Are naturalistic weight-reducing efforts associated with weight gain and onset of obesity in adolescent girls?

Stice E, Cameron RP, Killen JD, et al. Naturalistic weight-reduction efforts prospectively predict growth in relative weight and onset of obesity among female adolescents. *J Consult Clin Psychol* 1999;67:967-974.

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Competing interests:

None declared

Funding: National
Institute of Mental
Health, Bethesda, MD;
National Institute for
Child Health and
Development, Bethesda,
MD; Stanford Center
on Adolescence,
Stanford, CA; and W T
Grant Foundation, New
York, NY.

Published previously in
Evidence-Based Nursing
2000;3:71.

DESIGN

Prospective cohort study with 4 years of follow-up.

SETTING

Three high schools in northern California.

PARTICIPANTS

Participants included 692 girls (mean age, 15 years; 45% white) who were grade 9 students. Girls who were pregnant were excluded.

ASSESSMENT OF RISK FACTORS

Dietary restraint, self-labeled dieting, exercise for weight loss, incidental exercise (exercise for purposes other than intentional weight control) that might affect adiposity, fasting for weight loss, use of appetite suppressants or laxatives, vomiting for weight control, binge eating, and stage of pubertal development (Tanner stage) were assessed by student self-report or structured clinical interviews. Body mass index (BMI) was measured by trained research staff.

MAIN OUTCOME MEASURES

Growth in relative weight and, after excluding initially obese girls (16% of the initial cohort), the onset of obesity.

MAIN RESULTS

Analyses were adjusted for baseline BMI and sexual maturation level. Baseline BMI was not related to subsequent growth in relative weight. Baseline incidental exercise, appetite suppressant or laxative use, vomiting for weight control, and binge eating predicted relative weight gain over the 4-year study period ($P < 0.05$). Dietary restraint, self-labeled dieting, and exercise for weight control predicted onset of obesity over time. For each unit of increase on the restraint scale, there was a 192% increase in the hazard for onset of obesity (hazard ratio [HR] 2.92; confidence interval [CI] 1.74-4.89; $P < 0.001$). The hazard for onset of obesity was 324% greater for self-labeled dieters than for nondieters (HR 3.24, CI 1.53-6.85, $P < 0.01$), and for each unit increase on the exercise scale, there was a 25% increase in the hazard for onset of obesity over the study period (HR 1.25, CI 1.08-1.45, $P < 0.01$).

CONCLUSIONS

Incidental exercise, appetite suppressant or laxative use, vomiting, and binge eating predicted relative weight gain in adolescent girls. Dietary restraint, self-labeled dieting, and exercise for weight control predicted onset of obesity.