Enhancing the Patient-Provider Connection: Practical Strategies for Improving Outcomes in Obesity Management
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Faculty Disclosures

- Consulting Fees: Bausch Health/Valeant Pharmaceuticals International; Novo Nordisk Inc.
- Speakers’ Bureau: Novo Nordisk Inc.
- Contracted Research: Novo Nordisk Inc.
Learning Objectives

- Analyze regional and ethnic disparities in obesity
- Address patients with obesity with sensitivity and a greater understanding of this disorder’s causes, challenges, and treatments
- Apply current practice guidelines to optimize screening, diagnosis, and treatment
- Implement proven communication strategies, such as *The 5 A’s of Obesity Counseling*, to effectively engage patients in weight loss discussion
- Evaluate the efficacy and safety of available and emerging pharmacologic therapies for weight loss
Obesity Prevalence and Impact
Obesity is the single greatest threat to public health for this century

—US Department of Agriculture and US Department of Health and Human Services
**Overweight/Obesity Classifications**

<table>
<thead>
<tr>
<th>Category</th>
<th>BMI</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight</td>
<td>25.0–29.9</td>
<td></td>
</tr>
<tr>
<td>Obesity</td>
<td>30.0–34.9</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>35.0–39.9</td>
<td>II</td>
</tr>
<tr>
<td>Extreme obesity*</td>
<td>≥40</td>
<td>III</td>
</tr>
</tbody>
</table>

**NIH Guidelines for Identifying Obesity Class in Adults**

**BMI for Asian Populations**

Epidemiologic data indicate people of Asian descent are at risk for T2DM at lower BMI ranges.\(^3,4\)

Lower BMI cutpoints are recommended for Asian Americans:

- **Overweight:** ≥23–<27.5
- **Obesity:** ≥27.5

**Overweight Definitions in Children/Adolescents**

<table>
<thead>
<tr>
<th>Sex-specific BMI for age at or above ______ of CDC growth charts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obesity</td>
</tr>
<tr>
<td>95th percentile</td>
</tr>
</tbody>
</table>

*“Class III extreme obesity” now the preferred terminology over “morbid obesity.”* 
BMI, body mass index; CDC, Centers for Disease Control and Prevention; NIH, National Institutes of Health; T2DM, type 2 diabetes mellitus.

Prevalence of obesity, by state, in 2011, according to the CDC’s BRFSS

- 2011 the first year of BRFSS survey

BRFSS, Behavioral Risk Factor Surveillance System.

Obesity in America: 2017

... And prevalence of obesity, by state, in 2017

Incidence of obesity has more than doubled since 1980\textsuperscript{1,2}

<table>
<thead>
<tr>
<th>Population</th>
<th>Obesity (%)</th>
<th>Extreme Obesity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults (≥20 years)</td>
<td>93.3 million (39.8)</td>
<td>17.8 million (7.6)</td>
</tr>
<tr>
<td>Youth (2–19 years)</td>
<td>13.7 million (18.5)</td>
<td>4.2 million (5.6)</td>
</tr>
</tbody>
</table>

NHANES, National Health and Nutrition Examination Survey.


Obesity Rates by Race/Ethnicity

†Prevalence of Obesity in US Adults Age ≥20 NHANES Data 2015–2016

*Percentages are rounded; †AIAN not included in NHANES; data from Am J Health Promot. 2010;24:246-254.


AIAN, American Indian, Alaska Native; NH, non-Hispanic.
Obesity: More Than Just Appearance

T2DM
- Insulin insensitivity
- Insulin resistance
- Metabolic syndrome

CVD
- Dyslipidemia
- Hypertension
- Ischemic stroke
- Triglyceridemia

Cancer
- Breast
- Colorectal
- Kidney
- Liver
- Non-Hodgkin lymphoma

Others
- Depression
- Gallbladder
- GERD
- Renal disease
- Osteoarthritis
- Respiratory
- Sleep apnea

Obesity’s serious sequelae: associated comorbidities and complications

CVD, cardiovascular disease; GERD, gastroesophageal reflux disease; MI, myocardial infarction.

Obesity Bias, Stigma, and Empowering Patients
Obesity: Last Socially Acceptable Prejudice

- Irony: as obesity rates rise, so does bias and discrimination toward those affected
- People with obesity often openly, publicly humiliated, or denied services
  - No consequences for “fat-shamers” vs outrage for those who ridicule other subset populations
- Law provides protection against discrimination for racial, religious, and sexual orientation minorities; women, aged, disabled
  - No laws against discrimination on the basis of weight

The Vicious Cycle of Weight Stigma

Rather than motivating weight loss and improved health, stigmatizing and social shaming accelerates weight gain and exacerbates poor mental and physical health.

Anxiety & Depression

Additional Weight Gain

Physical & Mental Health Outcomes
- High-Risk, Health-Related Behaviors
- Mobility & QOL
- Morbidity & Mortality

Dysregulated Health Biomarkers
(↑A1c, BP, CRP, LDL-C)

Bias & Discrimination

Internalized Shame & Worthlessness

BP, blood pressure; CRP, C-reactive protein; LDL-C, low-density lipoprotein cholesterol; QOL, quality of life.

Obesity Origins: Myths vs Realities

Myths\textsuperscript{1,2}

- Obesity solely caused by
  - Lack of self-discipline
  - Laziness and gluttony
  - Poor food choices and lack of exercise
  - Inferior education and intelligence
  - Personal and moral failure

- It’s simple: too many calories in, too few calories out

Realities\textsuperscript{2-4}

- Obesity caused by complex, impaired interplay between
  - Genetic factors
  - Endocrinologic and metabolic physiology
  - Behavioral and psychosocial elements
  - Environment

- It’s complicated: not a lifestyle choice

AMA: Obesity is a complex, chronic disease — it needs medical intervention\textsuperscript{5}

Stigma in the Healthcare Setting

- Studies show clinicians believe obesity stereotypes\(^1\)
  - Many published articles documenting physician views of patients with obesity as lazy, undisciplined, stupid, unattractive, and unlikely to be adherent\(^2\)

- PCPs/HCPs in one study rated patients with obesity a “waste of time” and spent 28% less time with them\(^3\)

- A test of weight bias in 2,284 male and female US physicians found strong implicit and explicit anti-fat bias in nearly all\(^4\)
  - Bias particularly strong in the 1,046 male physicians
  - Anti-obesity attitudes even among the 221 physicians who were themselves struggling with obesity

HCPs, healthcare providers; PCPs, primary care providers/physicians.

Stigma in Healthcare: Blame the Victim

- Survey of 1,244 fourth-year medical students on their beliefs about the causes of obesity

- 46% of respondents believe in Bad Choices by Person with Obesity
- 28% believe in Genetic/Metabolic Dysfunction
- 27% believe in Choices & Genetic/Metabolic Dysfunction Independent Contributors

**Beyond Advice: Empowering Patients**

### Partner with the Patient to Develop a Plan

| Simple goals to start: Not 100 lbs, but 5% of body weight; Individualized physical activity | Strategies for overcoming barriers and setbacks |

### Locate Resources with the Patient

| Community resources for physical activity | Weight loss support groups and programs |

### Follow-Up

| Increase accountability with regular (eg, monthly) consultations | Review progress, help patient problem-solve to eliminate barriers |

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Empowering Patients: Advocates for Improved Access to Care

- **Obesity Action Coalition (www.obesityaction.org)**
  - Promotes respect and access to effective treatment options on federal and local levels
  - Works with patients to intervene with health insurance and employers
  - Educates against bias and for health and treatment
  - Connects patients with community and local resources

- **Obesity Medicine Association (www.obesitymedicine.org)**
  - The largest organization of clinical obesity experts (physicians and other clinicians)
  - Advocates for comprehensive, effective, individualized treatment
  - Educates clinicians about the pathophysiology of obesity and effective management strategies

*OAC website offers a wide variety of handouts, fact sheets, brochures, and guides for patient education. These can be found under the “Get Educated” tab, then “Public Educational Resources.”*
Asking and Counseling: The 5 A’s

Obesity Flow Chart

ASK
Ask for permission to discuss weight
Explore readiness for change

ASSESS
Assess risk, obesity class, and root causes using “4 M’s”

ADVISE
Advise on obesity risks, discuss benefits of weight loss and therapeutic options

AGREE
Agree on health outcomes and goals

ASSIST
Assist in accessing appropriate providers and arrange for follow-up

Example
Would it be alright if we discussed your weight?
Use a sensitive, nonjudgmental manner and tone

Yes
Refer to Obesity Specialist

No

Mental (eg, addiction, depression, eating disorder, insomnia, trauma)
Mechanical (eg, chronic pain, osteoarthritis, reflux disease, sleep apnea)
Metabolic (eg, dyslipidemia, fatty liver, hypertension, type 2 diabetes)
Monetary (eg, disability, education/employment, income, insurance)

Not ready

Ready

Focus should be on improving health and well-being, not on size or appearance
First goal is to stabilize weight and prevent further weight gain

Establish realistic and achievable goal of modest weight loss (5%–10%)
Mutually decide on a treatment plan (can include improved eating, increased physical activity, and anti-obesity medications) and discuss potential barriers

Assist in accessing appropriate providers and arrange for follow-up

Assisting/Arranging

Referrals to dietitian, physical/exercise therapist, psychologist, bariatric surgeon
Weight management clinic
Evidence-based commercial program
Follow-up appointments

Case Study: Mary

- 42-year-old Hispanic woman
  - Height: 5’6”; Weight: 240 lbs
  - BMI: 38 (Class II obesity)
  - Comorbidity: T2DM; A1c ~7.5

- Mary is visiting a new doctor
  - She avoids HCPs because they are sometimes condescending
  - Nag her about her weight, imply she’s lazy and gluttonous

- She wants to ask for anti-obesity medication but is afraid
  - Last time she asked, doctor said she had to prove she was serious by losing 10 lbs before he would prescribe
  - He told her he didn’t think she would take it as prescribed
  - Defeated, she didn’t return for several months and in that time, gained even more weight
Pathophysiology: Hormonal and Metabolic Adaptation
Multiple Hormones and Organs Involved in Developing and Maintaining Obesity

- Adipokines
- Proinflammatory cytokines
- NEFA
- Excess visceral (ectopic) fat
- Adiposopathy
- Ghrelin
- GLP-1
- GIP
- CCK
- OXM
- Microbiota changes
- Gut barrier dysfunction
- Beta cell burden, dysfunction, or apoptosis

CCK, cholecystokinin; GIP, glucose-dependent insulinotropic polypeptide; GLP-1, glucagon-like peptide-1; NEFA, non-esterified fatty acids; OXM, oxyntomodulin.

Complex Interplay Between Biology and Psychosocial Components

Fighting to Keep the Fat: Physiologic Adaptations to Weight Loss

When eating behavior changes because of dieting...

- Hormone activity/functionality increases or decreases
  - ↑ Orexigenic hormones (appetite stimulating)
  - ↓ Anorexigenic hormones (appetite suppressing)

- Metabolism changes
  - ↓ Fat oxidation
  - ↑ Cortisol
  - ↓ T4

- Energy expenditure slows
  - ↓ Resting energy expenditure
  - ↓ Non-resting energy expenditure
  - ↓ Total energy expenditure

Goal: Protect the fat supplies!

Result: Weight loss DEcelerates, weight gain ACCelerates...weight is regained

T4, thyroxine.

## Key Hormones Dysregulated with Weight Gain and Regain

<table>
<thead>
<tr>
<th>Hormone</th>
<th>Normal Function</th>
<th>Dysfunction with Weight ↑ or ↓</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCK</td>
<td>Suppresses appetite</td>
<td>Decreases during dieting and weight loss</td>
</tr>
<tr>
<td>Ghrelin</td>
<td>Stimulates appetite and desire for high-fat, high-sugar foods</td>
<td>Increases during dieting and weight loss</td>
</tr>
<tr>
<td>GIP</td>
<td>Stores energy</td>
<td>Increases during dieting and weight loss</td>
</tr>
<tr>
<td>GLP-1</td>
<td>Suppresses appetite, increases satiety</td>
<td>Functionality decreases</td>
</tr>
<tr>
<td>Insulin</td>
<td>Regulates energy balance; signals satiety to the brain</td>
<td>Decreases after dieting; insulin resistance develops in people with obesity</td>
</tr>
<tr>
<td>Leptin</td>
<td>Regulates energy balance; suppresses appetite</td>
<td>Decreases during weight loss</td>
</tr>
<tr>
<td>PYY</td>
<td>Suppresses appetite</td>
<td>Decreases in people with obesity</td>
</tr>
</tbody>
</table>

PYY, peptide YY.

Obesity Management: Current Guidelines and Therapy Options
There is no singular, universally accepted algorithm for obesity

**AHA/ACC/TOS**
- Defines obesity and cardiometabolic risk based on
  - BMI, waist circumference, comorbidities
- Ranks evidence for various interventions from Class I (high benefit, low risk) to Class III (no benefit, harmful)
  - Diet/physical activity
  - Behavior/lifestyle
  - Pharmacotherapy/surgery
- Algorithm to determine when pharmacotherapy and surgery might be needed

**Endocrine Society**
- Follow-up to AHA/ACC/TOS focused on pharmacotherapy
  - Purpose of medication is to ameliorate comorbidities and enhance adherence to lifestyle changes
- Explores dosing, pros/cons of the 6 FDA-approved anti-obesity medications
- Discusses patient selection and individualizing therapy
- Recommends GLP-1 analog or SGLT2 for obesity + T2DM

AHA/ACC/TOS, American Heart Association/American College of Cardiology/The Obesity Society; SGLT2, sodium-glucose cotransporter 2.
Clinical Guidelines (cont)

- **AACE/ACE**
  - Like AHA/ACC/TOS, ranks evidence for interventions from A (strong) to D (weak)
  - Focused on inter-relationship between obesity and weight-related comorbidities
  - Organized as a series of questions with evidence-based responses and recommendations

**Question:** Is weight loss effective to treat diabetes risk and prevent T2DM?

**Grade A Recommendation:**
Medication-assisted weight loss using liraglutide, phentermine/topiramate, or orlistat should be considered in patients at risk for future T2DM and should be used when needed to achieve 10% weight loss in conjunction with lifestyle therapy.

**Question:** Is weight loss effective to treat HTN?

**Grade A Recommendation:**
Patients with HTN should be treated with lifestyle therapy to achieve 5%–15% weight loss to achieve blood pressure reduction goals.

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AACE/ACE, American Association of Clinical Endocrinologists/American College of Endocrinology; HTN, hypertension.

AHA/ACC/TOS Treatment Algorithm

AHA/ACC/TOS Treatment Algorithm (cont)

Follow-up and weight loss maintenance

Yes

Intensive behavioral treatment; reassess and address medical or other contributory factors; consider adding or reevaluating obesity pharmacotherapy, and/or refer to an experienced bariatric surgeon

Weight loss ≥5% and sufficient improvement in health targets

No

Continue intensive medical management of CVD risk factors and obesity-related conditions; weight management options

No

BMI ≥40 or BMI ≥35 with comorbidity. Offer referral to an experienced bariatric surgeon for consultation and evaluation as an adjunct to comprehensive lifestyle intervention

Yes

High-intensity comprehensive lifestyle intervention

BMI ≥30 or BMI ≥27 with comorbidity—option for adding pharmacotherapy as an adjunct to comprehensive lifestyle intervention

No

Weight loss ≥5% and sufficient improvement in health targets

Alternative delivery of lifestyle intervention

Yes, ready

Determine weight loss and health goals and intervention strategies

Comprehensive lifestyle intervention alone or with adjunctive therapies (BMI ≥30 or ≥27 with comorbidity)

AACE Algorithm: Identifying Obesity Patients at Increased Health Risk

Screening

Clinical Component of Diagnosis

Diagnosis (Anthropometric Component)

Annual BMI

1. Clinical interpretation of BMI: Ensure elevated BMI is indicative of excess adiposity by assessing: age, gender, muscularity, hydration status, edema, third space fluid collection, large tumors, sarcopenia
2. Waist circumference if BMI <35 kg/m²: Adds information pertaining to cardiometabolic disease risk; use gender- and ethnicity-specific cut-off values
3. Can consider using body composition technologies

• BMI ≥25 kg/m²
• BMI ≥23 kg/m² for some ethnicities

Clinical Component of Diagnosis

• BMI ≥25 kg/m²
• BMI ≥23 kg/m² for some ethnicities

AACE Algorithm: When to Start Anti-Obesity Medications

Initiate Lifestyle Therapy

No Complications
Patients with overweight/obesity who have no significant weight-related complications (eg, T2DM, hypertension, CVD).

Mild to Moderate Complications
Patients with overweight/obesity who have mild to moderate weight-related complications but for whom lifestyle therapy is expected to yield sufficient weight loss to resolve complications. Anti-obesity medication can also be started based on clinical judgment.

Initiate Anti-Obesity Medications

Lifestyle Therapy Failure
Add medication for patients with BMI ≥30 with no weight-related complications or with BMI ≥27 with ≥1 weight-related complications.

Weight Regain on Lifestyle Therapy
Add medication for patients who continue to gain weight or whose weight-related complications have not improved or who experience weight regain despite initial success on lifestyle therapy alone.

Presence of Weight-Related Complications
Start anti-obesity medication and lifestyle therapy simultaneously for patients who have weight-related complications, particularly if severe.

## FDA-Approved Anti-Obesity Medications

<table>
<thead>
<tr>
<th>Agent (Trade Name)</th>
<th>MOA Route</th>
<th>% TBWL*</th>
<th>Contraindications</th>
<th>Use with Caution in Patients with/Monitor for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liraglutide (Saxenda®)</td>
<td>• GLP-1 RA • SC injection</td>
<td>5.2%</td>
<td>• Personal or family history of MTC or MEN2 • Pregnancy</td>
<td>• Pancreatitis • Acute gallbladder disease • Cholelithiasis • Suicidal ideation</td>
</tr>
<tr>
<td>2014†</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lorcaserin (Belviq®, Belviq XR®)</td>
<td>• Serotonin RA • Oral</td>
<td>3.3%</td>
<td>• Serotonin syndrome • Neuroleptic malignant syndrome • Pregnancy</td>
<td>• Concomitant use of SSRI, SNRI, MAOI • Cardiac valve disease • Depression</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Most Common AEs (≥5%): Patients without T2DM: headache, dizziness, fatigue, nausea, dry mouth, constipation
Patients with T2DM: hypoglycemia, headache, back pain, cough, fatigue

### Contraindications
- Personal or family history of MTC or MEN2
- Pregnancy
- Pancreatitis
- Acute gallbladder disease
- Cholelithiasis
- Suicidal ideation

### Use with Caution
- Concomitant use of SSRI, SNRI, MAOI
- Cardiac valve disease
- Depression

*Average TBWL compared with placebo in clinical trials; all percentages taken from relevant package insert with maximum number cited; †Liraglutide originally approved in 2010 at a lower dose range and under a different trade name, for type 2 diabetes. AEs, adverse events; MEN2, multiple endocrine neoplasia type 2; MTC, medullary thyroid carcinoma; MAOI, monamine oxidase inhibitor; MOA, mechanism of action; RA, receptor agonist; SC, subcutaneous; SNRI, serotonin-norepinephrine reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor; TBWL, total body weight loss.

### FDA-Approved Anti-Obesity Medications (cont)

<table>
<thead>
<tr>
<th>Agent (Trade Name) Year Approved</th>
<th>MOA Route</th>
<th>% TBWL*</th>
<th>Contraindications</th>
<th>Use with Caution in Patients with/Monitor for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naltrexone + Bupropion (Contrave®) 2014</td>
<td>• Opiate antagonist + DA and NE reuptake Inhibitor • Oral</td>
<td>4.1%</td>
<td>• Uncontrolled HTN • Seizure disorders • Anorexia or bulimia • Alcohol withdrawal • Opioid abuse • Pregnancy</td>
<td>• Suicidal ideation • Depression • Psychiatric disorders • Concomitant use of MAOI • Liver dysfunction • Concomitant use of OADs†</td>
</tr>
<tr>
<td>Orlistat (Xenical®, Alli®—OTC) 1999</td>
<td>• Lipase inhibitor • Oral</td>
<td>3%</td>
<td>• Chronic malabsorption syndrome • Cholestasis • Pregnancy</td>
<td>• Liver dysfunction‡ • Renal impairment • Malabsorption of fat-soluble vitamins</td>
</tr>
</tbody>
</table>

**Most Common AEs (≥5%):** nausea, constipation, headache, vomiting, dizziness, insomnia, dry mouth, diarrhea

**Most Common AEs (≥5%):** Oily spotting, flatus with discharge, fecal urgency, fatty/oily stool, oily evacuation, increased defecation, fecal incontinence

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*Average TBWL compared with placebo in clinical trials; all percentages taken from package insert with maximum number cited; †Weight loss may cause hypoglycemia in patients taking drugs for diabetes; ‡Rare cases of severe liver injury have been reported.*

DA, dopamine; NE, norepinephrine; OADs, oral antidiabetic drugs; OTC, over the counter.

## FDA-Approved Anti-Obesity Medications (cont)

<table>
<thead>
<tr>
<th>Agent (Trade Name)</th>
<th>Year Approved</th>
<th>MOA Route</th>
<th>% TBWL*</th>
<th>Contraindications</th>
<th>Use with Caution in Patients with/Monitor for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phentermine + Topiramate ER (Qsymia®)</td>
<td>2012</td>
<td>• NE-releasing agent; CNS stimulant + GABA receptor agonist • Oral</td>
<td>9.4%</td>
<td>• Hyperthyroidism • Glaucoma • Recent use of MAOI • Pregnancy</td>
<td>• Suicidal ideation • Depression • Mood and sleep disorders • Increased heart rate • Cognitive impairment • Concomitant use of OADs†</td>
</tr>
<tr>
<td>Phentermine‡ (Adipex-P, Suprenza)</td>
<td>1959</td>
<td>• NE-releasing agent; CNS stimulant</td>
<td>N/A</td>
<td>• Cardiovascular disease • Hyperthyroidism • Glaucoma • Pregnancy</td>
<td>• Anxiety disorders • Uncontrolled hypertension • History of drug abuse • History of seizures</td>
</tr>
</tbody>
</table>

**Most Common AEs (≥5%):** paresthesia, dizziness, dysgeusia, insomnia, constipation, dry mouth

**Most Common AEs (≥5%):** Headache, increased BP and HR, tachycardia, palpitations, dry mouth, dysgeusia, insomnia, anxiety, constipation

* Average TBWL compared with placebo in clinical trials; all percentages taken from package insert with maximum number cited; †Weight loss may cause hypoglycemia in patients taking drugs for diabetes; ‡Approved for short-term use ≥3 months.

CNS, central nervous system; ER, extended release; GABA, γ-aminobutyric acid; HR, heart rate.

Individualizing Pharmacotherapy

**AACE/ACE:** To select optimal anti-obesity medication for an individual patient, consider differences in efficacy, side effects, and cautions and warnings, as well as the presence of weight-related complications and medical history.¹

- **CVD:** Orlistat, lorcaserin, and liraglutide are preferred.* The combination of phentermine/topiramate is not contraindicated in CVD but should be used with caution with monitoring of heart rate and rhythm.

- **Depression:** Naltrexone/bupropion and lorcaserin should be used with caution after careful review of concomitant antidepressants. Orlistat, liraglutide, and phentermine/topiramate may be considered. When possible, weight-neutral antidepressants should be chosen.

- **CKD:** All anti-obesity medications can be used with caution in patients with mild renal impairment. The combinations of naltrexone/buproprion and phentermine/topiramate can be used in low doses in moderate impairment, but should not be used in patients with severe impairment. Liraglutide and orlistat can be considered in ESRD with a high level of caution.

- **Seizure disorder:** Avoid naltrexone/bupropion in this population. Phentermine/topiramate, lorcaserin, liraglutide, and orlistat are preferred.

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*Liraglutide for obesity (3 mg) has demonstrated no increased risk for CVD based on the LEADER trial, which looked at CVD risk in individuals with T2DM as well as in established CVD on a 1.8 mg dose of liraglutide.²

CKD, chronic kidney disease; ESRD, end-stage renal disease; LEADER, Liraglutide Effect and Action in Diabetes: Evaluation of cardiovascular outcome Results.

Individualizing Pharmacotherapy (cont)

**Endocrine Society:** Diet, exercise, and behavioral modification should be included in all obesity management approaches. Patients who have a history of being unable to successfully lose and maintain weight and who meet label indications are candidates for anti-obesity medications.

- **T2DM:** Liraglutide or other GLP-1 analogues or SGLT2 inhibitors should be chosen due to the dual benefit of these agents in glucose regulation and weight-negative profiles. Clinicians should use weight-losing or weight-neutral medications in the management of T2DM patients who are affected by obesity. For patients who use insulin, consider adding metformin, pramlintide, or a GLP-1 analogue to mitigate against weight gain.
- **Psychiatric disorders:** Clinicians should choose weight-neutral antipsychotics when indicated over those known to cause weight gain.
- **Contraception:** Recommend oral contraceptives over injectables due to weight gain potential with injectables.

New and Emerging Treatments: Gelesis100

- A hydrogel-filled capsule ingested orally, gelesis100 (Plenity™) is **NOT** a drug\(^1\)
  - Approved by FDA in April 2019 as a **device**
  - Contraindicated or to be avoided in patients who are pregnant or who have certain GI conditions

- After swallowing, hydrogel expands to fill the stomach, producing feelings of fullness
  - Gel passes through GI system naturally
  - Has no caloric value

- Approved for adults with BMI 25–40 based on results from GLOW trial\(^2\)
  - Phase 3 trial in 436 patients
    - 59% of patients achieved weight loss of ≥5% vs 42% taking placebo
    - 27% achieved ≥10% weight loss vs 15% in placebo group

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## Anti-Obesity Medications in Phase 3 Trials

<table>
<thead>
<tr>
<th>Name (Drug Class)</th>
<th>Study ID # (Acronym)</th>
<th>Total No. Pts Enrolled</th>
<th>Study Populations</th>
</tr>
</thead>
</table>
| **Semaglutide (GLP-1 RA)** | NCT03548935 (STEP 1) NCT03552757 (STEP 2) NCT03611582 (STEP 3) NCT03548987 (STEP 4) NCT03693430 (STEP 5) NCT03811574 (STEP 6) | 5,510 | - Adults with BMI ≥30 or ≥27 + ≥1 weight-related comorbidity (ie, HTN, DYS, OSA, CVD) 
- Adults with BMI ≥27 + T2DM 
- Adults with BMI ≥27 + ≥2 weight-related comorbidities or 
- BMI ≥35 + 1 weight-related comorbidity |
| **Dapagliflozin (SGLT2)** | NCT02338193 (DAPA-GDM)* NCT02635386† NCT03419624† | 264 | - Women with Class I, II, or III obesity + PCOS 
- Women with overweight or obesity (BMI ≥25) + recent GDM 
- Adults with BMI ≥30 + T2DM with high A1c (ie, ≥8%–11%) |

*Obesity the primary outcome measure; †Obesity a secondary outcome measure.

DYS, dyslipidemia; GDM, gestational diabetes mellitus; OSA, obstructive sleep apnea; PCOS, polycystic ovary syndrome.

Source: ClinicalTrials.gov using filters for “obesity,” “interventional studies,” “recruiting,” “active, not recruiting,” and “phase 3.”
### Using ADAPT in Conversations

<table>
<thead>
<tr>
<th>Step</th>
<th>Goal</th>
<th>Things to Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Attitude</td>
<td>Overcome attitudes of discouragement or defeat</td>
<td>“I know you feel stuck; a lot of people feel that way when they think about trying to lose weight. Let’s see if we can come up with a way to get you unstuck.”</td>
</tr>
<tr>
<td>D: Defining the problem</td>
<td>Identify barrier(s) to weight loss</td>
<td>“What do you think is the biggest obstacle preventing you from losing weight?”</td>
</tr>
<tr>
<td>A: Alternative solutions</td>
<td>Come up with alternative ways to overcome the barriers</td>
<td>“What are some possible solutions to this problem?” “Which solution do you think would be the most effective?” “Which solution are you willing to try in the next week?”</td>
</tr>
<tr>
<td>P: Predicting consequences</td>
<td>Consider possible consequences of the proposed solutions and decide which solution is best</td>
<td>“What things could prevent you from trying this solution?” “What might happen if you tried the solution this week?”</td>
</tr>
<tr>
<td>T: Trying the solution</td>
<td>Trying the solutions and evaluating their efficacy</td>
<td>“Name a day and time you will attempt this solution in the next week.”</td>
</tr>
</tbody>
</table>

ADAPT, Attitude, Defining the problem, generating Alternative Solutions, Predicting consequences, Trying the solution.

Summary

- Prevalence of obesity and extreme obesity has more than doubled since 1980
  - Adds tremendous disease burden from weight-related comorbidities and complications
- Clinicians often regard obesity as a character flaw, instead of a disease that needs medical treatment
  - Studies reveal explicit and implicit bias against patients with obesity, yielding inadequate medical care
  - Few clinicians recognize the complex pathophysiologic, metabolic, and psychosocial components involved in etiology
- Obesity can be successfully managed using
  - *The 5 A’s of Obesity Counseling*
  - Recent clinical guidelines
  - Empathetic, nonjudgmental language and approach
  - Anti-obesity medications as well as lifestyle interventions