A Primary Care Guide to

Lifestyle and Weight Management (Pediatrics)

This Care Process Model (CPM) was developed collaboratively by Intermountain Health Promotion and Wellness, Children's Health, and Clinical Nutrition to support pediatricians and pediatric care teams in the management of pediatric obesity. The CPM provides a structured, evidence-informed framework that emphasizes lifestyle-based strategies for weight management, while also outlining criteria for the appropriate use of medical interventions.

Key Points

- Family-based interventions are essential for achieving and sustaining long-term weight management in children and adolescents. [2,3]
- Obesity is a multifactorial condition, and evidence supports that comprehensive strategies—such as combining physical, nutritional and behavioral interventions—yield better outcomes than single-modality treatments. [4-7]
- Adequate sleep duration and quality are consistently associated with lower BMI in children, making sleep a critical component of obesity prevention and management. [8,9]
- GLP-1 receptor agonists have demonstrated significant weight loss in adolescents with obesity. However, their use must be integrated with comprehensive lifestyle interventions to ensure long-term efficacy. [10] Studies of the long-term effects of these medications on children are ongoing.
- A healthy lifestyle remains the primary foundation of pediatric weight management, even when medical interventions are employed.

Process Summary

- At each visit, measure BMI-for-age and calculate percentile.
- If weight-related concern (≥85 percentile, weight-related comorbidity, or unhealthy shift in weight trajectory), use motivational interviewing to assess causal factors.
- Begin 12 month family-based lifestyle intervention including:
  - 4 or more visits to dietitian for nutritional and activity planning (including documentation of efforts)
  - Addressing mental/behavioral health and sleep concerns
  - Goal setting surrounding improving social relationships
- If BMI is ≥95th percentile after one year of documented intervention, consider adding medical interventions such as pharmacotherapy to supplement lifestyle interventions.

What's inside?

Use the clinical term "obesity" when appropriate, but recognize that some patients may perceive the term as stigmatizing. Emphasize positive, actionable steps and adoption of healthy habits. See pg 2 for talking points.

Evidence Base

Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents with Obesity; AAP 2023

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Weight Management: Screening and Intervention

Pediatric patient presents for wellness exam

Take measurements and start conversation (A)

- Measure weight and height without shoes or jacket.
- Calculate BMI. Assess BMI percentile using age-appropriate growth charts .
- Measure blood pressure.

Are weight concerns present? (B)

no → return to wellness exam

yes

Use motivational interviewing to assess (C) for contributing factors including:

- Physical Activity
- Nutrition
- Mental Health
- Sleep
- Social support
- Readiness for change

Assess for weight-related complications or comorbidities (D)

Recommend 12 months of family-based lifestyle interventions based on assessment

Family-Based Lifestyle Interventions

Nutrition and Activity	• At least four lifestyle visits in a year with a dietitian • Nutrition approach chosen • 60 minutes of activity per day • Goal-oriented food and activity logs • See resources on pg 5
Mental and Behavioral Health	• Verify that standard EPIC mental health screenings are done. • Verify that Social Determinants of Health screening is done. • Consider referral: Primary Children's Assessment, Referral, and Consultation services (ARCS) (801) 313-7711
Sleep	Recommendations include: • 9–12 hrs for children 6–12 • 8–10 hrs for kids 13–18 See pg 5 for sleep resources
Social Connection and Relationships	Consider setting goals around improving social connections such as family dinners, in-person play, walks after dinner etc.

If weight concerns persist after 12 months of documented family-based intervention and BMI ≥ 95th percentile, consider adding medical interventions such as pharmacology to supplement lifestyle interventions. See next page for guidance.

(A) Conversation Starters

- I've noticed a change in your growth Would you like to talk about it?
- It may be good to check additional measure of your health.
- Do you have any concerns about your body or health?

Weight Language

- Ask permission to talk about weight or BMI.
- Frame conversations around health and well-being rather than weight or body image.
- Avoid fat, chubby, or skinny; instead use healthy, strong, or nutritious.

(B) Weight Concerns

- BMI ≥85th percentile
- Rapid change in weight trajectory
- Presence of weight-related comorbidity

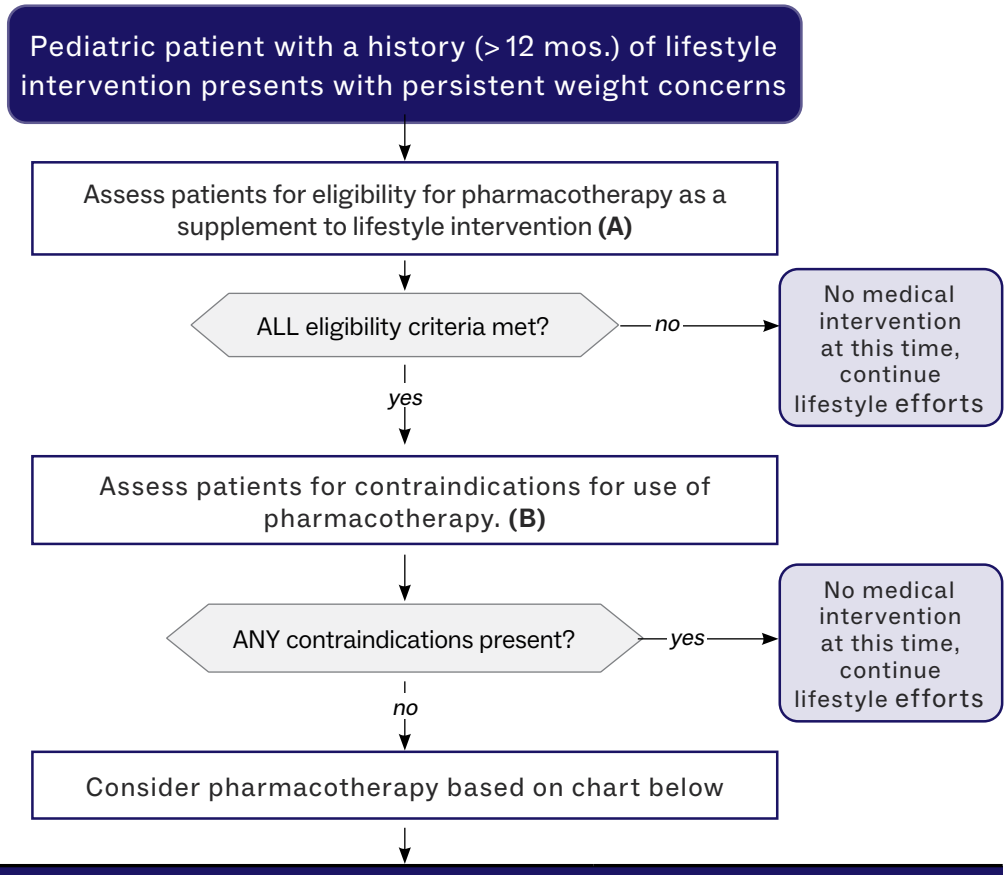
(C) Assessment Tools

- Lifestyle and Health Risk Questionnaire (English)/(Spanish)
- Behavioral Health assessments Parent/Child (English/Spanish) Adolescent (English)/Spanish
- Readiness for change Healthy Habit Builder (English)/(Spanish)
- Motivational interviewing Motivational interviewing resources

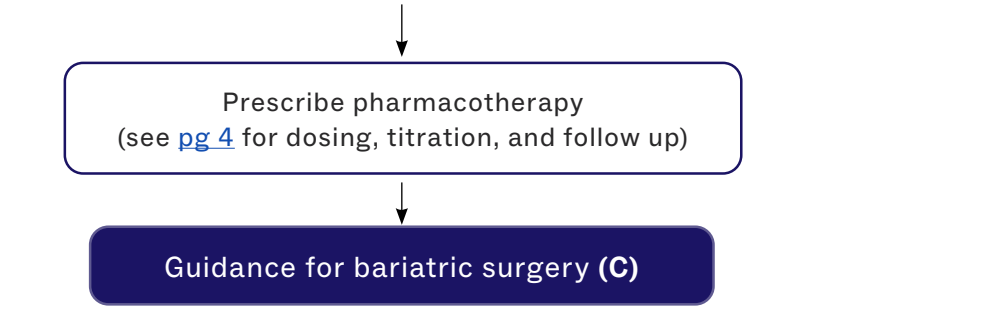
(D) Weight-related Comorbidities

- Dyslipidemia
- Hypertension
- Hyperglycemia
- Non-alcoholic fatty liver disease (NAFLD)
- Sleep apnea
- Orthopedic problems
- Depression/anxiety
- Polycystic ovary syndrome

Medical Intervention for Weight Concerns



Pharmacotherapy Considerations [11,12]	
Medical Condition*	**Consider**
Prediabetes, Type 2 Diabetes, or signs of insulin resistance	Metformin, GLP-1 Receptor Agonists
Polycystic ovary syndrome (PCOS)	Metformin, GLP-1 Receptor Agonists
Emotional eating or Loss of control (binge eating disorder)	Topiramate
Metabolic dysfunction-associated liver disease (MASLD)	GLP-1 Receptor agonists
Patient Report	**Consider**
Large portions; Difficulty with satiation (becoming full)	Phentermine/Topiramate
Lack of satiety (staying full), seeking food between meals	GLP-1 Receptor Agonists
Exercise "all the time" but no weight loss	Phentermine
Shared decision-making discussion	
• Medication costs	• Medication risks
• Importance of continuing lifestyle intervention	• Length of use



(A) Eligibility for pharmacotherapy

- Age limit is dependant on drug (See pg 4 indications column).
- Obesity (>95th percentile weight for age)
- 12 months of documented lifestyle intervention that has been unsuccessful including:
  - ≥4 lifestyle visits in past year with dietitian.
  - ≥8 weeks of documented nutrition and activity efforts (English)/(Spanish).

(B) Exclusions to pharmacotherapy

- Allergic reaction to products.
- Pregnancy
- Diagnosis or suspicion of an eating disorder. (SCOFF screening tool)
- Any contraindication to specific drug. See pg 4 for full table.

(C) Bariatric Surgery Considerations

- ≥13 years old AND one of the following:
  - Severe obesity (95th percentile X 1.2 or BMI 35+) with severe comorbid diseases.
  - BMI 40+ regardless of comorbidities.
- Lifestyle changes and pharmacotherapy tried before surgery considered.
- When indicated, refer to specialty clinic.

*FDA approval of GLP-1 RA's for treatment of obstructive sleep apnea have only been approved for those 18 and older.

Pediatric Weight Management Pharmacology

Drug (Weight loss Brand name)	FDA Indications	Dosing	Contra-indications	Follow-up	Benefits	Risks
Liraglutide (Saxenda) GLP1 Receptor Agonist	All required: • Age ≥12 y.o. • Weight >60 kg • BMI >95th percentile • Used with lifestyle intervention	• Starting dose: 0.6 mg SUBQ 1X daily • Titrate up each week as tolerated • Titration: max of 3 mg SUBQ 1X daily	• Personal or family history of medullary thyroid carcinoma or multiple endocrine neoplasia syndrome • Pregnancy	• Continue lifestyle interventions • High-protein diet and resistance training[13], see patient handout (English)/(Spanish) • If not tolerated, reduce to last tolerated dose • Check-in by phone with patient monthly • See in person every 3 months • Goal: losing 10-15% of body weight in 6 mos.–year • If 3–6 month period with no weight loss, consider switching or stopping • Taper when discontinuing	• Only GLP-1 RA 1X daily SUBQ • Multi-dose pen • ~10% BMI ↓ • Favorable lipid effects • Favorable for MASLD • Alternative if weekly GLP-1 not tolerated	• High cost (GLP-1 and GLP-1/GIP access and Affordability) • Injection (Injection Resources) • May cause GI distress (nausea/diarrhea) • Increased risk of hypoglycemia if on insulin • Stop GLP-1s 1 week prior to major procedures • Caution if poorly-controlled long-standing diabetes for concern of gastroparesis • Unknown long-term risks • See further details in Pharmacy's Clinical Fact Sheet • Increased risk of pregnancy in those on hormonal oral contraception, esp. in the 1st week after dose changes
Semaglutide (Wegovy) GLP1 Receptor Agonist	All required: • Age ≥12 y.o. • BMI >95th percentile • Used with lifestyle intervention	• Starting dose: 0.25 mg SUBQ 1X weekly • Titrate up every 4 weeks as tolerated • Titration goal: 2.4 mg (recommend) or 1.7 mg SUBQ 1X weekly			• ~16% BMI ↓ • Favorable lipid effects • Favorable for MASLD	
Tirzepatide (Zepbound) GLP1 Receptor Agonist	All required: • Age ≥18 y.o. • BMI >25 • Use with lifestyle changes	• Starting dose: 2.5 mg SUBQ 1X weekly • Titrate up every 4 weeks as tolerated • Titration goal: 10 mg or 15 mg SUBQ 1X weekly			• ~25% BMI ↓ • Favorable lipid effects • Favorable for MASLD	
Metformin / Metformin ER Biguanide	• Age ≥8 y.o. • T2D or PCOS	• Starting dose: 500 mg/day PO • Titrate up to a maximum of 1,000 mg 2x per day; maximum blood glucose effect in 3–4 weeks • Recommend with food	• Pregnancy	• Monitor renal function annually	• ~1-2% BMI ↓ • <$100/month • Minimizes weight gain in T2D and PCOS • No increase risk of hypoglycemia	• May cause GI distress • Increased risk of acidosis (rare, but serious) • Use with caution in patients with heart failure, liver disease, renal failure, or alcohol abuse • Increases pregnancy risk
Orlistat (Xenical) (Alli -OTC)	• Age ≥17 y.o • Short term weight management	• 120 mg TID PO	• Pregnancy • Chronic malabsorption • Cholestasis		• ~4% BMI ↓ • Available OTC • <$100/month	• Steatorrhea, recommend taking vitamin containing fat-soluble vitamins 2 hrs before/after dose • Significant interactions, review before prescribing • May not be covered by insurance
Phentermine (Lomaira) (Adipex-P)	• Age ≥16 y.o.	• Adipex-P: 37.5 mg PO once daily • Lomaira: 8 mg PO TID • Titrate up every 2 weeks as needed	• Uncontrolled hypertension • Tachycardia	• Taper when discontinuing to prevent potential seizure activity	• ~8% BMI ↓ • <$100/month	• Schedule IV • Do not give with stimulants • Significant interactions, review before prescribing
Phentermine/ Topiramate (Qsyimia)	• Age ≥12 y.o. • Obesity (95th %tile)	• Starting dose: 3.75/23 mg every day in AM • Titrate up every 2 weeks as needed	• Pregnancy • Glaucoma • Hyperthyroidism		• 10% BMI ↓ (most effective oral drug) • >$100/month	• Not covered by insurance

Handout Resources		
Nutrition and Activity	Nutrition Approaches	• 5-2-1-0 approach (English)/(Spanish) • Traffic Light Eating Plan (English)/(Spanish)
	Activity Handouts	• Sit Less and Limit Screen Time (English)/(Spanish) • Get Up and Move! (English)/(Spanish
	Goals and Daily Log	• Rx to Better Health (English)/(Spanish) • Habit Builder (English)/(Spanish)
Mental and Behavioral Health		• Be Positive About Food and Body Image (English)/(Spanish) • Stress Less (English)/(Spanish) • Emotional Toll of Obesity (AAP) (English)/(Spanish)
Sleep		• Get Enough Sleep (English)/(Spanish) • Sleep Well (English)/(Spanish) • Sleep services referral
Social Connection		• Eat Meals Together (English)/(Spanish)
GLP–1		• GLP–1 Medications and Nutrition: What you need to know (English)/(Spanish)

References

1. Hampl SE, Hassink SG, Skinner AC, et al. Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity. *Pediatrics.* 2023;151(2):e2022060640. doi:10.1542/peds.2022-060640
2. Epstein LH, Wilfley DE, Kilanowski C, et al. Family-Based Behavioral Treatment for Childhood Obesity Implemented in Pediatric Primary Care: A Randomized Clinical Trial. *JAMA.* 2023;329(22):1947-1956. doi:10.1001/jama.2023.8061
3. Pervanidou P, Chatzidaki E, Nicolaides NC, et al. The Impact of the ENDORSE Digital Weight Management Program on the Metabolic Profile of Children and Adolescents with Overweight and Obesity and on Food Parenting Practices. *Nutrients.* 2023;15(7):1777. Published 2023 Apr 5. doi:10.3390/nu15071777
4. Li L, Sun F, Du J, Li Z, Chen T, Shi X. Behavior-change lifestyle interventions for the treatment of obesity in children and adolescents: A scoping review. *Ann N Y Acad Sci.* 2025;1543(1):31-41. doi:10.1111/nyas.15278
5. O'Connor EA, Evans CV, Henninger M, Redmond N, Senger CA. Interventions for Weight Management in Children and Adolescents: Updated Evidence Report and Systematic Review for the US Preventive Services Task Force. *JAMA.* 2024;332(3):233-248. doi:10.1001/jama.2024.6739
6. Evidence reviews for the effectiveness of healthy living programmes in preventing overweight and obesity in children and young people: Overweight and obesity management: preventing, assessing and managing overweight and obesity. London: National Institute for Health and Care Excellence (NICE); January 2025.
7. Pereira AR, Oliveira A. Dietary Interventions to Prevent Childhood Obesity: A Literature Review. *Nutrients.* 2021;13(10):3447. Published 2021 Sep 28. doi:10.3390/nu13103447
8. Deng X, He M, He D, Zhu Y, Zhang Z, Niu W. Sleep duration and obesity in children and adolescents: evidence from an updated and dose-response meta-analysis. *Sleep Med.* 2021;78:169-181. doi:10.1016/j.sleep.2020.12.027
9. Chehal PK, Shafer L, Cunningham SA. Examination of Sleep and Obesity in Children and Adolescents in the United States. Am J Health Promot. 2022;36(1):46-54. doi:10.1177/08901171211029189
10. Kotecha P, Huang W, Yeh YY, et al. Efficacy and Safety of GLP-1 RAs in Children and Adolescents With Obesity or Type 2 Diabetes: A Systematic Review and Meta-Analysis. *JAMA Pediatr.* Published online September 15, 2025. doi:10.1001/jamapediatrics.2025.3243
11. Acosta A, Camilleri M, Abu Dayyeh B, et al. Selection of Antiobesity Medications Based on Phenotypes Enhances Weight Loss: A Pragmatic Trial in an Obesity Clinic. *Obesity* (Silver Spring). 2021;29(4):662-671. doi:10.1002/oby.23120
12. Cuda S, O'Hara V, Browne NT, Censani M, Kharofa R, Conroy R, Paisley J, Browne A, Damian A, Frederikson K, Pennings N. Pediatric Obesity Algorithm, presented by the Obesity Medicine Association. https://obesitymedicine.org/resources/obesity-algorithm/(Accessed 10/15/2025)
13. Mozaffarian D, Agarwal M, Aggarwal M, et al. Nutritional priorities to support GLP-1 therapy for obesity: A joint Advisory from the American College of Lifestyle Medicine, the American Society for Nutrition, the Obesity Medicine Association, and The Obesity Society. Obesity (Silver Spring). 2025;33(8):1475-1503. doi:10.1002/oby.24336

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This CPM presents a model of best care based on the best available scientific evidence at the time of publication. It is not a prescription for every physician or every patient, nor does it replace clinical judgment. All statements, protocols, and recommendations herein are viewed as transitory and iterative. Although physicians are encouraged to follow the CPM to help focus on and measure quality, deviations are a means for discovering improvements in patient care and expanding the knowledge base. Send feedback to Sara Mathews, MS, RDN, CD, Health Promotion and Wellness, Intermountain Healthcare, Sara.Mathews@imail.org