MedStar Health

Expert Committee Recommendations

Regarding the Prevention, Assessment and Treatment of Child and Adolescent Overweight and Obesity

Clinical Practice Guideline

MedStar Health

"These guidelines are provided to assist physicians and other clinicians in making decisions regarding the care of their patients. They are not a substitute for individual judgment brought to each clinical situation by the patient's primary care provider-in collaboration with the patient. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but should be used with the clear understanding that continued research may result in new knowledge and recommendations".

MedStar Health has adopted the recommendations from:

1. The American Academy of Pediatrics 2007 Expert Committee Recommendations Regarding the Prevention, Assessment and Treatment of Child and Adolescent Overweight and Obesity http://www.pediatrics.org/cgi/content/full/120/Supplement_4/S164
2. The Pediatric Endocrine Society 2017 Practice Guideline; Pediatric Obesity—Assessment, Treatment, and Prevention: An Endocrine Society Clinical Practice Guideline https://doi.org/10.1210/jc.2016-2573
3. AAP Institute for Healthy Weight Management Childhood Obesity Algorithm https://ihcw.aap.org/Documents/Assessment%20%20and%20Management%20of%20Childhood%20Obesity%20Algorithm_FINAL.pdf
4. US Preventive Services Task Force. Screening for Obesity in Children and Adolescents US Preventive Services Task Force Recommendation Statement. *JAMA.* 2017;317(23):2417–2426. doi:10.1001/jama.2017.6803 https://jamanetwork.com/journals/jama/fullarticle/2632511
5. Skinner AC, Perrin EM, Moss LA,Skelton JA. Cardiometabolic risks and severity of obesity in children and young adults. *N Engl J Med*. 2015;373(14):1307–1317 http://www.nejm.org/doi/full/10.1056/NEJMoa1502821

Additional helpful tools and articles:

1. Let's Go Motivational Interview Guide https://mainehealth.org/-/media/lets-go/files/childrens-program/pediatric-family-practices/letsgomotivationalinterviewingguide.pdf?la=en

2. Prevalence of Obesity and Severe Obesity in US Children, 1999–2016, Skinner et al Pediatrics March 2018, VOLUME 141 / ISSUE 3 http://pediatrics.aappublications.org/content/141/3/e20173459

Key components of these recommendations:

Primary care providers should universally assess children for obesity risk to improve early identification and management of increased BMI, co-morbidities, and unhealthy eating and physical activity habits.

Background:

1. The prevalence of obesity in children in the US has been increasing since 1988, with particularly sharp increases in adolescents and 2-5 year olds.
2. Disparities exist in obesity prevalence with Hispanic and African American children having the highest rates.
3. Definitions
    a. Underweight - Age- and sex-specific BMI <5th percentile
    b. Healthy weight - Age- and sex-specific BMI 5% - <85th percentile
    c. Overweight - Age- and sex-specific BMI ≥85th percentile
    d. Class I Obesity - Age- and sex-specific BMI ≥95th percentile
    e. Class II Obesity - BMI >120% of the 95th percentile or a BMI of ≥35 (whichever is lower)
    f. Class III Obesity - BMI ≥140% of the 95th percentile or a BMI of ≥40 or greater (whichever is lower)
4. Obesity during childhood is associated with high blood pressure, dyslipidemia, and insulin resistance, asthma, obstructive sleep apnea, orthopedic difficulties, early maturation, polycystic ovarian syndrome (PCOS), and hepatic steatosis.
5. Risk Class II and III obesity have the strongest association with greater cardiovascular and metabolic risk.
6. Childhood obesity increases the risk of adult obesity.

Summary of primary care clinical recommendations:

1. Assess all children for obesity at all well care visits 2-18 years
2. Use body mass index to screen for obesity
    a. Accurately measure height & weight
    b. Plot BMI on growth chart
    c. Make a weight category diagnosis using BMI percentile
3. Measure blood pressure
    a. Use appropriate cuff size
    b. Identify and manage hypertension

       Norms: http://www.nhlbi.nih.gov/files/docs/guidelines/child_tbl.pdf

       Guidelines:

       Flynn JT, Kaelber DC, Baker-Smith CM, et al. Clinical Practice Guideline for Screening and Management of High Blood Pressure in Children and Adolescents. *Pediatrics.* 2017;140(3):E20171904

       http://pediatrics.aappublications.org/content/early/2017/11/28/peds.2017-3035

4. History: Assess behaviors and attitudes and access
    a. Nutrition (daily consumption/behaviors)
        i. Fruit and vegetable consumption
        ii. Eating out and family meals
        iii. Consumption of excessive portion sizes
        iv. Breakfast consumption
        v. Sugar-sweetened beverage or juice consumption
        vi. Portion size and proportions of food types (My Plate as model)
        vii. Access to healthy food

b. Physical activity behaviors
   i. Amount of moderate physical activity; 60 minutes per day recommended
   ii. Level of screen time and other sedentary activities, < 2 hours recommended
   iii. Access to physical activity
c. Attitudes
   i. Self perception or concern about weight
   ii. Readiness to change
   iii. Successes, barriers, and challenges
d. Psychosocial assessment including family dynamics, environmental stressors

5. Focused family history
   a. Obesity
   b. Type 2 diabetes
   c. Cardiovascular disease (hypertension, hyperlipidemia)
   d. Early death from heart disease or stroke
6. ROS and Physical Exam looking for co-morbidities and obesity-related conditions:

   Prediabetes/Diabetes: Acanthosis nigricans

   PCOS: hirsutism, excessive acne, striae

   Hypothyroid: Attenuated height velocity

   Genetic Syndromes: Developmental delay ->a. Extreme hyperphagia (Prader-Willi), b. Syndactyly/breachydactyly/polydactyly (Bardet/Biedl), Leptin deficiency

   Precocious puberty

   Gastrointestinal: Cholelithiasis, constipation, GERD

   Neurologic: Pseudotumor cerebri

   Orthopedic: Blount's Disease, Slipped capital femoral epiphysis (SCFE)

   Psychological/Behavioral Health: Anxiety, binge eating disorder, depression, teasing/bullying, family interaction

   Obstructive Sleep Apnea: Snoring, daytime sleepiness
7. Laboratory tests (fasting or non-fasting)
   a. 85-94 percentile (overweight) **without** risk factors
      i. Lipid profile
   b. 85-94 percentile (overweight) **with** risk factors
      i. ALT and AST, glucose and HgbA1c
      ii. Lipid profile
   c. ≥ 95 percentile (severe obesity)
      i. ALT and AST
      ii. Glucose and HgbA1c
      iii. Lipid profile
   d. Other lab tests per clinical indications
      i. Thyroid studies (TSH, free T4) for attenuated growth velocity
      ii. PCOS studies (Free and total testosterone, SHBG) if signs/symptoms
      iii. Genetic testing as indicated

8. Mental Health Screening using a standardized tool

9. Management
   a. <u>Develop an office based approach for management of overweight and obese children: Prevention Plus</u>
      - Intensive, age-appropriate, culturally sensitive, family centered
      - Family visits with provider preferably who has some training in pediatric weight management/behavioral counseling.
      - Can be individual or group visits.
      - Frequency – individualized to family needs and risk factors, consider monthly as improved outcomes with frequent visits.
      - Goals for management:
        1. Positive behavior change.
        2. Weight maintenance or a decrease in BMI velocity.

        Note: Children age 2 – 5 years who have obesity should not lose more than 1 pound/month; older children and adolescents with obesity should not lose more than an average of 2 pounds/week.
   b. <u>Motivational interviewing</u>
      Empathize/elicit – provide – elicit to improve the effectiveness of counseling
      - *Empathize/elicit* Assess self efficacy and readiness to change
        - Reflect
        - What is your understanding?
        - What do you want to know?
        - How ready are you to make a change (1-10 scale)?
      - *Provide*
        - Advice or information
        - Choices and/or options
      - *Elicit*
        - What do you make of that?
        - Where does that leave you?
   c. <u>Evidence-based counseling:</u>
      - Identify and set behavioral goals with child and family
      - Identify barriers, motivation and confidence in reaching goals
        - Consume at least 5 servings of fruits and vegetables daily
        - Avoid calorie-dense, nutrient poor foods
        - Eliminate sugar sweetened beverages and minimize juice
        - Choose water when thirsty
        - Minimize refined carbohydrates
        - Eliminate trans fats, limit saturated fat, include healthy fats such as olive and canola oils
        - Prepare more meals at home as a family (goal of 5-6 times week)
        - Limit meals outside of the home and choose healthy options
        - Eat a healthy breakfast daily
        - Avoid constant snacking, and choose healthy snacks
        - Be mindful of eating patterns related to emotions or boredom
        - Healthy self-esteem and body image
        - Involve the whole family in lifestyle changes and positive modeling

- Positive family communication
- Be physically active 1 hr or more each day
- Decrease screen time to 2 hrs./day or less
- Ensure adequate sleep (8-11 hours for children and adolescents)

d. Referrals, community-clinical linkages and advocacy

- Refer to behavioral health providers, nutritionist, endocrinologist, or geneticist (warm hand-off if possible) as needed for co-morbid concerns.
- Refer to community resources as indicated for improved access to healthy food, fresh fruits and vegetables and safe physical activity (WIC, SNAP, etc).
- Work with community partners to advocate for increased activity and access to healthy nutrition in schools and the community.

e. Identify or develop more intensive weight management interventions for families who do not respond to Prevention Plus after 3-6 months.
https://ihcw.aap.org/Documents/Assessment%20%20and%20Management%20of%20Childhood%20Obesity%20Algorithm_FINAL.pdf

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