Screening for Obesity in Children and Adolescents: USPSTF Recommendation Statement

Our clinical advisor offers practical steps beyond the guideline to reduce the time your patients spend in front of screens. He also suggests this “triage” approach when recommending time-intensive behavioral programs.
I. Introduction

Obesity is common in children and adolescents in the United States, is associated with negative health effects, and increases the likelihood of obesity in adulthood. Approximately 17% of children (12.7 million children) between the ages of 2 years and 19 years in the U.S. are considered obese or have body mass index (BMI) in the 95th percentile or greater compared with children of the same age and race, based on growth charts of children in the U.S. in 2000. However, a number of barriers to screening and treatment of pediatric obesity exist, including time, resources, and cultural issues.

To systematically review the benefits and harms of screening and treatment for obesity and overweight in children and adolescents, the literature was reviewed to provide a recommendation from the U.S. Preventive Services Task Force (USPSTF).

Based on their review of the literature, the USPSTF updated their 2010 statement:

The USPSTF recommends that clinicians screen for obesity in children and adolescents aged ≥6 years and offer or refer them to comprehensive, intensive behavioral interventions to promote improvements in weight status. (Grade B)

These recommendations are consistent with the recommendations by other organizations including the Canadian Task Force on Preventive Health Care and American Academy of Family Physicians. To put this into practice, the recommendation can be considered in 3 sections: risk assessment, screening tests, and interventions.

II. Risk Assessment

Recommendation: All children and adolescents are at risk for obesity and should be screened. However, a number of risk factors increases the incidence of pediatric obesity, which may aid the clinician in stratifying their high-risk patients. These include parental obesity, poor nutrition, race or ethnicity (eg, African American, Hispanic), low levels of physical activity, inadequate sleep, sedentary behaviors, and low family income.

Details: While some risk factors for pediatric obesity change with age, other risk factors appear to be consistent across all ages. Parental obesity is a strong risk factor for all ages. Similarly, a low family income in childhood increases the risk for obesity and overweight throughout childhood. Racial/ethnic differences in both nongenetic and genetic risk factors likely contribute to disparities in obesity prevalence, with socioeconomic status being 1 of the strongest factors. Among younger children, factors associated with obesity include maternal diabetes, maternal smoking, gestational weight gain, rapid infant growth, and short sleep duration. In addition, a decrease in physical activity participation in the preteen years is a risk factor for excess weight in adolescence.

Comment: With the proliferation of technology, it is also important to reduce sedentary screen time. USPSTF refers to the Community Preventive Services Task Force’s systematic review entitled Obesity: Behavioral interventions that aim to reduce recreational sedentary screen time among children. Consider intervening in a quick and easy way by:

• Recommending a limited amount of screen time (television, tablets, and smartphones) outside of school
• Suggesting that TVs be kept out of the child's bedroom
III. Screening Tests

**Recommendation:** BMI measurement, using height and weight, is the recommended screening test for obesity. Obesity is defined as an age- and sex-specific BMI in the 95th percentile or greater.

**Details:** BMI percentile is plotted on a growth chart, developed by the Centers for Disease Control and Prevention based on U.S.-specific, population-based norms for children aged ≥2 years in 2000. Obesity is defined as an age- and sex-specific BMI in the 95th percentile or greater. While the USPSTF found no evidence regarding appropriate screening intervals for obesity in children and adolescents, height and weight are routinely measured during health maintenance visits, which facilitates BMI calculation and screening for obesity.

No direct evidence exists regarding the benefits or harms of screening children and adolescents for excess weight. The value of screening is that it allows clinicians to identify patients who can be helped by interventions. The potential harms of screening have not been well studied, but are likely minimal.

IV. Interventions

**Recommendation:** In general, lifestyle-based weight loss interventions with ≥26 hours of intervention contact are likely to help reduce excess weight in children and adolescents. Evidence regarding pharmacotherapy interventions was inadequate.

**Details:** In a review of 42 trials (n=6956) of lifestyle-based interventions designed to produce weight loss, weight interventions with an estimated ≥26 hours over a 6- to 12-month period consistently showed more weight loss when compared with usual care, after 6 to 12 months, without evidence of harm. These lifestyle-based interventions used a variety of components including sessions targeting both the parent and child (separately, together, or both); offering individual sessions (both family and group); providing information about healthy eating, safe exercising, and reading food labels; encouraging the use of stimulus control (eg, limiting availability to tempting foods and screen time), goal setting, self-monitoring, contingent rewards, and problem solving; and supervised physical activity sessions. Successful, intensive interventions were usually conducted outside the primary care office and involved health care professionals, including primary care clinicians, exercise physiologists, physical therapists, dieticians, diet assistants, psychologists, and social workers.

Eight studies involving the use of metformin (1 good-quality study and 7 studies of fair quality; n=616) showed a greater reduction in BMI compared with placebo, but benefit in cardiometabolic parameters were equivocal. Four of 5 trials reporting fasting glucose values reported a small or no decrease in fasting glucose level with the use of metformin compared with slight increases with placebo. Similar equivocal results were noted for other glucose- and insulin-related outcomes, and none of the trials found a benefit in lipid profiles or blood pressure.

Similar results were found in 3 studies evaluating the use of orlistat (three fair-quality studies, n=779) in children and adolescents. Orlistat was shown to reduce BMI when used for 6 to 12 months when compared with placebo. Of these 3 studies, 2 studies evaluated cardiometabolic outcomes. In these studies, no significant changes were seen in glucose concentration, insulin levels, or lipid levels.

Behavioral programs with ≥52 contact hours over a 6- to 12-month period demonstrated greater weight loss than programs that had between 26 and 51 contact hours. Furthermore, the 52-hour arms showed some benefit in cardiometabolic risk factors. However, this is likely impractical for most families.
Comment: Keep in mind that the metformin and orlistat studies were conducted with participants who were severely obese. This could make extrapolation to practice challenging.

As for recommending behavioral programs with more contact hours, cost and time are each a reality. Rather than giving in to impracticality, consider the following triage strategy:
• Aim for more contact hours in your patients who are morbidly obese, making concerted efforts with this smaller contingent (perhaps 6% of obese patients).
• For the remainder, aim for more contact hours, but consider it a small victory when they commit to something, even if it is not the contact hours desired.

V. Additional Approaches From Other Organizations

The Community Preventive Services Task Force recommends behavioral interventions to reduce sedentary screen time among children aged ≤13 years.

The CDC recommends 24 community strategies to prevent obesity in children, including promoting breastfeeding, promoting access to affordable healthy food and beverages, promoting healthy food and beverage choices, and fostering physical activity in children.
USPSTF Evidence Grading System

A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. Providers should offer or provide this service.

B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate, or there is moderate certainty that the net benefit is moderate to substantial. Providers should offer or provide this service.

C - The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small. Providers should offer or provide this service for selected patients depending on individual circumstances.

D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. Providers should discourage the use of this service.

I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined. Providers should read the clinical considerations section of the USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

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References:


