the general population and also specific groups such as night workers

https://doi.org/10.1016/j.orcp.2016.10.224

224

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

Kellie L. Fusco*, Gary Wittert, Philip A. Game

University of Adelaide, Adelaide, SA, Australia

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.

https://doi.org/10.1016/j.orcp.2016.10.225

225

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

Trishan Gajanand*, Matthew Wallen, Katrin Dias, Shelley E. Keating, Jeff S. Coombes

School of Human Movement and Nutrition Sciences, The University of Queensland, Brisbane, Queensland, Australia

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