Obesity Care Essentials

A Pocket Guide

for Clinicians

This resource was commissioned by Lilly Medical and is indicated to be used by HCPs for medical, educational, and scientific purposes.



Obesity Management in the Outpatient Setting

Welcome! As you know, healthcare professionals play an important role in helping patients manage their weight. An engaged and supportive clinician can make a world of difference. This guide offers:

- Tips and resources to enhance obesity management
- Guidance on screening, diagnosis, and body mass index (BMI) coding
- Strategies for effective communication with patients
- Information on lifestyle modification, including healthy eating and physical activity

This guide aims to build on your existing knowledge with additional resources to help your patients achieve their weight loss goals.





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Obesity Is a Disease

Obesity – abnormal or excessive fat accumulation that presents a risk to health. May be caused by disruptions to regulation of food intake that alter energy balance²

Contributing factors to obesity³:



Dietary intake affected by:

- Social determinants of health (eg, the food environment)
- Hunger/satiety signaling
- · Mental health
- Sleep
- · Medical conditions/medications



Energy expenditure affected by:

- Age, sex, and body composition
- Genetics/epigenetics and neuroendocrine factors
- Medications



Physical activity affected by:

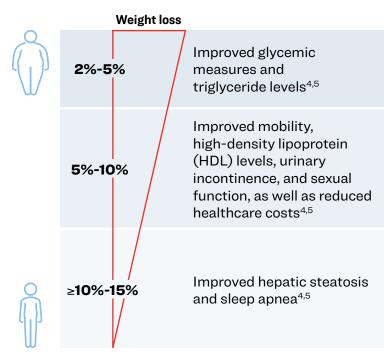
- Social determinants of health (eg, the built environment)
- · Physical limitations
- Medical conditions/medications
- · Emotional barriers





Diagnosis of Obesity Is Important

Diagnosis and treatment may lead to improvements in weight and other clinical outcomes⁴⁻⁷







Obesity Can Present a Risk to Health

BMI is a useful **screening tool**, but because of its limitations, it's not precise enough to diagnose obesity or fully assess an individual's health risk^{8,9}

Obesity classes^a

Class I Class II		Class III
30.0-34.9 kg/m²	35.0-39.9 kg/m²	≥40.0 kg/m²

Risk factors¹⁰

- Certain medications
- Inactivity
- Poor diet
- Poor sleep
- Stress
- · Genetics

Obesity-related complications¹⁰

- Heart disease
- Osteoarthritis
- Stroke
- · Obstructive sleep apnea
- Liver disease (MASLD)
- Type 2 diabetes

Take action if you see these risk factors or complications in your patients!

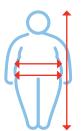
^aAlternate ethnicity-specific BMI thresholds may be utilized.





Evaluation for Excess Adiposity

If a patient has a higher BMI^a but screening suggests they are not at risk for obesity, measure **additional parameters** to validate the diagnosis or assess metabolic health



Waist-to-height ratio¹¹

Threshold for obesity-associated risks: ≥0.5

Waist-to-hip ratio^{12,a}

Threshold for obesity-associated risks: women ≥ 0.85 , men ≥ 0.90

Waist circumference^{13,a}

Threshold for obesity-associated risks: women ≥34.5 in, men ≥40 in



Edmonton Obesity Staging System comprehensively classifies and assesses severity of obesity and associated health risks

Benefits of evaluating for excess adiposity

- Helps identify cardiometabolic risk factors¹⁴
- Helps monitor and reduce risk of metabolic disorders¹⁴
- Permits individualized training plans for physical activity¹⁵
- Helps assess malnutrition risk¹⁶

^aAlternate ethnicity-specific cutoffs may be utilized.





Coding for Obesity

- Accurate coding aids in defining and documenting treatment more effectively¹⁷
- Emphasize diagnosis and complications over BMI alone when selecting codes¹⁷
- Include a Z code for BMI (Z68.XX)¹⁸
- Consider including additional Z codes for counseling, as appropriate (eg, Z71.3, Z71.89)¹⁸

Coding tips

- Include information on existing obesityrelated complications and comorbidities in a diagnosis of overweight¹⁷
- Document comorbidities¹⁷
- Avoid BMI codes in pregnancy¹⁷
- Report clinically significant obesity diagnoses¹⁷

- Include codes for complications, as appropriate¹⁷
- Z codes must be accompanied by an ICD-10-CM diagnostic code for obesity¹⁸

ICD-10-CM = International Classification of Diseases, Tenth Revision, Clinical Modification.





Common ICD-10-CM and BMI Codes for Obesity¹⁹

BMI (kg/m²)	Range	ICD-10-CM Code	BMI Code
<18.5	Underweight	R63.6	Z68.1
18.5-24.9	Normal	N/A	Z68.1- Z68.24
25.0-29.9	Overweight	E66.3	Z68.25- Z68.29
30.0-34.9	Obesity Class I	E66.811	Z68.30- Z68.34
35.0-39.9	Obesity Class II	E66.812	Z68.35- Z68.39
≥40	Obesity Class III	E66.813	Z68.41- Z68.45

When coding for obesity, include the ICD-10-CM diagnostic code for obesity and the Z code for BMI

You can also include ICD codes for any obesity-related complications you have diagnosed and discussed with the patient





Common ICD-10-CM and CPT® Codes for Obesity

Common	ICD-10-CM	codes for	obesity ^{18,20}
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E66.89	Other obesity not elsewhere classified
E66.9	Obesity, unspecified

E66.1 Drug-induced o

E66.2	Severe obesity with alveolar
	hypoventilation

E66.09	Other obesity due to excess calories
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HCPs are encouraged to use ICD-10 codes based on obesity class (eg, E66.813) to help reduce stigma and bias.

CPT = Current Procedural Terminology.





Common ICD-10-CM and CPT® Codes for Obesity (cont.)

Common CPT codes for obesity screening/counseling^{21,22}

CPT 99401	Individual preventive medicine counseling and/or risk factor interventions: ~ 15 min

CPT 99402	Individual preventive medicine
	counseling and/or risk factor interventions: ~ 30 min
	interventions. 4 50 min

CPT 99403	Individual preventive medicine counseling and/or risk factor interventions: ~ 45 min
	interventioner 10 min

GO447	Face-to-face behavioral





Creating a Patient-Centric Office Environment²³

Include features in waiting and examination rooms that are accessible and welcoming to patients with obesity

Open-armed furniture that can support > 300 lb





Step stool with **handle** for examination table access

Scale with wide base that measures **>500 lb**





The language and approach used by clinicians can affect treatment outcomes²⁴

Focus on the value of "non-scale victories"

such as improved cardiometabolic parameters, mobility, quality of life, or other benefits

Which goals best fit your lifestyle?

What small first steps can you take toward achieving those goals?

What personal goals do you have for your weight and health?

What goals and timelines are realistic for you?

What changes would you like to make in your lifestyle? What roadblocks are keeping you from starting a new routine?

Use nonjudgmental language²⁵:

X Obese person \(\square\$

Extremely obese / Higher weight

🗙 Fat/excess fat 💢 BMI





Scan the QR code to learn more

Person with obesity

Use the 5 As model to guide discussions with patients on weight management²⁵



ASK for permission to discuss weight and explore readiness to change



ASSESS obesity-related risks and potential root causes of weight gain



ADVISE on health risks and treatment options



AGREE on health outcomes and behavioral goals



ASSIST in accessing appropriate resources and providers and arranging follow-up appointments







ASK

Ask open-ended questions that encourage thoughtprovoking responses and engage a 2-way dialogue^{25,26}

Begin conversations about weight in a way that shows respect for your patient's preferences²⁷:

- Would it be okay to talk about your weight today?
- I'd like to learn more about your eating habits.
 What kinds of foods and drinks do you consume on a normal day?
- Body weight can affect blood pressure in some people. Given that you have high blood pressure, would it be okay to talk about your weight today?









Examine factors relevant to obesity

- Anthropometrics or body composition²⁶
- Obesity-related complications²⁸
- Psychosocial factors²⁶
- Obesity screening and staging systems²⁶

There are many factors to consider when we think about weight. Is it okay if we explore some of these together to better understand how your weight affects you and your health?

Assess the patient's willingness to change

- What are your goals for your health?
- What are you able to change in your daily life?
- Who can support and encourage you?
- How does your weight affect your health?







When providing weight management advice²⁶:

Emphasize

obesity-related risks relevant to the patient

Explain

the clinical benefits of weight loss

Educate

patients on treatment options

I'd like us to work together to come up with some goals that fit your lifestyle.







Establish collaborative SMART goals with your patients^{26,29}:

SPECIFIC	detailed outcome?
MEASURABLE	Can this goal be measured or tracked?
ACHIEVABLE	Is this goal attainable?
RELEVANT	How valuable is this to you? How will this goal affect your quality of life?
TIMELY	Can you accomplish this goal on a realistic timeline?

Doog this goal have a distinct

- I will walk for 30 minutes at lunchtime 3 times a week this month
- I will have vegetables with dinner every day this week
- I will go to bed by 10:30рм on weeknights this month







Assist in your patient's weight management²⁶:

Identify

facilitators and barriers

- Food is a source of comfort when I'm stressed
- I don't feel comfortable at the gym

Recommend

credible weight management resources

Support

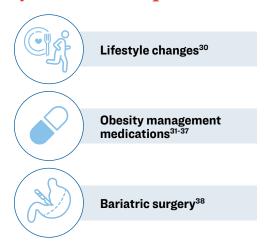
during weight regain and celebrate successes

 Instead of setting weight-based goals, let's focus on process-related ones, like goals for eating and physical activity





Obesity Treatment Options



In recent years, obesity management medications (OMMs) have become more effective, better tolerated, and safer⁵

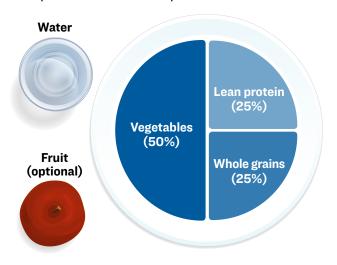
Despite their proven health benefits, OMMs and bariatric surgeries remain underutilized⁵

5% weight loss is considered clinically significant⁴



Lifestyle Modifications: Dietary Recommendations

Recommendations for energy intake should be personalized based on individual characteristics, such as age, sex, activity level, and body weight. Consume balanced meals. As a general guide, use a plate divided into 3 parts⁴⁰:



Ensure adequate intake of fluids, protein, healthy carbohydrates, dietary fiber, vitamins and minerals^{39,40}

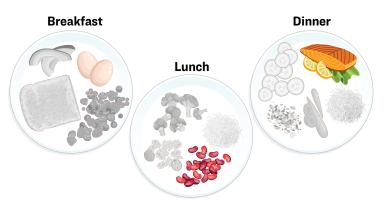




Daily Protein Recommendations

10%-35% of total calories³⁹

- During weight loss, consume at least 60-75 g/day and up to 1.5 g/kg body weight/day
- Distribute protein intake throughout the day
- Examples: eggs, poultry, fish, lentils, peas, and lean beef
 - Meal replacement products can be used when intake from whole food is insufficient



The highlighted foods are for illustrative purposes only and may not represent the only sources of protein on the plates.

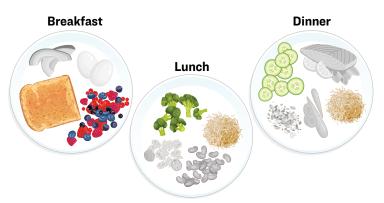




Daily Carbohydrate Recommendations

45%-65% of total calories³⁹

- Women at 1200-1500 kcal/day: 135-245 g/day
- Men at 1500-1800 kcal/day: 170-290 g/day
- · Focus on vegetables, fruits, and whole grains
 - Examples: brown rice, whole grain bread, oatmeal, sweet potatoes, fruit



The highlighted foods are for illustrative purposes only and may not represent the only sources of carbohydrate on the plates.

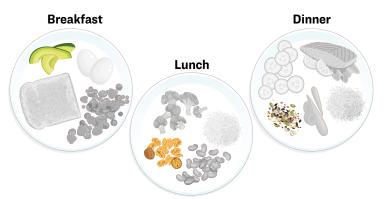




Daily Fat Recommendations

20%-35% of total calories³⁹

- Women at 1200-1500 kcal/day: 25-60 g/day
- Men at 1500-1800 kcal/day: 35-70 g/day
- Limit foods high in saturated and trans fat
- Choose foods high in omega-3 polyunsaturated, omega-6 polyunsaturated, or monounsaturated fatty acids
- Examples: avocado, tahini, olive oil, walnuts, and flaxseed



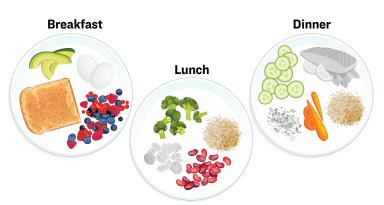
The highlighted foods are for illustrative purposes only and may not represent the only sources of fat on the plates.





Daily Fiber Recommendations³⁹

- Women: 21-25 g/day
- Men: 30-38 g/day
- Consume ≥14 g/1000 calories consumed
- Inadequate fiber intake can cause constipation
- Fiber can be found in whole grains, nonstarchy vegetables, and fruit
- Examples: whole grain bread, oatmeal, brown rice, beans, peas, apples, sweet potato, broccoli



The highlighted foods are for illustrative purposes only and may not represent the only sources of dietary fiber on the plates.





Lifestyle Modifications: Physical Activity

Moderate-intensity **aerobic physical activity** increases heart rate and oxygen consumption⁴¹ Aim for at least **150 minutes/week**⁴²

Examples of aerobic physical activity⁴²

Walking



Running



Use of cardio equipment



Cvcling



Swimming



Body mass



Fat mass



Aerobic physical activity can help change body composition in patients with obesity⁴³





Lifestyle Modifications: Physical Activity (cont.)

Resistance training – repeated movements against resistance⁴⁴ can improve muscle strength and physical function in patients with obesity⁴⁵ Resistance training exercises should be performed at least **twice a week**⁴⁶

Types of muscle strengthening activities or resistance training⁴⁶





Body weight (eg, yoga, tai chi)



Resistance bands



Weight/resistance machines



Suspension training equipment



Fat mass



Muscle strengthening activities may help improve body composition in patients with obesity

Exercise modifications can make resistance training more accessible for some patients⁴⁷





Self-Monitoring and Weight Management

Self-monitoring of weight, dietary intake, and physical activity is associated with weight loss⁴⁸

Monitoring tools

Wearable fitness trackers⁴⁹



Weight loss apps⁵¹



Camera-based food-logging apps⁵⁰



Bathroom scales that sync with smartphones⁵²



Use of tools such as these may increase your patients' success with weight loss efforts⁴⁸





Managing Obesity Long-Term

Physiological, behavioral, and environmental factors often lead to weight regain if treatment is stopped⁵³

- Maintain regular interaction with patients for at least 1 year
- Identify triggers for emotional eating and healthy alternatives
- Escalate treatment as needed



Optimal strategies for weight loss maintenance can differ from those for weight loss⁵³

- Identify internal drivers of healthy habits
- Retain long-term perspective when short-term weight challenges arise
- Emphasize non-scale victories, such as improved health, mobility, and quality of life
- Identify weight thresholds for reengagement with support team





Additional Resources

Follow the links below for additional help managing your patients on their weight loss journeys



Centers for Disease Control and Prevention

World Health Organization





Review Paper: Nutritional Considerations With Antiobesity Medications



References

- World Health Organization. Obesity. Accessed March 3, 2025. https://www. who.int/health-topics/obesity
- 2. Morton GJ, Meek TH, Schwartz MW. Neurobiology of food intake in health and disease. *Nat Rev Neurosci.* 2014;15(6):367-378.
- Sharma AM, Padwal R. Obesity is a sign—over-eating is a symptom: an aetiological framework for the assessment and management of obesity. Obes Rev. 2010;11(5):362-370.
- Ryan DH, Yockey SR. Weight loss and improvement in comorbidity: differences at 5%, 10%, 15%, and over. Curr Obes Rep. 2017;6(2):187-194.
- Bays HE, Golden A, Tondt J. Thirty obesity myths, misunderstandings, and/or oversimplifications: an Obesity Medicine Association (OMA) clinical practice statement (CPS) 2022. Obes Pillars. 2022;3:100034.
- Yaemsiri S, Slining MM, Agarwal SK. Perceived weight status, overweight diagnosis, and weight control among US adults: the NHANES 2003-2008 study. Int J Obes (Lond). 2011;35(8):1063-1070.
- Singh S, Somers VK, Clark MM, et al. Physician diagnosis of overweight status predicts attempted and successful weight loss in patients with cardiovascular disease and central obesity. Am Heart J. 2010;160(5):934-942.
- 8. Khattak ZE, Zahra F. Evaluation of patients with obesity. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2023.
- 9. Romero-Corral A, et al. Accuracy of body mass index to diagnose obesity in the US adult population. *Int J Obes (Lond).* 2008;32(6):959-966.
- Lim Y, Boster J. Obesity and Comorbid Conditions. In: StatPearls [Internet].
 Treasure Island (FL): StatPearls Publishing; 2025.
- 11. Yoo EG. Waist-to-height ratio as a screening tool for obesity and cardiometabolic risk. *Korean J Pediatr.* 2016;29(11):425-431.
- World Health Organization. Waist Circumference and Waist-Hip Ratio: Report of a WHO Expert Consultation. 2011. Accessed March 10, 2025. https://iris.who.int/bitstream/handle/10665/44583/9789241501491_eng. pdf?sequence=1



- Patry-Parisien J, Shields M, Bryan S. Comparison of waist circumference using the World Health Organization and National Institutes of Health protocols. Health Rep. 2012;23(3):53-60.
- Kerkadi A, Suleman D, Salah LA, et al. Adiposity indicators as cardiometabolic risk predictors in adults from country with high burden of obesity. *Diabetes Metab Syndr Obes*. 2020;1(3):175-183.
- McQueen MA. Exercise aspects of obesity treatment. Ochsner J. 2009;9(3):140-143.
- Fischer M, JeVenn A, Hipskind P. Evaluation of muscle and fat loss as diagnostic criteria for malnutrition. Nutr Clin Pract. 2015;30(2):239-248.
- Suissa K, Schneeweiss S, Lin KJ, Brill G, Kim SC, Patorno E. Validation of obesity-related diagnosis codes in claims data. *Diabetes Obes Metab.* 2021;23(12):2623-2631.
- American Academy of Physician Associates. ICD-10 Codes for Obesity Management Tip Sheet. Accessed September 9, 2024. https://www.aapa. org/wp-content/uploads/2018/09/FINAL_Obesity_ICD10_Codes.pdf
- Centers for Disease Control and Prevention. New Adult Obesity ICD-10-CM Codes Partner Promotion Materials. Accessed April 13, 2025. https://www.cdc.gov/obesity/media/pdfs/2024/12/adult-partner-promotionmaterials-icd-10-codes-508.pdf
- Centers for Disease Control and Prevention. National Center for Health Statistics-ICD-10-CM. Accessed March 10, 2025. https://icd10cmtool.cdc. gov/?fy=FY2025&query=E66
- BlueCross BlueShield of South Carolina. Preventive Services for Non-Grandfathered (PPACA) Plans: Behavioral Counseling for Prevention. South Carolina Blues. Accessed March 10, 2025. https://www.southcarolinablues. com/web/public/brands/medicalpolicy/externalpolicies/preventive-servicesfor-non-grandfathered-ppaca-plansbehavioral-counseling-for-prevention/
- Noridian Healthcare Solutions. Intensive Behavioral Therapy (IBT) for Obesity. Noridian Medicare. Accessed March 10, 2025. https://med.noridianmedicare.com/web/jeb/topics/preventiveservices/intensivebehavioral-therapy-ibt-for-obesity
- Obesity Action Coalition. Understanding Obesity Stigma. Accessed March 6, 2025. https://www.obesityaction.org/get-educated/publicresources/ brochures-guides/understanding-obesity-stigma-brochure/



- Dickinson JK, Guzman SJ, Maryniuk MD, et al. The use of language in diabetes care and education. Diabetes Care. 2017;40(12):1790-1799.
- Vallis M, Piccinini-Vallis H, Sharma AM, Freedhoff Y. Clinical review: modified 5 As: minimal intervention for obesity counseling in primary care. Can Fam Physician. 2013:59(1):27-31.
- Borrelli B, Riekert KA, Weinstein A, Rathier L. Brief motivational interviewing as a clinical strategy to promote asthma medication adherence. *J Allergy Clin Immunol*. 2007;120(5):1023-1030.
- 27. National Institute of Diabetes and Digestive and Kidney Disease. Talking with Your Patients about Weight. Accessed March 3, 2025. https://www.niddk.nih.gov/health-information/professionals/clinical-tools-patient-management/weight-management/talking-with-your-patients-about-weight
- 28. Tsai AG, Bessesen DH. Obesity. Ann Intern Med. 2019;170(5):ITC33-ITC48.
- 29. MacLeod L. Making SMART goals smarter. PEJ. 2012;38(2):68-70.
- 30. Wadden TA, Webb VL, Moran CH, Bailer BA. Lifestyle modification for obesity: new developments in diet, physical activity, and behavior therapy. *Circulation*. 2012;125(9):1157-1170.
- 31. ClinicalTrials.gov. A Safety and Efficacy Study of Naltrexone SR/Bupropion SR and Placebo in Overweight and Obese Subjects Participating in an Intensive Behavior Modification Program. Accessed February 27, 2025. https://clinicaltrials.gov/study/NCT00456521
- ClinicalTrials.gov. A Safety and Efficacy Study of Naltrexone SR/Bupropion SR in Overweight and Obese Subjects. Accessed February 27, 2025. https:// clinicaltrials.gov/study/NCT00567255
- Gadde KM, Allison DB, Ryan DH, et al. Effects of low-dose, controlled release, phentermine plus topiramate combination on weight and associated comorbidities in overweight and obese adults (CONQUER): a randomised, placebo-controlled, phase 3 trial. *Lancet*. 2011;377:1341–1352.
- Torgerson JS, Boldrin MN, Hauptman J, Sjostrom L. XENical in the Prevention of Diabetes in Obese Subjects (XENDOS) Study. *Diabetes Care*. 2004;27:155-161.
- 35. Pi-Sunyer X, Astrup A, Fujioka K, et al. A random, controlled trial of 3.0 liraglutide in weight management. *N Engl J Med.* 2015;373;11-22.



- 36. Wilding JPH, Batterham RL, Calanna S, et al. Once-weekly semaglutide in adults with overweight or obesity. N Engl J Med. 2021;384(11):989-1002.
- 37. Jastreboff AM, Aronne LJ, Ahmad NN, et al. Tirzepatide once weekly for the treatment of obesity. *N Engl J Med.* 2021;387(3);205-216.
- van Rijswijk AS, van Olst N, Schats W, van der Peet DL, van de Laar AW. What is weight loss after bariatric surgery expressed in percentage total weight loss (%TWL)? A systemic review. Obes Surg. 2021;31:3833-3847. https://doi. org/10.1007/s11695-021-05394-x
- Almandoz JP, Wadden TA, Tewksbury C, et al. Nutritional considerations with antiobesity medications. Obesity (Silver Spring). 2024;32(9):1613-1631.
- AACE. Nutrition and Obesity. Accessed May 29, 2024. https://www.aace. com/disease-and-conditions/nutrition-and-obesity/meal-prep-how-planhealthy-eating
- Prieto-Gonzalez P, Yagin FH. Energy expenditure, oxygen consumption, and heart rate while exercising on seven different indoor cardio machines and maximum and self-selected submaximal intensity. Front Sports Act Living. 2024;6:1313886.
- 42. Cox CE. Role of physical activity for weight loss and weight maintenance. *Diabetes Spectr.* 2017;30(3):157-160.
- Willis LH, et al. Effects of aerobic and/or resistance training on body mass and fat mass in overweight or obese adults. J Appl Physiol. 2012;113(12):1831-1837.
- 44. Lopez P, Taaffe DR, Galvao DA, et al. Resistance training effectiveness on body composition and body weight outcomes in individuals with overweight and obesity across the lifespan: a systematic review and meta-analysis. *Obes Rev.* 2022;23:e13428.
- 45. Orange ST, Madden LA, Vince RV. Resistance training leads to large improvements in strength and moderate improvements in physical function in adults who are overweight or obese: a systematic review. *J Physiother*. 2020;66(4):214-224.
- 46. Larkey LK, James D, Belyea M, Jeong M, Smith LL. Body composition outcomes of tai chi and qigong practice: a systemic review and meta-analysis of randomized controlled trials. *Int. J Behav. Med.* 2018;25(5):487-501.



- 47. Niemiro GM, Ayesan R, Algotar AM. Exercise and fitness effect on obesity. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025.
- Patel ML, Wakayama LN, Bennett GG. Self-monitoring via digital health in weight loss interventions: a systematic review among adults with overweight or obesity. Obesity. 2021;29(3):478-499.
- 49. Cheatham SW, Stull K. The efficacy of wearable activity tracking technology as part of a weight loss program: a systematic review. *J Sport Med Phys Fit.* 2018;58(4):534-548.
- Sato K, Yamakata Y, Amano S, and Aizawa K. Wearable camera based food logging system. ACM Multimedia Asia. 2012;33:1-5.
- Ufholz K, Werner J. The efficacy of mobile applications for weight loss. Curr Cardiovasc Risk Rep. 2023;17(4):83–90.
- 52. Gussman LAA, Rikhy M, Lockwood KG, Branch OH, Graham SA. The effects of providing a connected scale in an app-based digital health program: crosssectional examination. *JMIR Mhealth Uhealth*. 2022;11:e40865.
- Hall KD, Kahan S. Maintenance of lost weight and long-term management of obesity. Med Clin North Am. 2018;102(1):183-197.









