

PCOS prevalence, but not with increased lipid profile alterations. These findings are not statistically significant different in overweight and healthy weight adolescents, while a significant difference was detected in untreated girls ($p = 0.0001$), irrespectively of BMI, regarding predicted final height and final height, but this was not observed in GnRHa-treated girls.

EP-081 | Associations of early weight change with 12-month weight loss in postmenopausal women in a behavioral lifestyle change program in a randomized controlled trial

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INTRODUCTION: Lifestyle change behavioral weight loss programs in persons with overweight or obesity have produced a mean 10% weight loss over 1 year, but there is considerable variability in effectiveness. Whether degree of early weight loss influences eventual weight loss is unclear.

METHODS: Four hundred and thirty-nine healthy postmenopausal women (body mass index [BMI] ≥ 25 kg/m², age 50–75 years) were randomized to 12 months of (i) dietary weight loss ('diet'; $n = 118$); (ii) moderate-to-vigorous intensity aerobic exercise for 225 min/week ('exercise'; $n = 117$); (iii) combined dietary weight loss and exercise ('diet + exercise'; $n = 117$); or (iv) no lifestyle change control ($n = 87$). The diet program was a modification of the Diabetes Prevention Program/Look Ahead lifestyle change program with reduced calories, reduced dietary fat, and a 10% weight loss goal over 6 months. The exercise program was 45 min/day of moderate-to-vigorous aerobic exercise, 5 days/week. Diet and diet + exercise participants' weights were measured at baseline, 1, 2, and 12 months. Linear regression models, adjusting for age, baseline BMI, and race/ethnicity were used to compare the mean weight change from baseline to 12 months between higher vs. lowest levels of 1- and 2-month weight loss. Linear regression models were used to test the linear trend in the mean weight change from baseline to 12 months across the levels of 1- and 2-month weight loss. Logistic regression models, adjusting for age, baseline BMI, and race/ethnicity, were used to assess the association between achieving a 12-month weight loss > 10% and the degree of 1- and 2-month weight loss.

RESULTS: Of the 118 and 117 randomized to diet and diet + exercise, respectively, 104 and 108 completed the study. At Month 1, participants who lost < 2%, 2–4%, and >4% of starting weight lost a mean 10.2, 14.0, and 13 kg at 12 months, respectively (p trend = 0.019). Women who at Month 2 lost < 3%, 3–6%, and >6% lost a mean 7.2, 13.6, and 19.3 kg at 12 months (p trend < 0.001). Combining diet and diet + exercise women together, the odds of achieving greater than 10% weight loss at 12 months were 7.26 and 417e⁴ in women who

lost 3–6% and >6% at Month 2, compared with women who lost < 3% at Month 2 (p trend < 0.001). Similar associations between early and late weight loss were observed in women randomized to diet and in those randomized to diet + exercise.

CONCLUSIONS: Weight loss at 1 and 2 months predicted 12-month weight loss. This supports the need to monitor weight loss program effects early in order to provide additional support to individuals who are not early responders. Furthermore, monitoring early weight loss can also be a motivational tool for individuals to keep on track to meet clinically significant weight loss goals.

EP-082 | The obesogenic phenotype of a high-risk European state

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BACKGROUND: Obesity is a global epidemic and its pathophysiology has been well explored. However, many countries are still straggling with obesity inequalities. Malta, a small European state, has been widely reported to be an obesogenic country. The aim was to explore the obesity phenotype of the adult population of this country and explore for potential obesity drivers.

METHOD: Data were gathered through a national cross-sectional health examination survey conducted by the University of Malta between 2014 and 2016. A validated questionnaire was used for sociodemographic, comorbidities, and lifestyle data. And body weight and height were measured. Blood samples for fasting glucose and lipid profile were collected. The social position was categorised using the NS-SEC classes. Both descriptive and analytic statistics were done to establish the obesity phenotype and the association with different glucose status.

RESULTS: Out of the total adjusted population ($n = 3,947$), 69.75% (CI 95%: 68.32–71.18) were found to have a body mass index (BMI) above 25 kg/m², with a male predominance. The socio-economic profile of this sub-group exhibited that mostly lived in the highest densely populated district, had completed secondary school or above in terms of education, and had a 'routine and manual' occupation. As the BMI scale progressed, it was observed that so did the biochemical and anthropometric measurement levels. A positive association was established between an obese status (>30 kg/m²) and having type 2 diabetes (OR: 2.46; CI 95%: 1.79–3.38; $p \leq 0.01$) and impaired fasting glucose (FBG 5.60–6.99 mmol/l) (OR: 1.31; CI 95%: 1.17–1.90; $p \leq 0.01$) even after adjusting for age, gender, lifestyle (smoking and alcohol habits), education level, employment status, and residing districts.

CONCLUSION: Increase in adiposity has an effect on the metabolic profile and insulin sensitivity of the individual. Targeting obesity would automatically have a positive effect on the associated metabolic conditions. However, although education is a requisite for