$), a longitudinal cohort of Australian adults, to investigate the association between midlife parental body shape and four indicators of obesity and fat distribution. The analysis used pictograms for recall of parental body shape, and measured body mass index (BMI), waist circumference (WC), waist hip ratio (WHR) and waist height ratio (WHtR) of adult offspring ($n = 2128$). Compared to both parents being a healthy weight, offspring were more likely to be overweight or obese if both parents were an unhealthy weight at age 40 (OR 2.14, 95% CI 1.67—2.76). Furthermore, those participants whose mother was an unhealthy weight were more likely to be overweight or obese themselves (OR 1.50, 95% CI 1.14—1.98). There were similar but lower results for those with an overweight/obese father (OR 1.44, 95% CI 1.08—1.93). The effect of one or both parents being overweight or obese tended to be stronger for daughters than for sons across BMI, WC and WHtR. BMI showed the strongest association with parental body shape (OR 2.14), followed by WC (OR 1.78), WHtR (OR 1.71) and WHR (OR 1.45). WHtR (42—45%) and BMI (35—36%) provided the highest positive predictive values for