



THE AMERICAN ACADEMY OF  
**PEDIATRICS**  
ARIZONA CHAPTER

**AzAAP White Paper**  
**Recommendations for Childhood Obesity Prevention, Assessment, and Treatment**

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## Executive Summary

Obesity in children and adolescents is increasing at an alarming rate in the United States.<sup>1,2</sup> Obesity and co-morbid conditions associated with obesity are a leading cause of morbidity and mortality. Some of the co-morbid conditions associated with obesity include cardiovascular disease, diabetes, and hypertension. These chronic diseases decrease the quality of life of those afflicted with them and contribute significantly to healthcare costs.<sup>3</sup> As more young people become obese, the disease burden will increase.

The costs associated with obesity are high and will increase in the absence of effective prevention and treatment. According to a Robert Wood Johnson report in 2007, childhood obesity is responsible for \$14 billion per year in direct health costs alone. A 2009 study by the Centers for Disease Control and Prevention, along with RTI International (a nonprofit research group), found that the direct and indirect cost of obesity is as high as \$147 billion annually. Prevention and early treatment of obesity are critical to stemming the tide of the obesity epidemic. The consensus of experts is that there must be adequate support and payment for clinician services for prevention, assessment and treatment of childhood obesity.<sup>4</sup>

Current data available for Arizona shows that over 25 percent of Arizona youth are overweight or obese and that this trend is worsening.<sup>5</sup> Additionally, surveys show that a majority of Arizona youth do not get the recommended amount of fruit and vegetable servings, and do not have adequate amounts of physical activity.<sup>6</sup> Children from lower socioeconomic backgrounds have additional barriers to recommended nutrition and physical activity standards, and are at a higher risk for being overweight and having associated co-morbid conditions that can negatively affect their health and ability to succeed in school and in the workplace.<sup>1,2</sup>

Pediatricians and clinicians caring for youth serve an important role in preventing and treating childhood obesity. In December, 2007, *Pediatrics* published a supplement issue dedicated to childhood obesity. Four articles were featured that summarized the recommendations of an Expert Committee for the prevention, assessment, and treatment of childhood obesity.<sup>7,8</sup>

In 2008, the Obesity Committee of the Arizona Chapter of the American Academy of Pediatrics began developing several initiatives to address childhood obesity. One accomplishment of the Committee was the development of the *5 2 1 0 AZ Way to Go!* Toolkit to assist clinicians and school nurses in implementing best practice recommendations to help children and youth achieve and maintain a healthy weight. After release of the Toolkit, the Committee then obtained a grant to study the effectiveness of the Toolkit, provide educational opportunities to clinicians, and obtain input from clinicians and school nurses on the need for additional tools and resources.

The results of the survey indicate that an overwhelming majority of clinicians perceive that:

- Insurance coverage for prevention, assessment and treatment of obesity is inadequate
- Inadequate payment for obesity-related services is a major barrier to providing optimum care.

- There are confusing and varying coverage policies and processes that clinicians must navigate to assist youth and families.

Given the significance of the childhood obesity epidemic, the Arizona Chapter of the American Academy of Pediatrics and its Pediatric Council believe that it is critical that clinicians and allied health professionals follow established best practices for childhood obesity prevention, assessment and treatment. Thus, a panel of experts consisting of pediatricians and pediatric nurse practitioners, pediatric specialists, a nutritionist and other allied health professionals was convened to review existing best practices and standards of care to develop recommendations that will:

- Guide clinicians in adopting and following best practices for the prevention, assessment, and treatment of childhood obesity
- Advocate for adequate payment for the prevention, assessment, and treatment of childhood obesity by describing optimum coverage public and private insurance companies/payers.

The Arizona expert panel has concluded that to safeguard best practices for prevention, assessment, and treatment of childhood obesity, public and private insurance companies should make certain that:

- Primary care providers are paid for all recommended best practice services to prevent, assess, and treat childhood obesity
- Adequate nutrition consult and follow up services are covered, and an adequate network is maintained for nutritionists who serve children
- Adequate pediatric specialty consult and follow up services are covered and an adequate network is maintained for pediatric specialists
- Policies and processes clearly describe how to obtain covered services for childhood obesity management and do not place undue burdens on primary care clinicians, specialists, and allied health professionals who try to obtain these services for patients

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## **DEFINITION**

- Obesity = BMI  $\geq 95^{\text{th}}$  percentile
- Overweight = BMI  $85^{\text{th}}$ - $94^{\text{th}}$  percentile
- Ideal weight = BMI  $5^{\text{th}}$ - $84^{\text{th}}$  percentile
- There is no longer a designation for “at risk for overweight”
- For children <2 yrs old, weight for height values should be assessed/monitored

## **ASSESSMENT**

### **RISK FACTORS**

#### *Familial Risk Factors*

Family history related to:

- Parental obesity
- Race and Ethnicity (Hispanic, African American, Native American)
- Hypertension
- Diabetes mellitus Type II
- Dyslipidemias
- Early heart disease or cardiovascular disease <55 yrs in men, <65 yrs in women
- Sudden or unexplained death in the family
- Gestational diabetes
- Non-alcoholic steatohepatitis

#### *Environmental Risk factors*

- Early care and education center (childcare) environment
- Lack of free play activities
- Use of food and physical activity as reward or punishment
- Lack of intake of quality, nutritious food at meals provided
- Lack of quality extended-hour programs that include physical activity and nutritious snacks
- Permits screen time (TV/DVD, computer, video games) for children over the age of 2 for one hour or more a day
- Permits screen time to children age 2 and under for any amount of time
- Use of juice as a beverage

School environment:

- Lack of 30 minutes of daily, compulsory physical education
- Lack of recess for 30 minutes each day (kindergarten thru grade 6)
- Lack of physical activity during recess
- Use of food and physical activity as reward or punishment
- Lack of intake of quality, nutritious food at school meals
- Lack of quality before and after-school programs that include physical activity and nutritious snacks

Community environment:

- Lack of community and worksite accommodations for breastfeeding/ pumping
- Lack of access to affordable, healthy food.
- Lack of access to stores, farmer's markets that sell nutrient-rich foods including whole grains, fresh fruits and vegetables, low fat and fat free dairy foods, etc. (food deserts)
- Lack of access to safe places to play including parks, schools, community centers, etc.
- Lack of a safe walkable/ bikeable community

## **BEHAVIORAL ASSESSMENT**

In assessing childhood obesity, the following multifaceted risk factors need to be discussed with families. Note that for older children and adolescents, behavioral risk factors will need to be assessed both in an individual context and from a family dynamics perspective.

Family food behavior:

- Lack of breast milk for the first 4-6 months of life
- Irregular family eating patterns
- Lack of family mealtimes
- Skipping breakfast
- Inadequate intake of nutrient rich foods from the following food groups: fruits, vegetables, whole grains, low fat and fat free dairy foods.
- Intake of sugar sweetened beverages > 6 oz/d (juice, soda/pop, sports drinks, energy drinks, etc.)
- Frequent intake of fried foods
- Frequent intake of energy dense, low nutrient foods (donuts, candy, cakes, chips, etc.)
- Large portion sizes or second helpings
- Snacks of low nutrient foods ("junk food")
- Family rules to eat all foods served ("clean your plate")
- Use of food as a reward or punishment
- Intake of high calorie, nutrient poor fast food and restaurant meals >2 times per week

Daily family activity behavior:

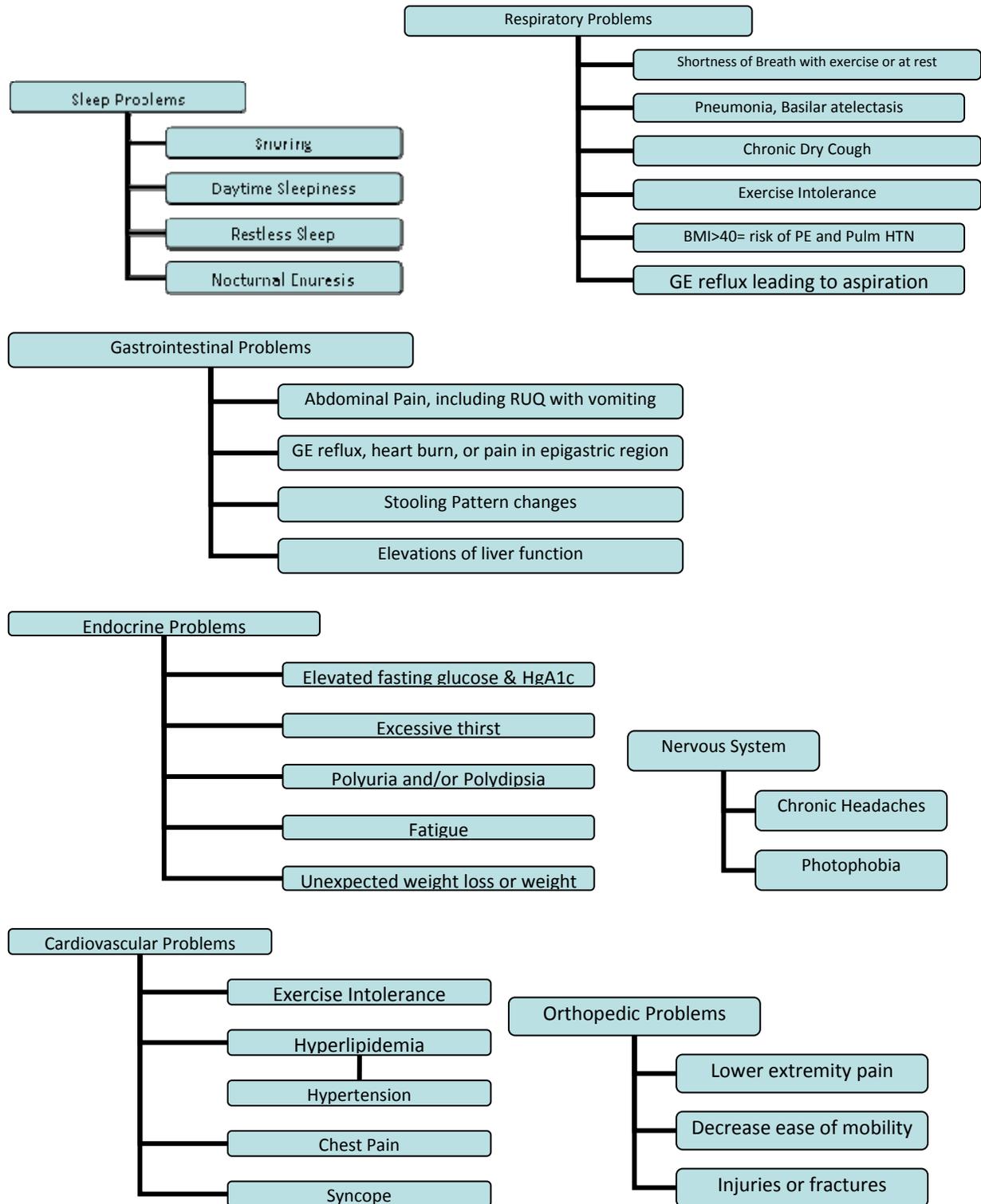
- Sedentary screen time
  - <2yo = more than 0 hours per day
  - >2yo = more than 2 hours per day
- Lack of moderate to vigorous physical activities for at least 60 minutes
- Lack of parental participation in physical activity with children

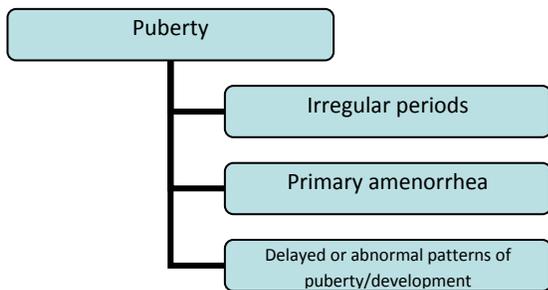
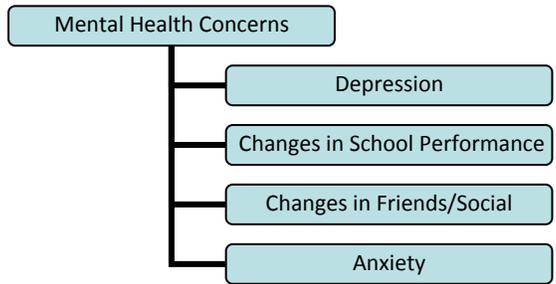
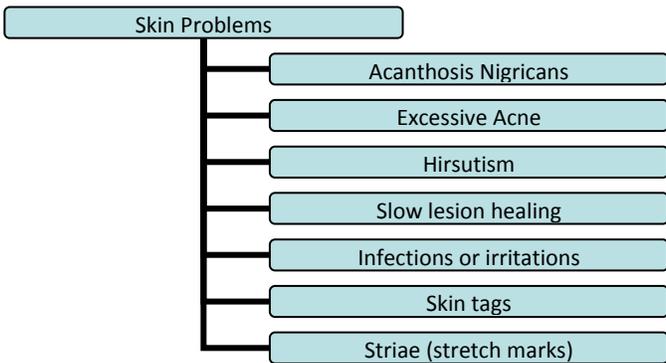
Other family behavior:

- Children with sleep <8hrs/night
- Bed-sharing contributing to inadequate sleep

## MEDICAL ASSESSMENT

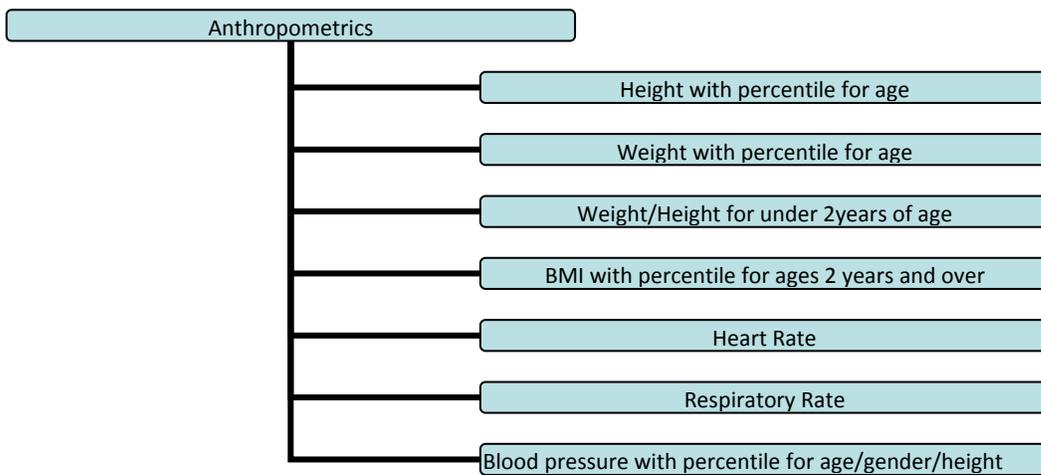
- Medical History

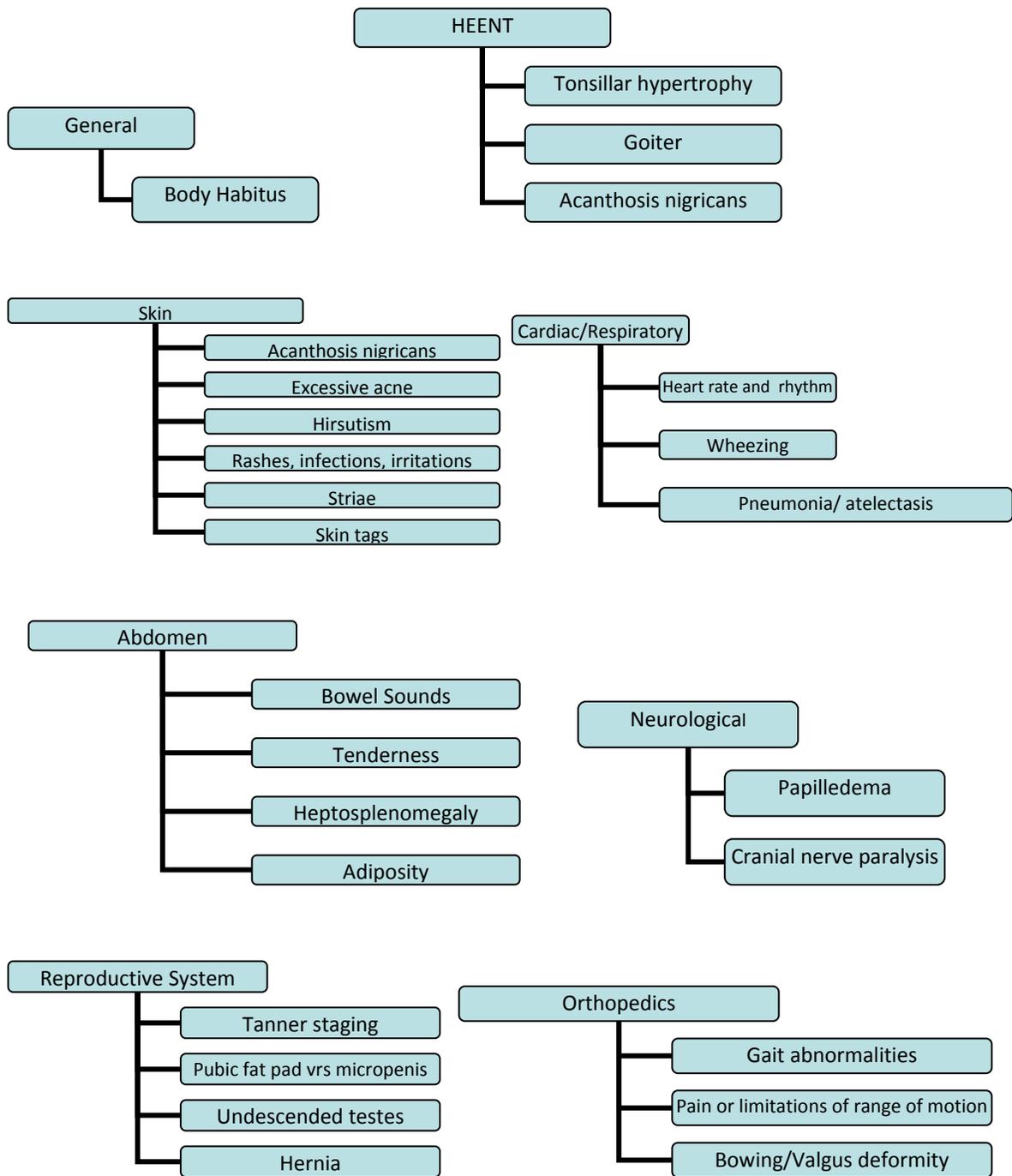




- Family History (see familial assessment section above)
- Dietary History (see behavioral risk factors above)
- Physical Activity History (see behavioral risk factors above)
  - Any symptoms experienced during exercise

Physical Exam





## LABORATORY ASSESSMENT

Laboratory testing should be individualized based on a patient's family history, risk factors, and BMI percentile. Suggested labs are as follows:

Clinical factors	Recommended Labs
<b>BMI 85-94<sup>th</sup>ile with no risk factors</b>	Fasting lipid panel (after 2 yrs of age-no later than 10 years of age*)
<b>BMI 85-94<sup>th</sup>ile with risk factors</b>	Fasting lipid panel (after 2 yrs of age-no later than 10 years of age*) Fasting glucose, ALT, AST (10 years or older)
<b>BMI 95<sup>th</sup>ile or above</b>	Fasting lipid panel (after 2 yrs of age-no later than 10 years of age*) Fasting glucose, ALT, AST, other testing as indicated by history and/or exam
<b>Any patient with hypertension:</b>	BUN, Creatinine, Urinalysis

\*Note: A fasting lipid panel screening is recommended to be done by 10 years of age for patients with elevated BMI percentile, and can be done at any time after the age of 2 years at the primary care provider's discretion. It is not required that a lipid panel be drawn at the age of 2 years.

**Refer to Treatment section below for intervention recommendations based on laboratory findings**

**Note:**

- **Elevated fasting glucose: (>99 mg/dl)**
- **Elevated LFTs: ALT >41 IU/L and AST > 50 IU/L**
- **Abnormal fasting lipid panel: Based on risk factors-see Table 2**

## CO-MORBIDITIES

Their presence during childhood and adolescence increases the risk of further disease and premature death in adulthood.

- **ENDOCRINE**
  - Insulin resistance
  - Type 2 Diabetes Mellitus
  - Hyperandrogenism/Polycystic ovarian syndrome (PCOS)
  - Alterations in growth and puberty
  - Hypothyroidism
  - Primary Cushing syndrome
  - Metabolic Syndrome

The Diagnosis of Metabolic Syndrome (ICD 277.0) can be made when a patient has 3 of the 5 criteria below:

Criterion	Adults	Adolescents
TG	≥ 150 mg/dl	≥110 mg/dl (100 mg/dl)*
HDL-c Males	< 40 mg/dl	≤ 40 mg/dl (45 mg/dl)*
HDL-c Females	< 50 mg/dl	≤ 40 mg/dl (50 mg/dl)*
Waist Circ. Males	>102 cm	≥ 90% (75 )*
Waist Circ. Females	> 88 cm	≥90% (75)*
Fasting Glucose	≥ 110 (100)*	≥110 (100)*
BP	≥ 130/85	≥90%

\*Alternate proposed criterion

- **CARDIOVASCULAR**
  - Hypertension
  - Dyslipidemias
  - Metabolic syndrome
  - Early development of atherosclerotic disease
- **GASTROINTESTINAL**
  - Non-alcoholic fatty liver disease
  - Cholelithiasis (gallstones)
  - Gastroesophageal reflux disease (GERD)
  - Constipation
  - Hemorrhoids
- **RESPIRATORY AND SLEEP PROBLEMS**
  - Obstructive sleep apnea
  - Obesity hypoventilation syndrome (aka Pickwickian Syndrome)
  - Asthma
- **ORTHOPEDIC**
  - Slipped capital femoral epiphysis
  - Blount Disease (tibia vara)
  - Increased risk for fracture
  - Musculoskeletal pain and misalignments of lower extremities

- PSYCHIATRIC/MENTAL HEALTH/PSYCHOSOCIAL<sup>9-21</sup>
  - Depression
  - Social isolation/ stigmatization
  - Poor self-esteem
  - Peer victimization/ bullying
  - Distorted body image
  - Anxiety
  - Disordered eating (including binge eating)
  - Quality of life
  - Behavior problems
- NEUROLOGIC/CENTRAL NERVOUS SYSTEM
  - Pseudotumor cerebri (idiopathic intracranial hypertension)
- SKIN/DERMATOLOGIC
  - Furunculosis
  - Intertrigo

## **Prevention**

Primary care pediatric clinicians have the advantage of long-term relationships with families, which afford the opportunity to continually emphasize healthy lifestyle choices that prevent childhood overweight and obesity.

All families should be provided information on healthy lifestyles including nutrition and activity appropriate for the developmental age of the child.

The AzAAP urges clinicians to use the 5210 message:

- 5 – Servings of fruits and vegetables per day
- 2 – Less than 2 hours of screen time per day (computers, TV, video games, cell phones)
- 1 – At least one hour of physical activity per day
- 0 – Zero or almost zero sweetened beverages such as soda, and sports or energy drinks

\*The AzAAP has created a clinician toolkit that can be viewed at: [www.azwaytogo.org](http://www.azwaytogo.org) <sup>22</sup>

Early care and education center (childcare) environment <sup>23</sup>

- Provides and participates in free play activities with children
- Rewards children with things not related to food or physical activity
- Does not take away food or physical activity as a form of punishment
- Prepares and/or serves quality, nutritious food at meals
- Enrolls children in quality extended-hour programs that include physical activity and nutritious snacks
- Provides activities so that children over the age of 2 years do not have more than one hour a day of screen time (TV/DVD, computer, video games)
- Provides activities so that children age 2 and under do not have any screen time
- Provides milk and water as a beverage (limits juice or sugar sweetened beverages)

## **Treatment and Intervention** <sup>24</sup>

The fundamentals of prevention and treatment of obesity in the pediatric population involve decreasing caloric intake and increasing energy expenditure. The ultimate aim is to achieve a permanent lifestyle change based on healthy habits. Family participation is an important element for treatment success since parents can serve as role models and authoritative figures to mold their children's eating and activity habits. Hence, weight management programs should focus on family engagement in the early stages of treatment to improve participation in family-based lifestyle changes.

PREVENTION: (These services are provided in the routinely scheduled well visit)

1. Goal: Healthy weight, BMI  $\leq$  85<sup>th</sup>ile, positive emotional health (good self-esteem and positive attitude about body and food)
2. Plot BMI percentiles for all children at least annually
3. Assess dietary intake, eating patterns/behaviors, and activity level at all well visits

4. Identify children most at risk for obesity due to history of obesity in one or both parents
5. Educate and encourage healthy family centered behaviors
6. Utilize educational resources to re-enforce information provided, such as AzAAP's 5-2-1-0 AZ Way To Go! clinician toolkit
7. Revisit at least annually, move to Stage 1 if a child is identified as overweight.

**PREVENTION PLUS (STAGE 1)** – Primary Care office services for children identified as overweight or obese.

1. Goal: Weight maintenance to allow height growth to result in BMI < 85%ile (See Table 1)
2. Use of motivational interviewing techniques- such as in the AzAAP's 5-2-1-0 AZ Way To Go! clinician toolkit
3. Explore knowledge and practice of healthy lifestyle as well as emotional health and motivation to change
4. Provide information on healthy lifestyle – with use of strategies such as 5-2-1-0 toolkit
5. Allow for step-wise or small changes at a time
6. Self-monitoring, including dietary intake and activity logs
7. Engage entire family in lifestyle changes and use reinforcement strategies for target behaviors
8. Treatment of hyperlipidemia as appropriate based on lab testing (See Table 2)
9. Follow up visits every 1-3 months for re-evaluation and encouragement
10. If no improvement in 3-6 months, move to stage 2

**STRUCTURED WEIGHT MANAGEMENT (STAGE 2)**-Primary Care office services with support from Other Clinicians (dietician, specialists) for children identified as overweight or obese

1. Goal: Weight maintenance or loss based on BMI, age, and comorbidities (See Table 1)
2. Strategies and goal similar to Stage 1
3. Develop family dietary plan with emphasis on balanced macronutrients, portion size, and limitation of calorically dense foods, and emphasis on dietary tracking/logs in conjunction with a registered dietician.
4. Planned and supervised moderate physical activity/play for one hour daily. Use of an exercise therapist if needed by the individual child and/or family
5. Planned reinforcement strategies for target behaviors
6. Treatment of hyperlipidemia as appropriate based on lab testing (See Table 2)
7. Follow-up at least monthly with clinician, and as needed with dietician and any needed specialists
8. If no improvement in 3-6 months, move to stage 3

**COMPREHENSIVE MULTIDISCIPLINARY INTERVENTION (STAGE 3)** – Specialized Program for children identified as obese who have not met the goals in Stages 1, 2

1. Goal: Weight maintenance or loss based on BMI, age, and comorbidities (See Table 1)
2. Strategies and goals continued from stage 2
3. Structured program of behavioral modification, preferably family centered, including short-term diet and physical activity goals, intake monitoring with emphasis on negative energy balance.
4. Multidisciplinary team including a medical clinician, a behavioral health provider, a registered dietician and other providers as needed, such as an exercise physiologist.
5. Systematic evaluation of anthropometrics, diet and physical activity, and emotional health
6. Continued use of motivational interviewing strategies and reinforcement strategies for target behaviors
7. Treatment of hyperlipidemia as appropriate based on lab testing (See Table 2)
8. Follow up visits weekly for at least 8-12 weeks and then monthly for at least 6 months  
If no improvement, move to stage 4

**TERTIARY CARE INTERVENTION (STAGE 4)**– Specialized program experienced in the treatment of obese children with co-morbidities who have not attained goals in stages 1-3

1. Goal: Weight maintenance or loss based on BMI, age, and comorbidities (See Table 1)
2. Strategies and goals from Stage 1-3 continue
3. Behavioral health counseling and specialty management continue as in Stage 3 intervention
4. Treatment of hyperlipidemia as appropriate based on lab testing (See Table 2)
5. Additional intervention strategies may be discussed by the multidisciplinary team:
  - a. Very low calorie diet
    - i. Few studies have been conducted with this strategy
  - b. Medications - There is currently only 1 FDA approved medication (Orlistat) for the treatment of obesity in children. This medication has modest benefits at best. As a result, other medications may be considered as deemed appropriate depending on the expertise of the prescribing provider. These medications should be used in the context of a comprehensive multidisciplinary approach. Medications are generally not effective when prescribed alone.
    - i. Orlistat (Xenical) blocks fat absorption from intestine by inhibiting lipase activity
      1. Approved by FDA for ages 12-18 years for BMI 2 units above 95%ile
    - ii. Metformin (Glucophage) improves the body's ability to respond to insulin
      1. Approved for ages 10years and above
      2. Not FDA approved for weight loss/control
    - ii. Phentermine
      1. Not FDA approved in children or for longtime use
      2. Minimal if any potential for addiction in longtime use
  - c. Surgical intervention
    - i. Bariatric surgery for selected adolescents with BMI >50Kg/m<sup>2</sup> or above 40Kg/m<sup>2</sup> with severe co-morbidities and who have failed Stage 3 intervention
    - ii. Patients and families should be psychologically stable
    - iii. Access to experienced surgeons and sophisticated multidisciplinary teams
    - iv. Comprehensive pre and post-operative evaluations

- ❖ Recommendation: While the current literature is insufficient to document evidence of effectiveness of specific treatments, the expert panel's consensus reported here is based on broad clinical experience and limited available data from studies. The significance of the epidemic of childhood obesity mandates that action be taken and not wait for completion of studies to begin intervention and prevention efforts. Risks and benefits of treatments should be considered by clinicians on tertiary multidisciplinary teams and updated as new data becomes available.

## **ASSESSMENT AND TREATMENT OF SPECIFIC CO-MORBIDITIES ASSOCIATED WITH CHILDHOOD OBESITY**

### **DYSLIPIDEMIA**

1. Education about the benefits of improved dietary intake and moderate aerobic physical activity should be the first line approach
2. Treatment with medications as appropriate based on labs (See Table 2)
3. If patient has hypertriglyceridemia with low HDL, use of Fish Oil/Omega 3 has been shown to be effective in adults
4. If laboratory findings do not improve in 6-12 months of dietary changes and physical activity, consultation with pediatric cardiology or endocrinology may be necessary
5. Follow up as appropriate based on monitoring of labs and any specialist recommendations

## HYPERTENSION

1. Ensure that the appropriate sized blood pressure cuff has been utilized and plot the results against age, gender, and height normative percentiles
2. Repetitive blood pressure readings to help rule out “white coat” hypertension
3. Children with hypertension should have screening labs-BUN/Cr, and urinalysis
4. Secondary causes of hypertension, including cardiac and renal, should first be excluded. Consider consultation with pediatric cardiology and/or pediatric nephrology to rule out an underlying cause
5. Treatment for primary hypertension includes therapeutic lifestyle change as the first line approach. Medications should be used as appropriate, if lifestyle changes do not improve blood pressure or if recommended by a specialist
6. Uncomplicated hypertension should not be a reason to restrict children from participating in physical activities, with the exception of vigorous isometric exercise, such as heavy weight lifting or power lifting

## DIABETES MELLITUS/INSULIN RESISTANCE

1. Children over 10 years or older who have a BMI at or above the 85<sup>th</sup> percentile with risk factors or who have a BMI at or above the 95<sup>th</sup> percentile should be screened with a fasting glucose level. Seek specialist consultation if needed
2. First line treatment for diabetes/insulin resistance remains dietary changes and increasing physical activity
3. Consultation with pediatric endocrinology for laboratory findings that fail to improve with therapeutic lifestyle changes may be considered
4. Follow up as appropriate based on monitoring of labs and any specialist recommendations

## STEATOSIS/STEATOHEPATITIS

Definition: NAFLD (non alcoholic fatty liver disease) includes both 1) Hepatic Steatosis: fat retention in liver cells and 2) Steatohepatitis or NASH: fat associated with inflammation and fibrosis which may progress to end stage liver disease.

1. Children 10 years or older who have a BMI at or above the 85<sup>th</sup> percentile with risk factors or who have a BMI at or above the 95<sup>th</sup> percentile should be screened for elevated liver enzymes-ALT and AST
2. Consultation with pediatric gastroenterology/hepatologist may be considered for patients found to have abnormal liver enzymes
3. Children with abnormal liver enzymes should be screened for hepatitis A, B and C, Wilson’s disease (ceruloplasmin), Alpha 1 antitrypsin deficiency (A1AT phenotype) and autoimmune hepatitis (quantitative IgG, ANA, ASMA, Anti LKM). Screening can be done at PCP or GI specialist
4. Liver ultrasound may be considered to confirm fatty infiltration (hyperechogenicity)
5. A liver biopsy may be required for confirmation, grading, and staging of the diagnosis
6. First line treatment for steatosis/steatohepatitis includes dietary changes and increase physical activity
7. No specific treatment regimes are currently standardized in children. Vitamin E 800 IU has been shown to improve biochemical and histological measures in adults with NASH. Treatments that specialists may consider include:
  - a. Antioxidants, such as vitamin E, selenium, UDCA, and betaine
  - b. Medications that are used to treat diabetes, such as metformin
  - c. Anti-inflammatory such as probiotics and pentoxifylline
8. Follow up as appropriate based on monitoring of labs and any specialist recommendations

**TABLE 1: WEIGHT MANAGEMENT GOALS BASED ON BMI +/- COMORBIDITIES**

	<b>BMI 85-94<sup>th</sup>ile</b> <b>No co-morbidities</b>	<b>BMI 85-94<sup>th</sup>ile</b> <b>With co-morbidities</b>	<b>BMI 95-98<sup>th</sup>ile</b>	<b>BMI <math>\geq</math>99<sup>th</sup>ile</b>
<b>Age 2-5</b>	Maintain wt velocity	Decrease wt velocity or wt maintenance	Wt maintenance	Gradual wt loss up to 1 lb/mo if BMI >21
<b>Age 6-11</b>	Maintain wt velocity	Decrease wt velocity or wt maintenance	Wt maintenance or gradual loss (1lb/mo)	Wt loss (avg. 2lb/wk)
<b>Age 12-18</b>	Maintain wt velocity. After linear growth complete, weight maintenance	Decrease wt velocity or wt maintenance	Wt loss (avg. 1-2lbs/wk)	Wt loss (avg. 2lb/wk)

**TABLE 2: HYPERLIPIDEMIA TREATMENT (LIPID PANEL NORMAL VALUES TO AIM FOR BASED ON RISK FACTORS\*)**

	<b>Normal (no risk factors)</b>	<b>Normal (1 risk factor)</b>	<b>Normal (<math>\geq</math> 1 risk factor)</b>
<b>Total cholesterol</b>	$\leq$ 180	$\leq$ 180	$\leq$ 180
<b>Triglyceride</b>	$\leq$ 150	$\leq$ 150	$\leq$ 150
<b>HDL</b>	$\geq$ 45	$\geq$ 45	$\geq$ 45
<b>LDL</b>	$\leq$ 130	$\leq$ 110	$\leq$ 100

**As stated in this treatment section, first line treatment for abnormal lipid panel findings is always therapeutic lifestyle changes. If this is not effective in 3-6 months, additional treatment is recommended.**

**\*Risk Factors to consider:**

- Family history of Familial Hyperlipidemia
- Family history of early coronary artery disease in a primary relative
- Patient with a diagnosis of diabetes
- Patient with a diagnosis of hypertension
- BMI >85%

# **AzAAP Childhood Obesity Prevention, Assessment and Treatment Coding Tool for Primary Care Clinicians**

## **Prevention:**

During well child care visits: assess weight for length percentile for ages 1 to 2 years, plot BMI percentile for ages 2 years and up, assess for risk factors, discuss 5 2 1 0, and assist in providing resources to maintain a healthy weight

- For new patient use 99381-99385 plus appropriate ICD-9 or V code
- For established patient use 99391-99395 plus appropriate ICD-9 or V code

## **V codes**

- V85.52- BMI 5th-85th percentile (healthy weight)
- V85.53 – BMI 85th – 95th percentile (overweight)
- V85.54 – BMI >95th percentile (obese)

## **Stage 1: Prevention Plus (children identified as overweight or obese):**

- Initial Visit
  - During the well visit: assess weight for length percentile for ages 1 to 2 years, assess for risk factors, plot BMI percentile for ages 2 years and up , establish goals for weight maintenance or loss, engage family and develop a working plan
  - For new patient use code 99381-99385 plus appropriate ICD-9 or V code
  - For established patient use code 99391-99395 plus appropriate ICD-9 or V code
  - *If a significant and separately identifiable service is performed, an E/M code 99201-99215 can be used with an attached 25 modifier*

During a sick visit or problem focused visit, if time allows and a concern arises about overweight or obesity, assess weight for length percentile for ages 1 to 2 years, plot BMI percentile for ages 2 years and up, assess for risk factors, establish goals for weight maintenance or loss, engage family and develop a working plan. The physician should make sure they code appropriately based on time, complexity, counseling and education.

- 99212 –Outpatient visit (typically 10 minutes)
  - 99213 – Outpatient visit (typically 15 minutes)
  - 99214 – Outpatient visit (typically 25 minutes)
  - 99215 – Outpatient visit (typically 40 minutes)
- Follow Up Visits (or problem focused visits)
    - After the initial well visit or during a problem focused visit in which a child is identified as overweight, schedule follow up visits every 1-3 months to assess progress over the next 3-6 months. These follow up visits will be outside of the well visit
    - Physicians providing behavioral assessment and intervention should use E/M codes 99212-99215. The physician should make sure they code appropriately based on time, complexity, counseling and education

- Health and Behavioral Assessment/Intervention and Medical Nutrition Therapy Codes (96150-96155 and 97802-97804) see allied health professional codes below) may be used ONLY if these service providers are available within the primary care office

### **Stage 2: Structured Weight Management (Primary care plus support)**

This stage is for a patient who needs services beyond those that could be provided by a primary care clinician's office. Additional services may include an assessment by a registered dietician and/or behavioral health provider, as well as utilization of exercise programs appropriate for youth.

Primary care clinicians continue to use E/M codes 99212-99215 for follow up visits as above and initiate additional services as appropriate. Check with insurance companies regarding coverage of and prior authorization requirements for nutrition and behavioral health services.

### **Stages 3 and 4:**

These stages are for patients who need more intensive weight management interventions than what can be provided in the primary care office with support. However, primary care clinicians should still follow these patients in addition to the specialized care providers. Step 3 includes comprehensive, multidisciplinary intervention (ie. Gastroenterologist, Endocrinologist, Cardiologist, Bariatrician). Step 4 includes tertiary care center intervention for more intensive management.

### **Examples of ICD-9 Codes clinicians could document when applicable**

783.1 – Abnormal weight gain	V18.0 – Family history DM
272.0 – Hyperlipidemia	401.9 – Hypertension
701.2 – Acanthosis	V17.49 – Family history heart disease
272.4 – Other Hyperlipidemia	277.7 – Insulin Resistance

### **Codes for use by allied health professionals, behavioral providers and dietitians/nutritionists**

#### Behavioral Intervention

- 96150 – Health & behavioral assessment (each 15 minutes face to face with patient)
- 96151 – Health & behavioral re-assessment (each 15 minutes face to face with patient)
- 96152 – Health & behavioral intervention (each 15 minutes face to face, individual)
- 96153– Health & behavioral intervention (each 15 minutes face to face, group 2 or more patients)
- 96154– Health & behavioral intervention (each 15 minutes face to face, family-with patient present)
- 96155– Health & behavioral intervention (each 15 minutes face to face, family-without patient present)

#### Nutrition

- 97802– Medical Nutrition Therapy, initial (each 15 minutes face to face with patient)
- 97803– Medical Nutrition Therapy, re-assessment (each 15 minutes face to face with patient)
- 97804– Medical Nutrition Therapy, group (each 30 minutes, 2 or more patients)

## AzAAP Payment Proposal-Childhood Obesity Stages 1 and 2

Services	BMI: 85 <sup>th</sup> – 94 <sup>th</sup> percentile	BMI: over 95 <sup>th</sup> percentile
General Primary care/Pediatric visits	At least 4 per year	At least 4 per year with additional visits covered as needed to cover obesity management
Registered Dietitian/Nutritionist visits	6 visits per year	6 visits per year minimum with 6 additional visits covered if BMI is not improved with initial 6 visits
Behavioral health Assessment and Treatment	Evaluation as indicated based on PCP assessment with follow-up visits covered as needed	Evaluation as indicated based on PCP assessment with follow-up visits covered as needed
Subspecialty visits (e.g. Endocrine, GI, Ortho, Cards, Pulm)	Evaluation as indicated based on PCP assessment with follow-up visits covered as needed	Evaluation as indicated based on PCP assessment with follow-up visits covered as needed
Laboratories – screening for co-morbidities, continued follow-up of co-morbid conditions	Covered as needed based on lab assessment recommendations (see AzAAP Position Paper assessment and treatment section)	Covered as needed based on lab assessment recommendations (see AzAAP Position Paper assessment and treatment section)

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The Arizona Chapter of the American Academy of Pediatrics (AzaAP) is committed to improving the health of Arizona children and supporting the pediatric professionals who care for them.

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