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Evaluation and management of overweight and obesity in children and adolescents – Current problems in pediatric and adolescent health care

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Foreword: Evaluation and management of overweight and obesity in children and adolescents



It is well-known and of concern that the prevalence of overweight and obesity has been rising significantly over the past decades within the United States as well as much of the rest of the world. This is true for pediatric/adolescent populations as well as for adults, and for both males and females. The Centers for Disease Control and Prevention (CDC) publishes a series of illustrations that demonstrate the increasing percentage of obesity within the population of each of the 50 states, year by year.¹ Just in the past decade, 12 states had a prevalence of obesity in 30–34% of their populations (dramatic in its own right); by 2018 there were 14 states where 34–39% were classified as obese.¹ For children and adolescents, the CDC indicated that in 2015–2016 the prevalence of obesity nationally was 13.7% of pre-school aged children (2–5 year-olds), 18.7% of school age children (6–11 year-olds), and 20.6% of adolescents (12–19 year-olds).²

We are devoting this issue of *Current Problems in Pediatric and Adolescent Health Care* to the topic of evaluating and managing overweight and obesity in children and adolescents. The first article presents what is currently known about the epidemiology, patho-physiology, and etiology of obesity in this population.³ Starting with a detailed look at the prevalence data, it goes on to address a number of questions related to the development of obesity: What happens to the different types of adipose tissue (white, brown, and beige) in those who are overweight or obese? How do various hormones interact in these patients? What causes the multiple medical consequences of

obesity? Genetic plus environmental factors, and the interactions between them, are also examined in the section on etiology.

Next is an article on the medical evaluation and management of children and adolescents with obesity.⁴ What questions need to be explored in obtaining the medical, nutritional, and psychosocial history? Which aspects of the physical evaluation need to be highlighted? What laboratory tests are recommended? Medical complications found in patients with obesity are discussed at length, including a wide range of orthopedic, gynecologic, hepatic, and metabolic issues, each requiring attention and follow-up.

The third article offers an overview of the approaches used in managing obesity within this youth population, including methods of counseling on diet and exercise, employing mobile apps and other digital methods, the use of the *MyPlate* and 5-2-1-0 initiatives as public health recommendations, school-based programs, pharmacotherapy, and bariatric surgery.⁵ Additional to providing the particulars of these methods, this article examines what the literature has to say regarding their outcomes.

In general, with the exception of bariatric surgery, the outcomes for the various approaches currently utilized in managing overweight and obesity in children and adolescents have been moderate at best, rarely yielding significant long-term results. A recent editorial published in *JAMA Pediatrics*⁶ laments this state of affairs: “Despite considerable time and effort spent encouraging healthy eating and more exercise, substantial

improvements in these behaviors on obesity outcomes have not been realized. Why? Because we are not translating evidence-based obesity-related guidelines into behaviorally sound recommendations for patients.” The authors advocate the implementation of principles from behavioral economics to have a greater impact on the behavioral changes described in the management article in this issue. Specifically, they call for behavioral counseling that emphasizes immediate benefits (since “individuals weigh immediate payoffs more heavily than future ones when considering trade-offs between two choices”), giving stepwise goals, rather than presenting the overall goals at one time (since “people become more motivated as they move closer to achieving a goal and less motivated when farther from that goal”), and keeping nutrition information simple (since “being overwhelmed with choices” often leads to “avoiding making any choice at all”). They point out that to date, the principles of behavioral economics have been studied mostly in adults and that the field includes additional principles (loss aversion, defaults, and social norms) that can be applied to weight management in children and adolescents. Their editorial serves to underscore how new directions in thinking can be and will need to be deployed in the years ahead.

It must be noted that most of the writing and editing of this issue took place before the onset of

the COVID-19 pandemic, the rest completed when many of those involved were sheltering in place along with much of the rest of the population. The effects of the pandemic and the quarantine on children and adolescents who generally have been at home with their families will generate a great deal of research across many fields. Undoubtedly, it will include the impact on the eating habits and weights of individuals of all ages and all communities.

References

1. Centers for Disease Control and Prevention: Adult Obesity Prevalence Maps. <https://www.cdc.gov/obesity/data/prevalence-maps.html>.
2. Ogden CL, Carroll MD, Fryar DC. Prevalence of obesity among youths by household income and education level of head of household - United States, 2011-2014. *Morb Mortal Wkly Rep* 2018;67(6):186–9.
3. Kerns J, Fisher M. Epidemiology, pathophysiology, and etiology of obesity in children and adolescents. *Curr Probl Pediatr Adolesc Health Care* 2020;50(9):100869.
4. Tassy A, Fisher M. The medical evaluation and management of children and adolescents with obesity. *Curr Probl Pediatr Adolesc Health Care* 2020;50(9):100874.
5. DiFiglia-Peck S, Feinstein R, Fisher M. Treatment of children and adolescents who are overweight or obese. *Curr Probl Pediatr Adolesc Health Care*.
6. Frank HR, Ubel PA, Wong CA. Behavioral economic insights for pediatric obesity: suggestions for translating the guidelines for our patients. *JAMA Pediatr* 2020;174(4):319–20.

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