weight loss was observed (mean ΔBMI SDS -1.09 ± 1.00), in one patient BMI stabilization (ΔBMI SDS +0.03), and in two patients an increase in BMI SDS was seen (mean ΔBMI SDS +0.32 ± 0.05). Of nine children with acquired HO and measurement of REE before and during treatment, a mean REE increase of +15.3% ± 10.5 was observed. In three out of five patients with genetic obesity, initially weight loss was observed resulting in BMI stabilization at end of follow-up due to weight regain (mean ΔBMI SDS -0.08 ± 0.19). In these patients, no difference in REE before and during treatment was observed. In two patients an increase in BMI SDS was seen (mean ΔBMI SDS +0.29 ± 0.25). However, one patient discontinued treatment after one month, due to hypertension. Thirteen out of 18 children (72.2%) reported improvement of either their hyperphagia, energy level, and/or behavior. No serious side effects were reported.
Conclusion: In children and adolescents with acquired HO, treatment with dextroamphetamine may significantly lower BMI, reduce hyperphagia and improve activity level. In genetic HO, these effects were less pronounced. Future studies in a larger cohort and with randomized controlled designs are needed to support these results.

Adipose Tissue, Appetite, and Obesity
WHAT'S NEW IN WEIGHT MANAGEMENT THROUGH THE LIFESPAN?

Once-Weekly Exenatide Enhances Weight Loss Maintenance in Adolescents with Severe Obesity: A Randomized, Placebo-Controlled Trial

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Background: In adolescents with severe obesity, long-term weight loss maintenance using lifestyle therapy alone is hampered by numerous biological adaptations favoring weight regain such as increased appetite and sense of food palatability and decreased satiety and resting energy expenditure. Anti-obesity pharmacotherapy may have a role in mitigating some of these physiological adaptations, thereby enhancing weight loss maintenance. We conducted a randomized, double-blind, placebo-controlled clinical trial to evaluate the effect of the glucagon-like peptide-1 receptor agonist (GLP-1RA) exenatide extended release (XR) on the maintenance of BMI reduction and improvements in cardiometabolic risk factors induced by short-term meal replacement therapy (MRT) among adolescents with severe obesity. **Methods:** One-hundred adolescents ages 12 to <18 years with BMI ≥120% of the 95th percentile engaged in an MRT intervention consisting of pre-portioned meals averaging 1,400 kcals/day with a goal of reducing BMI by ≥5% within eight weeks. Participants achieving this goal were randomized 1:1 to either exenatide XR (2 mg/week subcutaneously) + lifestyle therapy or matching placebo + lifestyle therapy for a subsequent 52 weeks. The primary outcome was mean percent change in BMI from randomization (post-MRT) to 52 weeks. Secondary outcomes included changes in body fat (DXA) and cardiometabolic risk factors. **Results:** Sixty-six participants (mean age 16±1.5 years; 47% female; mean BMI 36.9±4.4 kg/m^2) achieved ≥5% BMI reduction with MRT and were randomized; 56 (85%) completed the 52-week visit. From randomization (post-MRT) to 52-weeks, the exenatide and placebo group mean BMI increased 4.6% and 10.1%, respectively. The prespecified intention-to-treat, last observation carried forward primary analysis demonstrated a placebo-subtracted exenatide treatment effect of -4.1% (95% CI -8.6 to 0.5, p=0.078). The per-protocol analysis (excluding participants with major protocol deviations) demonstrated a placebo-subtracted exenatide treatment effect of -5.7% (95% CI -10.9 to -0.6, p=0.030). The placebo-subtracted exenatide treatment effect on total body fat was -3.0 kg (95% CI -6.7 to 0.7, p=0.108), systolic blood pressure -3.2 mmHg (95% CI -7.0 to 0.7, p=0.107), and triglycerides to HDL ratio -0.6 (95% CI -1.2 to 0.0, p=0.050). Exenatide was generally well-tolerated and the adverse event profile was similar to previous reports of GLP-1RAs. **Conclusion:** The steep trajectory of weight regain following short-term MRT, particularly in the placebo group, underscores the challenge many adolescents encounter in maintaining weight loss over time. GLP-1RA treatment with once-weekly exenatide appears to partly mitigate the propensity toward weight regain after initial dietary-induced weight loss among adolescents with severe obesity.

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WHAT'S NEW IN WEIGHT MANAGEMENT THROUGH THE LIFESPAN?

Weight Loss Maintenance With Once-Weekly Semaglutide 2.4 MG in Adults With Overweight or Obesity Reaching Maintenance Dose (STEP 4)

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