

# 2007 Expert Committee Recommendations About the Treatment of Pediatric Obesity

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**E**pidemiologic analyses leave no doubt that we have witnessed a global epidemic of childhood and adolescent obesity over the past three decades. In the United States, prevalence rates of overweight and obesity have tripled for children aged 6–19 (from approximately 10% to 34%) and projections suggest that by 2015, just 6 years from the date of this publication, that rate could quintuple—getting frighteningly close to 50%.<sup>1</sup> Obesity-associated hospital costs (adjusted for inflation) more than tripled over just two of the prior decades (1979–1999),<sup>2</sup> with far greater healthcare costs likely to emerge over the ensuing decades. The human costs, measured in terms of

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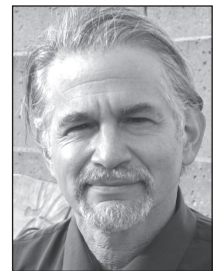
adverse quality of life, including negative psychosocial and vocational impact, are perhaps even more devastating.<sup>3</sup>

These alarming data led the Department of Health and Human Services to convene the first expert panel to dis-

cuss the evaluation and treatment of obese young people in 1997. Twenty representatives from 9 healthcare organizations (*e.g.*, American Academy of Pediatrics, American Dietetic Association, Centers for Disease Control and Prevention, U.S. Department of Agriculture) reached a consensus about evaluation and treatment of childhood obesity. In 2005, the American Medical Association, the Health Resources and Service Administration, and the Centers for Disease Control and Prevention asked representatives from 15 national healthcare organizations to form a new expert committee to update those initial recommendations, which were published in 1998.<sup>4</sup>

In December 2007, the new expert committee published a much more extensive set of recommendations than the 1998 recommendations: three times longer and with far more commentary about the scientific evidence pertaining to various aspects of treatment.<sup>5</sup> The key points of the new recommendations are summarized in Table 1, a scientifically derived four-staged approach to treatment.

“Stage 1: Prevention Plus” in the 2007 recommendations involves 3 to 6 monthly educational sessions for overweight and obese children and their families. A pediatrician or allied healthcare professional would suggest four daily eating and activity goals (*i.e.*, eat more fruits and



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vegetables, minimize sugary drinks, limit screen time to 2 hours or less, 1 hour or more of physical activity). The recommendations also suggest allowing children to regu-

late their own meals and to aim for weight maintenance for as much as 6 months. Failure to achieve maintenance of BMI level in the first stage should lead to “Stage 2:

**Table 1. Suggested Staged Approach to Weight Management for Children and Adolescents**

STAGE	COMPONENTS	WHERE IMPLEMENTED	IMPLEMENTED BY WHOM AND SKILLS NEEDED	FREQUENCY OF VISITS/DURATION BEFORE MOVING TO NEXT STAGE
1. Prevention plus	Recommend ≥5 servings of fruits and vegetables per day, ≤2 h of screen time per day, no television in room where child sleeps, and no television if <2 y of age. Minimize or eliminate sugar-sweetened beverages. Address eating behaviors (e.g. eating away from home, daily breakfast, family dinners, and skipping meals). Recommend ≥1 h of physical activity per day. Amount of physical activity may need to be graded for children who are sedentary; they may not achieve 1 h/d initially. Involve whole family in lifestyle changes. Acknowledge cultural differences.	Primary care office	Primary care provider or trained professional staff member (e.g., registered nurse)	Visit frequency should be based on accepted readiness to change/behavioral counseling techniques and tailored to patient and family. Provider should encourage more-frequent visits when obesity is more severe. Advance to more-intensive level of intervention depending on responses to treatment, age, health risks, and motivation. A child in this stage whose BMI has tracked in same percentile over time with no medical risks may have low risk for excess body fat. Clinicians can continue obesity prevention strategies and not advance treatment stages.
2. Structured weight management	Develop plan with family for balanced-macronutrient diet emphasizing small amounts of energy-dense foods. Because diet provides less energy, ensure that protein is high quality and sufficient to prevent loss of muscle mass. Increase structure of daily meals and snacks. Reduce screen time to ≤1 h/d. Increase time spent in physical activity (≥60 min of supervised active play per day). Instruct patient and/or parent in monitoring (e.g., screen time, physical activity, dietary intake, and restaurant logs) to improve adherence. Perform medical screening (e.g., vital signs, assessment tools, and laboratory tests).	Referral to dietitian; primary care office	Registered dietitian or physician/nurse practitioner with additional training, including assessment techniques, motivational interviewing/behavioral counseling (may need to provide specific information with environmental change and reward examples), parenting skills and managing family conflict, food planning (including energy density and macronutrient knowledge), physical activity counseling, and resources/referrals.	Monthly visits should be tailored to patient and family, based on family's readiness to change. Advance to more-intensive level of intervention depending on responses to treatment, age, health risks, and motivation.
3. Comprehensive multidisciplinary intervention	Distinguished from stage 2 by more frequent patient/provider contact, more active use of behavioral strategies, more-formal monitoring, and feedback regarding progress to improve adherence. Multidisciplinary approach is essential. Components of multidisciplinary behavioral weight control programs include (1) moderate/strong parental involvement for children <12 y of age; parental involvement should decrease gradually as adolescents increase in age; (2) assessment of diet, physical activity, and weight (body fat) before treatment and at specified intervals thereafter to evaluate progress; (3) structured behavioral program that includes at least food monitoring, short-term diet and activity goal setting, and contingency management; (4) parent/caregiver training to improve home food and activity environments; and (5) structured dietary and physical activity interventions that improve dietary quality and result in negative energy balance.	Primary care office can coordinate multidisciplinary care; weight management program (community), pediatric weight management center, or commercial programs with the following components: age-appropriate and culturally appropriate treatments; nutrition, exercise, and behavioral counseling provided by trained professionals; and weight loss goals of ≤2 lb/wk. Use primer 1 to evaluate commercial programs.	Multidisciplinary team with expertise in childhood obesity, including behavioral counselor (e.g., social worker, psychologist, trained nurse practitioner, or other mental health care provider), registered dietitian, and exercise specialist. Alternative could be dietitian and behavioral counselor based in primary care office, along with outside, structured, physical activity program (e.g., team sports, YMCA, or Boys and Girls Club program). For areas without services, consider innovative programs (e.g., telemedicine).	Frequent follow-up visits (weekly for a minimum of 8–12 wks is most efficacious) and then monthly follow-up visits. If not feasible, then telephone or other modalities could be used, with weight checks no less than once per month in local health care provider office (e.g., primary care provider or health department). Advance to more-intensive level of intervention depending on responses to treatment, age, health risks, and motivation.

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4. Tertiary care intervention	Continued diet and activity counseling plus consideration of meal replacement, very-low-energy diet, medication, and surgery.	Pediatric weight management center operating under established protocols (e.g., clinical or research) to assess and to monitor risks and outcomes; residential settings (camps or boarding facilities with appropriate medical supervision). Use primer 2 to evaluate centers.	Multidisciplinary team with expertise in childhood obesity, including behavioral counselor (e.g., social worker, psychologist, trained nurse practitioner, or other mental health care provider), registered dietitian, and exercise specialist. For areas without services, consider innovative programs (e.g., telemedicine).	According to protocol.

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Structured Weight Management.” In this stage, primary healthcare providers would monitor more closely similar target behaviors, facilitate more explicit planning by parents, and target minimal to modest weight losses for up to 6 additional months. In “Stage 3: Comprehensive Multidisciplinary Intervention,” frequency of sessions increases, specialists become more involved, and the intensity of behavioral change strategies increase. Table 2 indicates that for more overweight and older children and teenagers and those with more explicit comorbidities Stage 3 may begin sooner than usual. Finally, if warranted by lack of progress and degree of problem, obese young people and their families are encouraged to enter “Stage 4: Tertiary Care Intervention;” this stage involves even more intensive and specialized interventions, including potentially more restrictive diets, more intensive and structured activity prescriptions, medications, residential treatment (therapeutic camps or boarding schools), and bariatric surgery.

## Rationale for the Special Issue

It seems likely that pediatricians and other healthcare professionals will pay close attention to these new recommendations, studying them carefully during training and relying on them to make important decisions about how they can help stem the tide of the pediatric obesity epidemic. As such, the 2007 recommendations warrant close inspection and analysis. *Obesity Management* provides practical information derived from theorizing, research, and clinical experience. As such, it is an ideal forum for examining closely these potentially critical new recommendations.

This issue focuses on the opinions of four groups of healthcare providers who, like the proverbial blind men examining different parts of an elephant, were expected to differ in perspective based on their differential involvement with pediatric obesity. Each group used the same template to evaluate the recommendations. They identified the most and least useful aspects of the recommendations and then made suggestions about how to improve them. First, representing the primary target audience for the recommendations, two experienced pediatricians who are well known for their dedication and specialization as front-line healthcare professionals, provided their views. Second, a psychologist commented—based on 6 years of experience managing, evaluating, and publishing—about an innovative Stage 3: Comprehensive Multidisciplinary Intervention. The final two comments on Stage 4: Tertiary Care Treatments. An impressive multidisciplinary group from UCLA Medical School that specializes in bariatric surgery provided one of those comments. The writer and colleagues wrote the final paper based on their work developing or consulting with Wellspring—the operators of more than a dozen immersion programs (camps and boarding schools) in the U.S. and abroad.

In addition to four comments from four different perspectives, this issue includes: a “Comments on the Comments” within which the groups reacted to each others’ opinions; a review of seven of the more popular books for parents and teenagers on weight loss; and a review of one of the most useful websites pertaining to pediatric obesity. I hope that this issue will help you gain some insight or direction that you will use to help ameliorate this major worldwide health crisis. ■

**Table 2. Staged Treatment of Pediatric Obesity According to Age and BMI Percentile**

BMI PERCENTILE	AGE OF 2–5 Y	AGE OF 6–11 Y	AGE OF 12–18 Y
5th–85th (normal)	Prevention stage	Prevention stage	Prevention stage
85th–94th (over-weight) <sup>a</sup>	Start at Prevention Plus stage. Advance to structured weight management stage after 3–6 mo if increasing BMI percentile and persistent medical condition or parental obesity. Weight goal is weight maintenance until BMI of <85th percentile or slowing of weight gain, as indicated by downward deflection in BMI curve.	Start at Prevention Plus stage. Advance to structured weight management stage after 3–6 mo if increasing BMI percentile or persistent medical condition. Weight goal is weight maintenance until BMI of <85th percentile or slowing of weight gain, as indicated by downward deflection in BMI curve.	Start at Prevention Plus stage. Advance to structured weight management stage after 3–6 mo if increasing BMI percentile or persistent medical condition. Weight goal is weight maintenance until BMI of <85th percentile or slowing of weight gain, as indicated by downward deflection in BMI curve.
95th–98th	Start at Prevention Plus stage. Advance to structured weight management stage after 3–6 mo if not showing improvement. Weight goal is weight maintenance until BMI of <85th percentile; however, if weight loss occurs with healthy, adequate-energy diet, it should not exceed 1 lb/mo. If greater loss is noted, monitor patient for causes of excessive weight loss. <sup>b</sup>	Start at Prevention Plus stage. Advance to structured weight management stage depending on responses to treatment, age, degree of obesity, health risks, and motivation. Advance from structured weight management stage to comprehensive multidisciplinary intervention stage after 3–6 mo if not showing improvement. Weight goal is weight maintenance until BMI of <85th percentile or gradual weight loss of ~1 lb/mo. If greater loss is noted, monitor patient for causes of excessive weight loss. <sup>b</sup>	Start at Prevention Plus or structured weight loss stage depending on age, degree of obesity, health risks, and motivation. Advance to more-intensive level of intervention depending on responses to treatment, age, health risks, and motivation. Weight goal is weight loss until BMI of <85th percentile, with no more than average of 2 lb/wk. If greater loss is noted, monitor patient for causes of excessive weight loss. <sup>b</sup>
≥99th	Start at Prevention Plus stage. Advance to structured weight management stage after 3–6 mo if not showing improvement. Advance from structured weight management stage to comprehensive multidisciplinary intervention stage after 3–6 mo if not showing improvement and comorbidity or family history indicates. Weight goal is gradual weight loss, not to exceed 1 lb/mo. If greater loss is noted, monitor patient for causes of excessive weight loss. <sup>b</sup>	Start at Prevention Plus stage. Advance to structured weight management stage depending on responses to treatment, age, degree of obesity, health risks, and motivation. Advance from structured weight management stage to comprehensive multidisciplinary intervention stage after 3–6 mo if not showing improvement. After 3–6 mo with comorbidity present and patient not showing improvement, it may be appropriate for patient to receive evaluation in tertiary care center. Weight goal is weight loss not to exceed 2 lb/wk. If greater loss is noted, monitor patient for causes of excessive weight loss. <sup>b</sup>	Start at stage 1, 2, or 3 of treatment depending on age, degree of obesity, health risks, and motivation. Advance to more-intensive levels of intervention depending on responses to treatment, age, health risks, and motivation of patient and family. Advance from comprehensive multidisciplinary intervention stage to tertiary care stage after 3–6 mo with comorbidity present and patient not showing improvement. Patients may warrant tertiary care evaluation to determine next level of treatment. Weight goal is weight loss not to exceed average of 2 lb/wk. If greater loss is noted, monitor patient for causes of excessive weight loss. <sup>b</sup>

In most circumstances, the general goal for all ages is for BMI to deflect downward until it is <85th percentile. Although long-term BMI monitoring is ideal, short-term (<3-month) weight changes may be easier to measure. Resolution of comorbidities is also a goal.

<sup>a</sup>Children in this BMI category whose BMI has tracked in the same percentile over time and who have no medical risks may have a low risk for excess body fat. Clinicians can continue obesity prevention strategies and not advance treatment stages.

<sup>b</sup>Because Youth Risk Behavior Surveillance Survey responses indicated that 15% of teens practice some unhealthy eating behaviors, all teens should be evaluated for these symptoms. Providers should be especially concerned if weight loss is >2 lb/week in this age group and should evaluate patients for excessive energy restrictions by the parent or child/teen or unhealthy forms of weight loss (meal skipping, purging, fasting, excessive exercise, and/or use of laxatives, diet pills, or weight loss supplements).

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