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Position paper

Preventing Nutritional Disorders in Adolescents by Encouraging a Healthy Relationship With Food

The Society for Adolescent Health and Medicine

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A B S T R A C T

Nutritional disorders, including overweight, underweight, and/or nutrient deficiency, are a significant cause of morbidity and mortality. These disorders are frequently related to abnormal patterns of eating and/or physical activity, which commonly begin in adolescence and persist into adulthood. Abnormal eating and exercise behaviors may stem from an unhealthy relationship with food, which often takes root in preadolescence or early adolescence. To prevent eating disorders, overweight, underweight, and nutritional deficiencies in adolescence and beyond, health care providers need to proactively support early adolescents and their caregivers to develop a healthy relationship with food and their bodies. Anticipatory guidance, nutrition and exercise counseling, and encouragement of body positivity and healthy self-image during the vulnerable period of early adolescence can prevent maladaptive behaviors from emerging later on. Advocacy beyond the health care setting is also needed to ensure that adolescents are exposed to consistent and positive nutritional messaging. In this position article, authors from both the Nutrition/Obesity Committee and the Eating Disorder Committee of the Society of Adolescent Health and Medicine provide practical recommendations for health care professionals to guide their young patients and caregivers toward a flexible, balanced, and satisfying approach to nutrition that will lead to physical and emotional wellness throughout their lifetimes.

Positions of the Society for Adolescent Health and Medicine

1. Providers should proactively educate early adolescents and their caregivers about expected growth, development, and nutritional requirements throughout adolescence.
2. Medical recommendations for nutritional or activity changes should not be based solely on weight, body mass index (BMI), or BMI percentile.
3. All patients, regardless of weight, should be assessed for body image concerns at health surveillance visits. Caregivers should be warned about potential indicators of disordered eating and exercise behaviors.
4. Providers should base their nutritional counseling for all adolescents, regardless of their weights, on the total diet approach.
5. Providers should encourage adolescents to get most of their nutrition from unprocessed foods when possible.
6. Adolescent athletes may be at particular risk for an unhealthy relationship with food and body image concerns and require proactive nutritional anticipatory guidance from their providers.
7. Advocacy from health care providers is needed to improve the quality of nutritional messaging toward adolescents from schools, media, corporations, and public health organizations.

Statement of the Problem

Adolescence is a period of significant growth and development, with increased independence from caregivers. However, as adolescents start making nutritional choices independently, harmful nutritional behaviors may emerge. This may lead to the development of overweight, underweight, eating disorders, and/or micronutrient deficiencies with associated metabolic dysfunction, growth problems, or impairment of cognitive, psychosocial, and pubertal development [1,2].

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Many guidelines provide treatment recommendations for obesity and eating disorders once established. Existing literature [2,3] describes how obesity prevention and treatment can be approached to prevent the development of disordered eating and outline risk factors common to both obesity and eating disorders, including poor body image, unhealthy weight talk, weight-related teasing, and dieting. To reduce these risk factors, there is a need for more detailed provider guidelines on the earlier establishment of a healthy relationship with food among adolescents. A "healthy relationship with food" encompasses eating and exercise patterns, which not only meet physiologic needs, facilitate growth, and prevent disease but also promote body positivity, emotional neutrality toward food, and socialization and satisfaction around eating and exercise.

This position statement offers recommendations for providers for clinical practice, patient education, and advocacy to foster a healthy relationship with food among growing adolescents.

Methods

The positions outlined are based on literature review and collaborative expert consensus from interdisciplinary members of both the Nutrition/Obesity and Eating Disorder Committees of the Society for Adolescent Health and Medicine.

Positions and Recommendations

Position 1: Providers should proactively educate early adolescents and their caregivers about expected growth, development, and nutritional requirements throughout adolescence

A normative preoccupation with external appearance during adolescence, especially with rapid physical growth and pubertal changes, may trigger negative feelings toward food and weight [4]. Providers should prepare preadolescents and caregivers for expected increases in weight and height and changes in body composition throughout puberty, even after full stature is achieved. Such anticipatory guidance can prevent misinterpretation of normal growth and development as abnormal weight gain.

Disordered eating behaviors and body image dissatisfaction peak in adolescence, preceding the onset of both eating disorders and obesity [5]. Anticipatory guidance about positive self-image that goes beyond weight and shape and the importance of flexibility with eating and exercise patterns while ensuring needs are met should begin in early adolescence. Coaching caregivers to improve communication with their adolescents about positive food choices, body positivity, and avoidance of dieting can improve eating behaviors in adolescence [6].

Position 2: Medical recommendations for nutritional or activity changes should not be based solely on weight, BMI, or BMI percentile

Even when nutritional disorders are emerging, providers should discuss weight and nutritional status in a manner that promotes a healthy relationship with food, exercise, and self [1–3].

Height, weight, and BMI should be plotted on growth curves at every visit, including acute visits, to allow early detection of changes. Changes in growth trajectory, even if measurements remain within the "normal" range, should prompt further assessment. Caregivers and patients should be sensitively notified about deviations from growth curves and asked about any correlation to changes in eating patterns, physical activity, or significant life events. A comprehensive nutritional assessment should be conducted, including exploration of important contextual factors, such as food security, culture, gender roles, country development status, family and community dynamics, and environmental factors, as outlined by Kumar et al. [1]. Providers without sufficient training to conduct a comprehensive nutritional assessment should refer to a registered dietitian for evaluation.

Medical recommendations for caloric intake or activity changes should not be based solely on weight or BMI percentile, which do not account for multiple factors influencing an individual's optimal weight range at any given time. Interpretation of BMI should include consideration of family history, pubertal status, timing of pubertal onset, body composition, ethnicity, gender, level of physical activity, presence of cardiovascular or metabolic syndrome risk factors, and previous growth trajectories. Recommending weight changes, even when medically indicated, carries the risk of harm by stigmatizing body image and encouraging disordered eating and/or low self-esteem, so should be done cautiously.

Adolescents who could benefit from changes to caloric intake or physical activity should receive guidance about how to do so safely with close follow-up. The goals of management should be improved quality and appropriate quantity of food, healthy exercise patterns, reduction of comorbidity, and optimization of physical, socioemotional, and cognitive functioning, rather than the achievement of a particular weight [1–3,7]. Rapid weight loss or gain should never be encouraged or praised; clear parameters for maximally safe rates of weight change should be provided. Providers should make behavior-based recommendations adhering to empirically supported guidelines for adolescents and offer referrals for multidisciplinary support.

Position 3: All patients, regardless of weight, should be assessed for body image concerns at health surveillance visits. Caregivers should be warned about potential indicators of disordered eating and exercise behaviors

Poor body image frequently lays the foundation for an unhealthy relationship with food and is associated with the development of disordered eating in adolescence [8]. Assessment for body image concerns at health surveillance visits permits early detection of an unhealthy relationship with food and may prevent the onset of eating disorders, which occur in patients of all weight ranges [3,9].

Body image and self-valuation on the basis of weight should be gently explored. Screening questions related to body image, nutrition, and exercise practices may be incorporated into a comprehensive psychosocial assessment [10].

Educating caregivers to recognize disordered eating and exercise behaviors could lead to earlier intervention and better outcomes. Disordered eating behaviors may include restrictive eating, fasting, binging, dieting, food preoccupation, emotional eating, night eating, calorie counting, restriction of particular nutrients, unusual food combinations or rituals, diet product or laxative misuse, self-induced vomiting, and exercising excessively (especially without adequate energy intake, after dark, in secret, or at the expense of participation in other activities), any of which can occur in adolescents of any weight and are always

harmful [4]. Body dissatisfaction may manifest as a desire for a toned or muscular build rather than thinness, particularly in males; this may be accompanied by dietary changes, overuse of nutritional supplements, excessive weight training, or anabolic steroid abuse to increase muscularity [11]. Providers should consider early referral of adolescents with an unhealthy relationship with food or exercise to multidisciplinary eating disorder specialists, even if the patient does not yet meet criteria for an eating disorder.

Providers should not assume that a thin or toned body is necessarily desired by the adolescent. In many cultures, a larger body shape or weight may be considered ideal. Regardless, providers can encourage positive self-image and positive nutrition and exercise patterns.

Providers should consider the impact that food insecurity may have on eating behaviors. Food insecure adolescents may binge when food is available, eat emotionally because of toxic stress, or habitually restrict because of inconsistent food availability [12]. Adolescents who report binging or restrictive eating should be screened for both current and past food insecurity; the provider should validate how the experience of food insecurity changes eating behavior, offer resources for improving access to food, and offer suggestions for making the healthiest choices that are realistic, given the constraints that the adolescent faces.

Position 4: Providers should base their nutritional counseling for all adolescents, regardless of their weights, on the total diet approach

The total diet approach, recommended by the Academy of Nutrition and Dietetics, is the foundation for a healthy relationship with food [13]. It postulates that overall eating patterns are more important than individual foods eaten. All foods can fit into the approach if consumed in moderation, in appropriate portions, and in combination with physical activity. The approach discourages extreme nutritional behaviors, such as eliminating entire food or nutrient groups. The approach recognizes that many foods may have both beneficial and harmful effects. Thus, variety is necessary to meet nutrient needs over time [13,14]. Many nutrition programs and professional organizations support the total diet approach [14–17].

Adolescent nutritional needs are complex, individualized, and influenced by physiological, social, cultural, and psychological factors; providers should advise adolescents that this complexity is why there is no one “correct” way to eat. Trends of “clean eating” (i.e., the practice of rigidly avoiding foods that are not “pure” or sufficiently healthy) and popular restrictive diets, such as paleo or ketogenic diets, promote dichotomous thinking around food and are associated with disordered eating [18]. Categorizing foods as “good versus bad” or using frameworks that encourage restriction of particular foods may impede internal regulators of appetite and satisfaction [19] and may promote disordered eating [20]. Instead, providers should encourage the total diet approach to promote neutrality toward individual foods, emphasizing that overall nutritional patterns (eating every 3–4 hours, including all food groups in appropriate proportions) are more important than individual foods consumed [1,13]. Ultimately, eating should be pleasurable, varied, and economical. Nutritional programming and messaging should promote nonrestrictive and varied patterns of eating to promote health [21].

Position 5: Providers should encourage adolescents to get most of their nutrition from unprocessed foods when possible

Providers should explain to adolescents that calorie-dense but nutrient-poor foods (e.g., sweetened beverages, sugary cereals, and heavily processed foods) should not be consumed in lieu of required food groups or in quantities that would result in excessive caloric intake; however, as per the total diet approach [13], they also should not be vilified and can be enjoyed in appropriate portions as part of an overall healthy diet.

Providers should warn that micronutrient supplements cannot replace entire food groups. Food provides not only micronutrients but also macronutrients and energy to support metabolism and promotes satisfaction that comes from eating real food.

Meal replacement products (e.g., drinks, bars, and powders) are inadequate to meet adolescent nutritional needs and may give false assurance that needs are being met. Unless medically required, adolescents should be discouraged from substituting meal replacement products for real food groups [14].

Providers must recognize that food insecure adolescents often lack access to nutrient-rich foods. Adolescents should be universally screened for food insecurity; adolescents at risk should receive information about resources, programs, and food banks, which may improve access to nutritious options. Providers should sensitively brainstorm with adolescents and families about how to incorporate a variety of food groups from whatever options are available and affordable.

Position 6: Adolescent athletes may be at particular risk for an unhealthy relationship with food and body image concerns and require proactive nutritional anticipatory guidance from their providers

Primary care providers should collaborate with coaches, athletic trainers, and dietitians to ensure that athletes have a healthy relationship with food. Adolescents require education about the spectrum of healthy weights and body compositions that permit strong athletic performance and what energy and micronutrient intake is necessary to permit normal growth and socioemotional health while fueling physical activity [22]. Athletes need reminding that muscle mass contributes to a higher BMI but not in a way that increases nutritional risk. Registered dietitians can be helpful in educating adolescents about nutritional needs during rigorous training [23].

Amenorrhea should not be normalized among female athletes, as there can be underlying physical and/or emotional pathology [24]. Adolescents participating in activities with an emphasis on weight or shape (e.g., dance, gymnastics, figure skating, boxing, and wrestling) are at high risk for weight manipulation, disordered eating and body image concerns, and should be regularly screened for these [25].

Adolescents should be warned about the lack of demonstrated efficacy and potential dangers of many nutritional supplements marketed toward athletes.

Position 7: Advocacy from health care providers is needed to improve the quality of nutritional messaging toward adolescents from schools, media, corporations, and public health organizations

Schools play a critical role in encouraging a healthy relationship with food, as this is where students receive health

education and eat at least one meal per day. School-based interventions can reach adolescents widely through policy, systemic, and environmental modalities. Providers can assist schools in implementing evidence-based school nutrition guidelines, which have been developed collaboratively by health and education experts and include promotion of overall wellness, balanced nutrition, physical activity, and socioemotional health [26,27]. Ensuring that school meal programs and vending machines include appropriate combinations of food groups, with minimal calorie-dense but nutrient-poor snacks, may improve student food choices while in school [28–30]. However, they may have less influence on food choices outside of school and may not create sufficient improvements in overall diet quality; providing nutritious food choices in schools may have a larger impact on overall eating patterns, even outside of school, if combined with appropriate nutrition education [31]. The total diet approach should be used in nutrition education and food provision to teach students how to meet nutritional needs through a balanced intake of food groups while permitting occasional enjoyment of higher calorie snacks or drinks in appropriate portions. Providers can advocate for school meal programs that improve access to nutritious foods among all students, providing a particular safety net for low-income students. Providers should discourage mandatory "weigh-ins" and BMI report cards in schools, which have not been proven effective and may perpetuate weight stigmatization [32].

Social media and advertising may significantly influence food choices and body image among youth [33,34]. Providers can educate adolescents and their caregivers about how media images are often manipulated and distort reality. In addition to helping patients improve their media literacy, providers can advocate for age-appropriate media with representation of diverse body types, avoidance of body shaming, and emphasis on healthy eating patterns and enjoyable physical activity.

Providers can advocate against corporate advertising that targets vulnerable youth. For example, providers can voice concerns about the targeted marketing of calorie-dense but nutrient-poor food toward youth, commercial weight loss programs "designed" for adolescents but which may not account for their unique nutritional and activity needs, and the use of overly thin or muscular models in advertising geared toward adolescents.

Providers can encourage public health agencies to support principles of the total diet approach, accounting for dynamic individual eating practices and avoiding oversimplified messaging. Providers can advocate to allocate public health resources toward increasing access among adolescents in all communities to fresh and affordable fruits, vegetables, whole grains, dairy or dairy alternatives, and proteins, with safe spaces for physical activity. This requires national, regional, and local support and engagement with community leaders. Shifting our focus on adolescent nutrition to earlier stages of prevention is essential.

Summary

Providers must broaden their focus from treatment to prevention of nutritional disorders in adolescence. To do so, they must encourage adolescents and their caregivers during early adolescence to develop healthy relationships with food, which includes balanced eating patterns consistent with the total diet approach, enjoyable physical activity, and recognition of the role that food and exercise play in positive socialization and self-image. Engaging caregivers to corroborate these messages and create a healthy family culture around nutrition and exercise is equally important. Providers can advocate in multiple arenas where adolescent development and decision-making are influenced to encourage positive nutritional messaging in every environment where adolescents grow and thrive.

Prepared by:

Maya M. Kumar, M.D.
University of California San Diego School of Medicine
San Diego, California

Taylor Argo, M.D.
University of Minnesota School of Medicine
Minneapolis, Minnesota

Jane Chang, M.D.
Weill Cornell School of Medicine
Nerw York, New York

Nicole Cifra, M.D., M.P.H.
University of Rochester School of Medicine
Rochester, New York

Alicia Dixon Docter, M.S., R.D.N.
University of Washington School of Medicine and Seattle Children's Hospital
Seattle, Washington

Preeti M. Galagali, M.D.
Bangalore Adolescent Care and Counseling Centre
Bangalore, Karnataka, India

Cynthia J. Kapphahn, M.D., M.P.H.
Stanford University School of Medicine
Stanford, California

Janice D. Key, M.D.
Medical University of South Carolina
Charleston, South Carolina

Paulette Pitt, Ph.D.
University of Oklahoma School of Medicine
Oklahoma City, Oklahoma

Amy L. Weiss, M.D., M.P.H.
University of South Florida School of Medicine
Tampa, Florida

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