What are the most effective interventions to reduce childhood obesity?

EVIDENCE-BASED ANSWER Efforts to increase physical activity or decrease sedentary activities have shown some short-term benefit, and adding dietary changes may be more effective. Aiming interventions at parents, intensive family therapy, comprehensive school-based programs, and selecting motivated children for subspecialty care may improve success. (Grade of recommendation: B, based on poor-quality randomized controlled trials [RCTs] and heterogeneous systematic reviews.) Other potentially effective short-term strategies include screening with body mass index (BMI) for age (grade of recommendation: C, extrapolation from cohort studies and ecological research) or dietary counseling (grade of recommendation: D, conflicting poor-quality RCTs). No drugs are currently approved for pediatric obesity therapy in the United States.

EVIDENCE SUMMARY Pediatric obesity increases the risk of adverse outcomes in adulthood, independent of adult BMI.[1] Trials aiming to reduce childhood obesity suffer from serious methodological constraints. No long-term (> 2 years) evidence is available. Many apparently efficacious interventions are beyond the scope of primary care physicians. A detailed summary is available online at http://www.FPIN.org.

Several studies have examined the value of isolated changes in either diet or activity level. Randomized controlled trials and retrospective cohort studies of dietary advice alone show short-term efficacy (weeks to months).[1] Most involve intensive subspecialty care for extremely obese children who are 120% to 140% over their ideal body weight. Trials without careful selection of motivated children had dropout rates up to 87%. One Italian RCT showed a 12% reduction in the number of obese children in schools receiving multimedia dietary advice compared with a 5% to 6% increase in those schools receiving only written or no advice.[2] Several RCTs reduced obesity by introducing or improving school-based physical activity.[1] Two RCTs that discouraged sedentary activity through counseling or school-based programs also reduced obesity.[3,4]

Two larger trials integrated diet and exercise advice into school curricula. One study emphasized improving school menus, but no difference was observed because children compensated by overeating at home.[5] The other emphasized reducing sedentary activities and found lower obesity rates in the intervention schools, but only for girls.[6] A third trial provided family-based dietary and behavior counseling, but emphasized either increasing physical activity or decreasing sedentary activity.[7] Both strategies resulted in reduced obesity compared with controls. A systematic review supported the combined approach of these trials, finding diet and exercise interventions superior to diet interventions alone.[8]

Some evidence supports focusing on the family rather than just the child. A systematic review found that family therapy prevented pediatric obesity.[9] An RCT found that focusing on parents as the sole change agent was superior to targeting the child.[10]

RECOMMENDATIONS FROM OTHERS Expert consensus promotes screening because of obesity's increasing incidence and associated morbidity and mortality.[11] The Maternal and Child Health Bureau recommends a primary goal of healthy eating and activity. They recommend treating when the body mass index is >95th percentile, and assessing the child and family's willingness to change. Primary strategies are to begin early, involve the family, promote parenting skills, and increase activity and reduce high-calorie food intake. They also recommend ongoing support to maintain weight loss.[9]

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Clinical Commentary by Tess Bobo, MD, at http://www.fpin.org.

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