

nents of eating behaviour, dietary intakes or physical activity did not differ either between groups.

Conclusion: In this large case-control study on functional *MC4R* mutations carriers, we have shown that *MC4R* mutations do not affect dietary intakes or eating behaviours.

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HTP.021

Psychological Benefits of Weight Loss: A Systematic Research Review

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Introduction: It is generally accepted that weight loss has significant physiological benefits, such as reduced risk of diabetes, lowered blood pressure and blood lipid levels. However, few behavioural and dietary interventions have investigated psychological benefit as the primary outcome.

Method: Systematic review methodology was adopted to evaluate the psychological outcomes of weight loss following participation in a behavioural and/or dietary weight loss intervention in overweight/obese populations. 35 studies were selected for inclusion and were reviewed.

Results: Changes in self-esteem, depressive symptoms, body image and health related quality of life (HRQoL) were evaluated and discussed. The results demonstrated consistent improvements in psychological outcomes concurrent with and sometimes without weight loss. Improvements in body image and HRQoL (especially vitality) were closely related to changes in weight.

Conclusion: Although the quality of the studies reviewed was generally acceptable, only 8 out of 35 studies included a suitable control/comparison group and the content, duration of intervention and measures used to assess psychological outcomes varied considerably. Further research is required to improve the quality of studies assessing the benefits of weight loss to fully elucidate the relationship between weight loss and psychological outcomes.

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Adipose tissue and liver fibrosis in morbid obesity: Link with BMI variation and tissue stiffness

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Introduction: Gastric bypass (GBP) is associated with long-term weight loss (WL). However, there is an important interindividual variability of WL after GBP with some subjects being less responsive than others. Previous studies identified predictive factors of WL but none explored tissue specific parameters such as adipose tissue remodelling. We aimed to determine presurgical predictors of WL after GBP by exploring these parameters.

Methods: The study enrolled 404 obese candidates for bariatric surgery. Liver biopsies, subcutaneous (scWAT) and omental adipose tissue were collected. 243 patients were clinically characterized before, 3, 6, and 12 months after surgery. Liver and scWAT stiffness were assessed non-invasively using Vibration-Controlled-Transient-Elastography (Fibroscan®) and a novel prototype named AdipoScan™) in 72 patients.

Results: The exploration of BMI trajectories revealed that 28.8% of the participants were less responsive (LR) than others. LR group was older, had higher frequency of diabetes and increased circulating concentrations of IL6. LR group also showed increased amount of scWAT fibrosis and a higher frequency of liver fibrosis. We built two predictive models for the less response to WL. Model1 combines scWAT fibrosis, HBA1C, IL6, age and BMI. Model2 combines histological parameters of liver, IL6 and age. Liver and scWAT stiffness were positively correlated with liver and scWAT fibrosis.

Conclusion: Altered BMI response to GBP can be predicted by a series of biochemical variables, which include not only metabolic and inflammatory parameters but also scWAT and liver fibrosis. Therefore the non-invasive evaluation of liver and scWAT seems to have an interest in clinical practice.

HTP.023

Benefits of levemir insulin therapy at obese diabetic patients

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Aims: We studied in this study the effect of the Levemir insulin therapy over the weight curve and the advantages of the using of basal insulin analogues.

Method: We included 120 obese patients with type 2 diabetes, to who we initiated the basal insulinic therapy.

We created 2 plots: one of 60 patients who were treated with basal human insulin, and the second one of 60 patients who were treated with basal insulinic analogues- Levemir. During an interval of 6 months, the patients were monitored the metabolic control, body weight, BMI, HOMA index, waist and hip circumferences.

Results: At initializing of the study, the patients had an average Hb A1c of 9.8%, while after 6 months of therapy the patients out of the first plot ranged a Hb A1c value of 8.2% vs. the second plot with a range of 7.3%. The frequency rate of nonsevere hypoglycemic episodes was 39% and of the severe episodes was with 12% for first plot vs 21 % and 5% for second plot. The patient's weight increase was smaller in the second batch. They presented an average increase of 3,8 kg within 6 months for first plot vs 1.2 kg for second plot.

Conclusions: The use of basal insulin analogues in the therapy of obese diabetic patients ensures a great benefit, as it allows a good metabolic control with the price of a lower hypoglycemic risk and a reduced weight increase in comparison to the basal human insulin.

HTP.024

The use of alternative key performance indicators to measure success in a tier 3 weight management programme

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Introduction: Programmes around the UK use various methods to trigger weight change. This work refers to a Tier 3 multidisciplinary (MDT) programme for patients with BMI >35 kgm² (+ co-morbidities) or BMI >40 kgm² (- co-morbidities). The MDT includes registered dietitians, anthropometrists, clinical psychologists and a bariatric physi-