Dokumenttyp: journal article

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Titel des Beitrags: Leptin, adiponectin, and short-term and long-term weight loss after a lifestyle intervention in obese children.

Abstract: In overweight children, high leptin levels are independently associated with higher risk for cardiovascular disease, whereas adiponectin seems to be protective against type 2 diabetes and atherosclerosis. The study examines the predictive value of leptin for weight loss after a 4- to 6-wk inpatient therapy and again after 1 y; as well as the association among weight loss, leptin, and adiponectin levels and changes in cardiometabolic risk factors after therapy. Body mass index (BMI), blood pressure, Tanner stage, and cardiometabolic risk factors were studied in 402 children (59.2% females, 13.9 ± 2.3 y, BMI 33.8 ± 5.7 kg/m(2)) before and after a 4-to 6-wk inpatient intervention (exercise, diet, and behavioral therapy) and BMI 1 y later (n = 206). BMI was reduced from 33.8 ± 5.7 to 30.5 ± 5.1 kg/m(2) (P< 0.001) during the lifestyle intervention and remained unchanged after 1 y. Baseline BMI was positively associated with leptin (r = 0.60; P< 0.001) and cardiometabolic risk factors (blood pressure, high-density lipoprotein [HDL] cholesterol, triglycerides). Baseline leptin was associated with BMI and triglycerides (r = 0.39; P< 0.001), baseline adiponectin with HDL-cholesterol (r = 0.40; P< 0.001). Baseline BMI explained 40.7% of the variance in weight loss during therapy. The combination of BMI, sex, and leptin explained 50.4% of the variance. Neither BMI nor leptin predicted weight changes over the long
Overweight children maintained a substantial amount of weight loss after participation in a short-term inpatient lifestyle intervention. Baseline BMI was positively associated with weight reduction during the intervention, whereas baseline leptin had only a minor predictive value.