

# Obesity Treatment & Approach in the Primary Care Office

Consistent with the 2023 AAP Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents with Overweight & Obesity (CPG) & associated algorithm. # Denotes content directly quoted or paraphrased from the CPG. + Denotes expert opinion.

## Obesity Treatment Principles<sup>#</sup>

- Evidence based obesity treatment is effective and does not cause harm.
- Treat patients with overweight and obesity promptly, using the most intensive comprehensive obesity treatment available.
- Treat obesity concurrently with any comorbidities.
- Use a non-stigmatizing approach to treatment and shared decision making, following principles of the medical home and chronic care model.
- Evidence-based treatment strategies include: motivational interviewing (MI), intensive health behavior and lifestyle treatment (IHBLT), pharmacotherapy and surgery. (See additional information on Page 2.)

## Key Aspects of Comprehensive Obesity Treatment<sup>#</sup>

Obesity is a complex chronic disease that requires a holistic patient-centered approach. Ensure that these elements are happening for your patient either within your office or via referrals you coordinate.

### Provide or ensure ongoing medical evaluation & monitoring

- What is happening with this patient and family physically, emotionally, and socially?

### Develop & implement an individualized comprehensive treatment plan, using evidence-based strategies (Refer to Page 2).

- What can help the patient & family develop & reach treatment goals and treat comorbidities?

### Tailor treatment as needed (See below & page 2).

- What else is needed to support the patient & family's immediate needs & longitudinal treatment progress?

### Serve as medical home

- What care coordination and/or advocacy does this patient/family need?

## Role of the Pediatric Healthcare Provider (PHCP) +

The PHCP plays a critical role in supporting all patients and families in comprehensive obesity treatment and ensuring ongoing continuity of care, regardless of treatment scenario.

Treatment Scenarios	Role of PHCP		
	Provide Medical Evaluation & Monitoring	Deliver, Support & Refine Obesity Treatment Plan	Serve as Medical Home
Patient provided with most intensive obesity treatment possible within primary care	✓*	✓*	✓
Patient referred to community or healthcare partner for IHBLT	✓^	✓^	✓
Patient referred to pediatric weight management specialty program			✓

^ Consider seeing patient again at the midpoint and conclusion of the IHBLT program or a minimum of every 3 months unless taking weight loss medication or has comorbid condition that requires more frequent visits

\* Ideally see at least monthly. Increase as needed or desired by patient or if more intensive medical monitoring is required.

## Suggested Approach to Treatment In Your PCP Office +

Below are example treatment visit structures that align with CPG recommendations. Note: they are not the only ways to implement CPG recommendations.

### Initial Overweight & Obesity Treatment Visit

**Goals: Finish gathering important information, assess motivation & develop tailored treatment plan**

- Cover any items missed in well visit and/or address concerns
- Assess any changes in patient history or medical status
- Review labs & diagnostic test results
- Discuss comorbid conditions, if relevant
- Assess readiness and motivation
- Collaboratively develop individualized treatment plan (using evidence-based tools: MI, IHBLT, pharmacotherapy, & surgery)
- Agree to meet again in a month & connect to relevant community resources

#### Operational Tips:

- Plan for at least a 45-60 minute visit. Consider time-based billing codes: 99204-99205 (new patient) and 99215 (established patient).
- Schedule within 1 month of well visit.

### Ongoing Overweight & Obesity Treatment Visit

**Goals: Support family in their treatment plan, continue medical monitoring & refine treatment plan as needed**

- Monitor BMI
- Assess any changes in patient history or medical status
- Treat comorbid conditions
- Use MI to support behavioral goals
- Monitor progress with IHBLT
- Monitor pharmacotherapy & surgery if applicable
- Refine treatment plan as needed
- Coordinate care & connect to relevant community resources

#### Operational Tips:

- Plan for at least a 20-25 minute visit at least monthly if providing IHBLT. Consider time-based billing codes: 99213-99215 (established patients).
- If IHBLT is external, consider seeing every 3 months or at midway & conclusion of program unless patient is on medication or has comorbid conditions.

## Strategies to Intensify Care

(when no pediatric weight management specialty program or IHBLT is available)

### Frequency & Dosage<sup>#</sup>

- Increase number of touchpoints
- Decrease time between contacts



### Community-clinic Connections<sup>#</sup>

Partner with community or other healthcare entities to adopt evidence-based IHBLT programs, or connect patients with existing community resources



### Multiple Formats + Explore:

- Group visits
- Telehealth
- Virtual touchpoints



**Multi-disciplinary Approach<sup>#</sup>**  
Integrate additional providers (Dietitian, Physical Therapist, Health Educator, Behavioral Health Specialist, etc.)





**Motivational Interviewing:** Use MI to engage patients and families in treating overweight and obesity.

MI is a tool used aimed at encouraging nutrition and physical activity behavior change. MI can be effective even in low-intensity settings. The table below summarizes ways to use MI processes to evaluate and respond to patient *readiness to change*.

MI Process	Goal	Possible MI Tool
<b>Engaging</b>	Establishing collaborative role, understanding patient issues	Open-ended questions, affirmations, nonjudgmental graphics, empathic reflections
<b>Focusing</b>	Identifying appropriate and productive strategies to change weight status	Readiness ruler, elicit-provide-elicited, healthy habits survey, identifying and responding to change talk and sustain talk
<b>Evoking</b>	Triggering internal motivation, empowering change	Values statement, double-sided and amplified reflections
<b>Planning</b>	Carrying out effective change plan, dealing with relapse	Readiness ruler, action reflections, summarization, teach back, SMART goals (specific, measurable, achievable, realistic, and timely)



**Intensive Health Behavior & Lifestyle Treatment:** Provide or refer children ages 6 years and older and may provide or refer children ages 2-5 years with overweight or obesity to intensive health behavior and lifestyle treatment.

IHBLT is the foundational approach to achieve body mass reduction in children. It is rooted in strong evidence. The table below describes key components of evidence-based IHBLT. To learn more about existing evidence-based IHBLT programs, visit [www.aap.org/obesitycpg](http://www.aap.org/obesitycpg).

<b>Who</b>	Patient and family in partnership with a multidisciplinary treatment team (e.g., PHCPs with training in obesity as well as other professionals trained in behavior and lifestyle fields such as dietitians, exercise specialists and behavioral health practitioners)
<b>When</b>	Promptly for child or adolescent with overweight or obesity
<b>What</b>	<ul style="list-style-type: none"> <li>Health education and skill building on multiple topics (i.e., both nutrition &amp; physical activity; also, mental health, parenting skills, stigma &amp; bias, sleep, and reducing sedentary screen time)</li> <li>Behavior modification and counseling</li> </ul>
<b>Where</b>	<ul style="list-style-type: none"> <li>Healthcare setting</li> <li>Community-based setting with linkage to medical home</li> </ul>
<b>Dosage</b>	Longitudinal treatment across 3-12 months with ideally ≥26 contact hours
<b>Format</b>	Group, individual, or both
<b>Channel</b>	Face-to-face (strongest evidence), virtual (growing evidence)

<p><b>Evidence-based Behavioral Strategies to Explore with MI &amp; IHBLT</b></p> <ul style="list-style-type: none"> <li>Reduction in sugar-sweetened beverages</li> <li>Nutrition education and counseling</li> <li>60 minutes of moderate to vigorous physical activity daily</li> <li>Reduction in sedentary time</li> <li>Age-appropriate amount of sleep</li> </ul>	<p><b>Considerations for Evaluation of IHBLT Programs</b></p> <ul style="list-style-type: none"> <li>Consistent with evidence-based standards</li> <li>Non-stigmatizing, empathetic, family-centered</li> <li>Developmentally appropriate</li> <li>Consistent with chronic care model</li> <li>Values partnership with the medical home</li> </ul>
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**Pharmacotherapy:** Offer adolescents ages 12 years and older with obesity weight loss pharmacotherapy, according to medication indications, risks, and benefits, as an adjunct to health behavior and lifestyle treatment.

The use of weight loss medications require oversight and expertise in management as do other medications used in pediatric care. PHCPs who prescribe weight loss medications should have knowledge of the patient selection criteria, medication efficacy, adverse effects, and follow-up monitoring guidelines. Also, consider patient's current medications and whether any are weight promoting, and if so, consider suitable alternatives. Refer to Weight Loss Medication Use & Mechanism Table on Page 3 for more detailed information on selected medications.



**Surgical Interventions:** Offer referral for adolescents ages 13 and older with severe obesity for evaluation for metabolic and bariatric surgery to local or regional comprehensive multidisciplinary pediatric metabolic and bariatric surgery centers.

PHCPs should be familiar with clinical and anthropometric benchmarks, which serve as a prompt for the initiation of referral discussions.

Weight Criteria	Criteria for Comorbid Conditions
Class 2 obesity, BMI ≥ 35 kg/m <sup>2</sup> or 120% of the 95th percentile for age and sex; whichever is lower	Clinically significant disease, including T2DM, IIH, NASH, Blount Disease, SCFE, GERD, hypertension, and obstructive sleep apnea (AHI > 5)
Class 3 obesity, BMI ≥ 40 kg/m <sup>2</sup> or 140% of the 95th percentile for age and sex; whichever is lower	Not required but commonly present

**Note:** A referral to a comprehensive metabolic and bariatric surgery center with experience and expertise in treatment of patients younger than 18 years doesn't necessarily mean the child will have surgery.

## Weight Loss Medication Use & Mechanism<sup>#</sup>

PHCPs who prescribe weight loss medications should have knowledge of the patient selection criteria, medication efficacy, adverse effects, and follow-up monitoring guidelines. Injectables may require additional teaching. PHCPs may choose to refer to pediatric obesity experts or treatment centers for prescribing weight loss medication. There is no evidence to support the use of weight loss medications alone. Medication should be used in conjunction with IHBLT.

Drug	Function/Background	Age Approved	Dosage/Type	Impact	Side Effects
<b>Metformin</b>	<ul style="list-style-type: none"> <li>Originally to treat T2DM</li> <li>Mechanism is to improve insulin sensitivity by increasing peripheral tissue uptake of glucose and by inhibiting hepatic glycogenesis</li> </ul>	<ul style="list-style-type: none"> <li>10 and older</li> <li>Some safety info down to age 8</li> </ul>	<ul style="list-style-type: none"> <li>Recommended starting dose is 500 mg 1 or 2x daily</li> <li>Gradual increase up to 2500mg</li> <li>Extended release recommended for fewer side effects</li> </ul>	<ul style="list-style-type: none"> <li>2/3 of studies show BMI reduction</li> <li>1/3 of studies show no benefit</li> <li>Successful BMI reduction is more common in older children and adolescents</li> </ul>	<ul style="list-style-type: none"> <li>Lactic acidosis is a rare but serious side effect</li> <li>Side effects are dose dependent and include bloating, nausea, flatulence, &amp; diarrhea</li> </ul>
<b>Orlistat</b>	<ul style="list-style-type: none"> <li>Intestinal lipase inhibitor that blocks fat absorption through inhibition of pancreatic and gastric lipase</li> </ul>	<ul style="list-style-type: none"> <li>Age 12 and older</li> </ul>	<ul style="list-style-type: none"> <li>120 mg 3X per day</li> </ul>	<ul style="list-style-type: none"> <li>2-3% BMI reduction</li> </ul>	<ul style="list-style-type: none"> <li>Steatorrhea</li> <li>Fecal urgency</li> <li>Flatulence</li> </ul>
<b>Liraglutide &amp; exenatide</b>	<ul style="list-style-type: none"> <li>Glucagon-like peptide-1 (GLP-1) receptor agonists</li> <li>Decrease hunger by slowing gastric emptying as well as through targets in CNS</li> </ul>	<ul style="list-style-type: none"> <li>Age 12 and older</li> </ul>	<ul style="list-style-type: none"> <li>Starting dose is 0.6 mg/day up to a maximum dose of 3.0 mg/day</li> </ul>	<ul style="list-style-type: none"> <li>About 1/2 of patients will achieve a 5% BMI reduction</li> <li>About 20% will achieve a 10% BMI reduction</li> </ul>	<ul style="list-style-type: none"> <li>Nausea</li> <li>Vomiting</li> <li>Increased risk of medullary thyroid cancer among patients with family history of multiple endocrine neoplasia</li> </ul>
<b>Phentermine</b>	<ul style="list-style-type: none"> <li>A central norepinephrine inhibitor</li> <li>Nonselectively inhibits serotonin and dopamine</li> <li>Suppresses appetite</li> </ul>	<ul style="list-style-type: none"> <li>16 and older</li> <li>Short term use only (3 months)</li> </ul>	<ul style="list-style-type: none"> <li>7.5 mg, 15 mg, 30 mg or 37.5 mg</li> </ul>	<ul style="list-style-type: none"> <li>Effectiveness does not always increase with increased dosage</li> </ul>	Side effects are dose dependent <ul style="list-style-type: none"> <li>Elevated BP</li> <li>Dizziness</li> <li>Headache</li> <li>Tremor</li> <li>Dry mouth</li> <li>Stomach ache</li> </ul>
<b>Lisdexamphetamine</b>	<ul style="list-style-type: none"> <li>Stimulant</li> <li>Approved for ADHD</li> </ul>	<ul style="list-style-type: none"> <li>6 and older with ADHD</li> </ul>	<ul style="list-style-type: none"> <li>Dose increments of 10mg, no clear effective dose for BMI reduction</li> </ul>	<ul style="list-style-type: none"> <li>Limited evidence of effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Elevated blood pressure</li> <li>Insomnia</li> <li>Irritability</li> </ul>
<b>Topiramate</b>	<ul style="list-style-type: none"> <li>Carbonic anhydrase inhibitor</li> <li>Suppresses appetite</li> </ul>	<ul style="list-style-type: none"> <li>2 and older for epilepsy</li> <li>12 and older for headache</li> </ul>	<ul style="list-style-type: none"> <li>Start 25mg qam/50mg qhs</li> <li>Max dose 100mg/day</li> </ul>	<ul style="list-style-type: none"> <li>Limited evidence of effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Cognitive slowing</li> </ul>
<b>Setmelanotide</b>	<ul style="list-style-type: none"> <li>Recently approved for obesity caused by mutations in the MC4R pathway &amp; leptin deficiency or leptin receptor deficiency</li> </ul>	<ul style="list-style-type: none"> <li>&gt;= 6 years of age with POMC deficiency, PSK1 deficiency, LEPR deficiency confirmed by genetic testing</li> </ul>	<ul style="list-style-type: none"> <li>1-3 mg/day given subcutaneously</li> </ul>	<ul style="list-style-type: none"> <li>Weight loss of 12-25%</li> </ul>	<ul style="list-style-type: none"> <li>Injection site reaction</li> <li>Nausea</li> </ul>
<b>Phentermine and Topiramate</b>	<ul style="list-style-type: none"> <li>See above for mechanisms of action</li> </ul>	<ul style="list-style-type: none"> <li>Combination medication is approved for weight loss in adults.</li> <li>Recent data support BMI reduction in adolescents 12-17 years of age with documented history of failure to lose sufficient weight or maintain weight loss in a lifestyle modification program. (mean age = 14 years; mean BMI=37.8 kg/m<sup>2</sup>)</li> </ul>	<ul style="list-style-type: none"> <li>Starting dose; 3.75mg/23mg</li> <li>Mid-dose; 7.5mg/46mg</li> <li>High dose; 15 mg/92mg</li> </ul>	<ul style="list-style-type: none"> <li>BMI percent change at 56 weeks was -10.44 (high dose; 15mg/92mg) and -8.11 (mid-dose; 7.5 mg/46 mg) as compared with placebo</li> <li>Treatment also improved HDL and TG cholesterol profiles</li> </ul>	<ul style="list-style-type: none"> <li>Adverse event reports in the high- to mid-dose range were no more common than placebo.</li> </ul>

## Interpretation of Test Results<sup>#</sup>

### NHLBI Criteria for Lipid Testing Results<sup>▲</sup>

Lipid Category	Low (mg/dL)	Acceptable (mg/dL)	Borderline High (mg/dL)	High (mg/dL)
Total cholesterol	-	<170	170-199	≥200
LDL cholesterol	-	<110	110-129	≥130
HDL cholesterol	<40	>45	-	-
Triglycerides				
• 0-9 years	-	<75	75-99	≥100
• 10-19 years	-	<90	90-129	≥130
Non-HDL cholesterol	-	<120	120-144	≥145

▲From CPG Table 8, adapted from the NHLBI Expert Panel on Integrated Guidelines for Cardiovascular Health

### Criteria for Diagnosing Prediabetes and T2DM<sup>◆</sup>

	Prediabetes/Impaired Glucose tolerance	Diabetes Mellitus <sup>a</sup>
Fasting plasma glucose (FBG) <sup>b</sup>	100-125 mg/dL	≥126 mg/dL
2-hour plasma glucose (OGTT) <sup>c</sup>	140-199 mg/dL	≥200 mg/dL
Random plasma glucose (RBG) <sup>d</sup>	Not applicable	≥200 mg/dL
Hemoglobin (HbA1c) <sup>e</sup>	5.7% - 6.4%	≥6.5%

<sup>a</sup> In the absence of unequivocal hyperglycemia, diagnosis is confirmed if 2 different tests are above threshold or a single test is above threshold on 2 separate occasions.

<sup>b</sup> Fasting for at least 8 hours with no calorie intake.

<sup>c</sup> Oral glucose tolerance test (OGTT) using a load 1.75 g/kg of body weight of glucose with a maximum of 75 g.

<sup>d</sup> In patients with hyperglycemic crises or classic symptoms of hyperglycemia (eg, polyuria, polydipsia).

<sup>e</sup> Glycosylated hemoglobin (HbA1c) is the preferred test for monitoring prediabetes.

◆From CPG Table 10, based on American Diabetes Association Standards of Medical Care in Diabetes- 2021

### BP Categories by Age and Number of Visits Needed for Diagnosis<sup>■</sup>

BP Category	Children 1-13 Years of Age	Children ≥13 Years of Age	Number of Visits to Diagnosis
Normal	BP <90th percentile	BP <120/80 mm Hg	n/a
Elevated	BP ≥90th percentile to <95th percentile	120/<80 to 129/<80 mm Hg	3
Stage 1	BP ≥95th percentile to <95th percentile + 12 mmHg	130/80 to 139/89 mm Hg	3
Stage 2	BP ≥95th percentile + 12 mm Hg	≥140/90 mm Hg	2

■Used in CPG Table 12 with permission, adapted from the AAP HTN CPG, Figure 2, and AAP Pediatric Obesity Clinical Decision Support Chart

### Retesting for Common Comorbidities<sup>#</sup>

Comorbidity	Reevaluation Guidance
<b>Multiple</b>	PHCPs may repeat testing for abnormal glucose metabolism, liver function, and lipid levels in 2 years, if the laboratory test results are normal. <sup>¥</sup>
<b>Dyslipidemia</b>	PHCPs should repeat testing every 6 to 12 months in conjunction with lifestyle treatment, if lipids are abnormal. <sup>¥</sup>
<b>Abnormal glucose metabolism</b>	PHCPs may repeat testing for prediabetes and T2DM in 12 months, if HbA1c 5.7% to <6.0% AND 1 or more risk factors for progression is present (severe obesity, weight gain, higher-risk racial or ethnic groups, signs of insulin resistance such as acanthosis nigricans, or use of obesogenic psychotropic medications). <sup>¥</sup>
<b>Prediabetes/ T2DM</b>	PHCPs may obtain an initial repeat test for evaluation of prediabetes and T2DM in 3 to 6 months if HbA1c ≥6% to 6.4%.
<b>NAFLD</b>	PHCPs should repeat ALT in 3 to 6 months, if ALT is abnormal at twice the upper limit of normal or greater (ALT ≥52 IU/L for males and ALT ≥44 IU/L for females) to confirm results and guide subsequent laboratory testing. <sup>¥</sup>
<b>HTN</b>	PHCPs should monitor BP at every visit for children with overweight or obesity starting at age 3 years.

¥ Refer to KASs 3 and 3.1 for age and BMI category.



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