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Objective: Avoidant/restrictive food intake disorder (ARFID) occurs across the weight spectrum, however research addressing the coexistence of ARFID with overweight/obesity (OV/OB) is lacking. We aimed to establish co-occurrence of OV/OB and ARFID and to characterize divergent neurobiological features of ARFID by weight.

Method: Youth with full/subthreshold ARFID (11 with healthy weight [HW], 12 with OV/OB) underwent fasting brain fMRI scan while viewing food/non-food images (M age = 16.92 years, 65% female, 87% white). We compared groups on BOLD response to high-calorie foods (HCF) (vs. objects) in food cue processing regions of interest. Following fMRI scanning, we evaluated subjective hunger pre- vs. post-meal. We used a mediation model to explore the association between BMI, brain activation and hunger.

Results: Participants with ARFID and OV/OB demonstrated significant hyperactivation in response to HCF (vs. objects) in the orbitofrontal cortex (OFC) and anterior insula compared with HW subjects with ARFID. Mediation analysis yielded a significant indirect effect of group (HW vs. OV/OB) on hunger via OFC activation (effect=18.39, SE=11.27, 95% CI [-45.09, -3.00]), suggesting that OFC activation mediates differences in hunger between ARFID participants with HW and OV/OB.

Conclusions: Compared to youth with ARFID and HW, those with OV/OB demonstrate hyperactivation of brain areas critical for reward value of food cues. Postprandial changes in subjective hunger depend on BMI and are mediated by OFC activation to food cues. Whether these neurobiological differences contribute to selective hyperphagia in ARFID presenting with OV/OB and represent potential treatment targets is an important area for future investigation.

Background: Roux-en-y (RYGB) is considered a procedure with more malabsorptive impact than sleeve Gastrectomy (SG), so the risk of chronic complications seems greater. **Aim:** To describe the metabolic profile and weight regain of patients who underwent bariatric surgery, according to each procedure. **Method:** A retrospective cohort with patients who underwent bariatric surgery (2003–2018). The sample was divided into SG group and RYGB group. Comparisons were made to analyze the relationship between the procedure itself and metabolic improvements, weight loss and weight regain. **Results:** We included 117 eligible participants (91.5 % female, 51.2% RYGB surgery), mean follow-up was 4.4± 3.3 years. Mean age was 41.8±6.8 years, without significant difference between the groups. Before the surgery, the groups were similar according metabolic profile (fasting glucose, Hba1c, total cholesterol, LDLc, triglycerides and HOMA IR), except by non-HDLc (RYGB 108.8±26.3 vs SG 127.2±33.2 mg/dl, p=0,002) and 25OHD (RYGB 28.9±4,7 vs SG 34.3±9,5 ng/ml, p=0.044). The RYGB group had greater weight than the SG group (mean 114.1±13.5 kg vs 122.7±20.5 Kg, p<0.0001) and almost 23.3% of the participants had T2DM and 36.2% of them had systemic arterial hypertension, without significant difference between the groups. The RYGB group had a greater postoperative time than the SG group (mean 5.0±4.0 vs 3.6± 2.9 years, respectively). After the surgery, although weight loss was greater in the RYGB group than the SG group (mean 39%±10.2 vs 34.1%±9.8, p<0.0001, respectively), both groups were similar regarding BMI, body fat percentage (BFP) and abdominal circumference. Also, there were no differences in the metabolic profile (fasting glucose, Hba1c, HOMA IR, leptin, triglycerides and HDLc), according to the type of surgery, except in the total cholesterol and LDLc levels (RYGB 167.9±28.2 vs SG 187.9±35.1 and RYGB 92.6±25.6 vs SG 109.5±30.8). Nearly the whole sample (95%) has reached > 20% weight loss. Despite that, 37.6% of the patients have regained > 20% of weight loss, with no relation regarding the type of surgery. Only 7% of the patients remained with some degree of glucose intolerance, with no difference between the groups. **Conclusion:** We found similar benefits among metabolic markers and weight regain after SG, compared to RYGB.

Adipose Tissue, Appetite, and Obesity INTEGRATED PHYSIOLOGY OF OBESITY AND METABOLIC DISEASE

No Differences in Metabolic Parameters Between Roux-en-Y Gastric Bypass and Sleeve Gastrectomy, Regardless of Achieved Weight Loss

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Adipose Tissue, Appetite, and Obesity INTEGRATED PHYSIOLOGY OF OBESITY AND METABOLIC DISEASE

Obesity, Body Fat Distribution, and Circulating Glutamate Concentrations, A BI-Directional Mendelian Randomization Study

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Background: Various observational studies have reported that circulating levels of the amino acid glutamate was significantly associated with central fat accumulation in men and women. This is the case in the Framingham Heart Study Generation 3 for waist circumference, in the TwinsUK cohort for trunk fat and in a cohort of 1449 Japanese for visceral adipose tissue area measured by computed tomography. However, whether the association between