

CLINICAL PRACTICE BRIEF:

PHARMACOLOGICAL MANAGEMENT OF OBESITY: OBESITY MANAGEMENT ASSOCIATION (OMA) 2020 OBESITY ALGORITHM

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During the past 30 years, there has been a dramatic increase in the number of individuals in the United States who have preobesity (overweight) or obesity. Between reporting periods 1999–2000 through 2017–2018, the prevalence of obesity increased from 30.5% to 42.4%, the Centers for Disease Control and Prevention (CDC) reports.

Prevalence of obesity by age group:

- 40% in adults aged 20-39.
- 44.8% in adults aged 40-59.
- 42.8% in adults aged 60 and older.

Obesity is a disease with 236 obesity-associated disorders (Yuen, 2016), the majority of which are complications of the chronic disease of obesity and several comorbidities. Nurse practitioners (NPs) frequently manage patients with obesity. The OMA 2020 Obesity Algorithm discusses the management of obesity and includes pharmacologic guidance as an adjunct in the foundational treatment of obesity: diet, activity and behavioral interventions. This algorithm has the pillars of treatment as described by OMA, but this practice brief will highlight the pharmaceutical portion of the algorithm as part of the treatment plan for the chronic disease of obesity.

Care of the Patient With Preobesity (Overweight) or Obesity

1. Diet, exercise and behavioral modifications are recommended as the foundation of treatment for all patients with obesity. This treatment begins in all obesity management approaches for individuals with a body mass index (BMI) >25 kg/m². Other tools, such as pharmacotherapy, may be appropriate for patients with a BMI >27 kg/m² with complications and/or comorbidities or BMI >30 kg/m². Indications for the use of bariatric surgery for patients with obesity includes a BMI >35 kg/m² with complications or comorbidities, or BMI >40 kg/m², or a patient who has been unsuccessful with previous weight loss attempts.
2. Approved anti-obesity medications, as opposed to nonpharmacological therapy, are recommended to promote long-term weight maintenance and ameliorate complications and/or comorbidities.
3. Anti-obesity medications currently approved by the U.S. Food and Drug Administration (FDA) include short-term choices — phentermine, diethylpropion, phendimetrazine and benzphetamine — orlistat and liraglutide, as well as two combination medications — phentermine/topiramate and naltrexone/bupropion. An addition to the pharmacology for anti-obesity medications in 2020 is biodegradable hydrogel capsules.
4. Phentermine is labeled by the FDA with a 13-week prescribing limit; however, OMA and experts believe the evidence supports long-term use of this medication.
5. General considerations:
 - a. Discontinue medication in patients who do not respond with weight loss of at least 5% at 12 weeks.
 - b. Different patients respond to different medications; if one option does not work, consider others.
3. Avoid pharmacologic treatment in pregnancy.

Drugs That Are Obesogenic and Possible Alternatives

Diabetes Mellitus (DM)

Medications that may increase body weight: insulin, thiazolidinediones, meglitinides and sulfonylureas. Medication alternatives for type 2 DM: metformin, GLP1 agonists, SGLT2 inhibitors, alpha glucosidase inhibitors, pramlintide and dipeptidyl peptidase 4 (DPP4 inhibitors).

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Depression

Medications that may increase body weight: Some selective serotonin reuptake inhibitors, such as paroxetine and citalopram; some selective serotonin and norepinephrine re-uptake inhibitors, such as venlafaxine; and irreversible monoamine oxidase inhibitors, such as isocarboxazid and phenelzine. Medication alternatives are bupropion and fluoxetine (variable response). Additionally, there are medications that may be weight neutral: vortioxetine and zonisamide. Hormones can increase body weight: glucocorticoids, progestin contraceptives (weight gain does not occur with every patient). More weight neutral: oral contraceptives over injectable.

Seizure

Medications that may increase body weight: carbamazepine, gabapentin, valproate and pregabalin. Medication alternatives are topiramate and zonisamide.

Migraine

Medications that may increase body weight: amitriptyline, gabapentin, paroxetine, valproate acid and beta blockers. Medication alternatives are topiramate and zonisamide.

Hypertension

Medications that may increase body weight: some beta-blockers, such as propranolol, atenolol and metoprolol; carvedilol variable response; and dihydropyridine calcium channel blockers, such as nifedipine and amlodipine. Medication alternatives include Angiotensin-Converting Enzyme Inhibitor (ACE-I) and Angiotensin II Receptor Blockers (ARBs).

Use of Medications in an Off-label Manner for Chronic Obesity Management

The off-label use of medications approved for other disease states for the sole purpose of weight loss is not recommended in the clinical setting. An example of this is thyroid hormone used for hypothyroidism in a patient that does not have hypothyroidism but is given the medication to cause weight loss. A trial of such a therapy can be used in the research setting by health care providers, who have expertise in weight management and well-informed patients.

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