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What behavioral interventions are safe and effective for treating obesity?

EVIDENCE-BASED ANSWER

Interventions that include a combination of behavioral and lifestyle modifications—including decreased caloric intake, specific aids to changing diet, increased physical activity, and treatment of binge eating disorders—have modest benefit

with appropriate use (strength of recommendation [SOR]: **A**, based on multiple randomized controlled trials). Hypnosis can be used as an adjunct to behavioral therapy for weight loss (SOR: **A**, based on systematic reviews).

CLINICAL COMMENTARY

More options for the patient is better: physician, dietician, counselor, trainer

Working against the cultural incentives that promote obesity is difficult, and doing so places physicians in the challenging position of trying to change culture one patient at a time. A good team is essential, and it seems the more options the better: physician, dietician, counselor (perhaps with hypnosis skills), and even a

physical trainer. Funding for these services, as well as patient motivation for change, are often easier to obtain when the physician labels the patient as having a disease (such as diabetes or hyperlipidemia). Unfortunately, the rising prevalence of the metabolic syndrome is making this situation increasingly common.

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Evidence summary

Obesity rates in the US have risen significantly in recent years: 30% of US adults (60 million people) and 16% of children 6 to 19 years old (more than 9 million), are obese,¹ and trends suggest rates will continue to increase. Eating behaviors are learned and reinforced within families, peer groups, and other important social groups. Behavioral techniques to treat obesity attempt to reduce reinforcement for unhealthy eating behaviors and teach and reinforce healthy eating behaviors. Cue avoidance is a common behavioral inter-

vention: the patient avoids situations in which he has overeaten in the past, such as “all-you-can-eat” buffets. Role play to practice restraint from overeating, or to resist social pressure to eat at an open buffet, uses cognitive therapy as a behavioral technique. Involving family members in an obesity treatment plan and using group therapy such as Overeaters Anonymous are other standard behavioral techniques.

A 1997 systematic review of 99 weight loss studies, including randomized and nonrandomized controlled trials of at least 1 year’s duration, found 21 behavioral

intervention trials that included dietary, exercise, and behavioral approaches.² The reviewers concluded that long-term behavioral techniques, dietary changes with very specific instructions to assist adherence, exercise, relapse prevention training, and social/community support were optimal for promoting weight loss.²

One of the RCTs³ involved 163 patients and compared behavioral therapy alone with behavioral therapy plus specific aids to changing diet: use of grocery lists, meal plans, and specific instructions to reduce total fat intake. The average weight loss after 1 year in the behavioral therapy with specific aids group, was statistically significantly greater than the weight loss in the behavioral therapy alone group (6.9 kg vs 3.3 kg).³

Another RCT⁴ in the review evaluated different types of maintenance programs to promote ongoing weight loss among 125 people randomized to 1 of 5 maintenance programs after an initial 20-week behavioral weight loss program: 1) control—no further contact with the behavioral therapists; 2) behavioral—ongoing problem-solving behavioral therapy sessions; 3) social—peer support and participant presentations, with some financial incentives; 4) exercise—therapy sessions, as in group 2, plus an aerobic exercise program; and 5) combined—using therapy sessions, social support and an exercise program. Mean weight loss at 1.8 months for the 4 intervention programs was significantly greater than for the control (group 2, 11.4 kg; group 3, 8.4 kg; group 4, 9.1 kg; group 5, 13.5 kg vs 3.6 kg).⁴ Two additional similar RCTs^{5,6} showed significant benefit from behavioral interventions combined with social support and relapse prevention training.

One RCT⁷ addressed both behavioral therapy and the importance of face-to-face interaction. The study randomized 122 subjects to either Internet video sessions biweekly with a therapist (which included behavioral therapy, access to an associated chat room and e-mail correspondence), or to biweekly face-to-face sessions with a

therapist. The active intervention spanned 24 weeks, but the therapist met with the face-to-face group and interacted in the chat room and with e-mail for another 6 months. At 18 months, the mean weight loss in the Internet group was 5.7 kg compared with 10.4 kg in the face-to-face group.⁷ In a subsequent data analysis,⁴ regular attendance to follow-up group sessions for at least 1 year resulted in better maintenance of weight loss. Initial weight loss—ie, weight loss in the first few months of the behavioral intervention—was a good predictor of long-term adherence to behavioral interventions.⁸

Hypnosis has been used as an adjunct to behavioral therapy for weight loss in multiple small studies. Two meta-analyses^{9,10} concluded that behavioral therapy alone yielded an average weight loss of 6.05 kg; with the addition of hypnosis, the average weight loss rose to 14.88 kg.

Depression and binge-eating disorder commonly coexist with obesity. Obese patients seeking treatment have a lifetime prevalence of affective disorders over 30%. Depression is associated with higher dropout rates from treatment programs for obesity.¹¹ However, there are no rigorous studies that indicate that treatment of depression is necessary to achieve optimal weight loss.^{12,13}

Recommendations from others

The Centers for Disease Control and Prevention recommends behavior changes, including an increase in physical activity and in the intake of vegetables and fruits.¹ The American Academy of Family Physicians recommends working to improve self-efficacy—the patient's belief that they can succeed in the intervention.¹⁴

The US Preventive Services Task Force found insufficient evidence to recommend brief counseling for obese adults, nor any counseling for overweight adults. However, they did recommend high-intensity counseling for dietary change and exercise to obese adults; this counseling is likely to produce modest sustained weight loss.¹⁵

FAST TRACK

Optimal for promoting weight loss:

- long-term behavioral techniques
- diet changes with specific instructions
- social/family support

THE JOURNAL OF FAMILY PRACTICE

Evidence-based medicine ratings

THE JOURNAL OF FAMILY PRACTICE uses a simplified rating system called the Strength of Recommendation Taxonomy (SORT). More detailed information can be found in the February 2003 issue, "Simplifying the language of patient care," pages 111–120.

Strength of Recommendation (SOR) ratings are given for key recommendations for readers. SORs should be based on the highest-quality evidence available.

- A Recommendation based on consistent and good-quality patient-oriented evidence.
- B Recommendation based on inconsistent or limited-quality patient-oriented evidence.
- C Recommendation based on consensus, usual practice, opinion, disease-oriented evidence, or case series for studies of diagnosis, treatment, prevention, or screening

Levels of evidence determine whether a study measuring patient-oriented outcomes is of good or limited quality, and whether the results are consistent or inconsistent between studies.

STUDY QUALITY

- 1—Good-quality, patient-oriented evidence (eg, validated clinical decision rules, systematic reviews and meta-analyses of randomized controlled trials [RCTs] with consistent results, high-quality RCTs, or diagnostic cohort studies)
- 2—Lower-quality patient-oriented evidence (eg, unvalidated clinical decision rules, lower-quality clinical trials, retrospective cohort studies, case control studies, case series)
- 3—Other evidence (eg, consensus guidelines, usual practice, opinion, case series for studies of diagnosis, treatment, prevention, or screening)

Consistency across studies

Consistent—Most studies found similar or at least coherent conclusions (coherence means that differences are explainable); or If high-quality and up-to-date systematic reviews or meta-analyses exist, they support the recommendation

Inconsistent—Considerable variation among study findings and lack of coherence; or If high-quality and up-to-date systematic reviews or meta-analyses exist, they do not find consistent evidence in favor of the recommendation

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