

Challenging Case Discussions

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39-year-old Man with Progressive Weight Gain

- David is a 39-year-old man with progressive weight gain over the past 15 years that accelerated over the past year.
- He was thin and active throughout childhood, gained some weight during college, and then started gaining more significantly when he joined the workforce. He works as an information systems analyst, which is a sedentary job with long hours and a lot of stress, especially with client deadlines. He attributes his weight gain to busy lifestyle, traveling, not choosing healthy foods, eating large portions, and not enough exercise.

39-year-old Man with Progressive Weight Gain

- PMH: hypertension, type 2 diabetes mellitus, GERD, CLBP, depression
- Medications: glyburide 10 mg, losartan 100 mg, escitalopram 20 mg, omeprazole 20 mg
- Weight: 230 lbs, BMI: 34 kg/m²
- Waist circumference: 40 inches
- BP: 135/85 mmHg, HR: 86 bpm
- A1C: 6.9%
- Lipids: TC: 164 mg/dL, LDL: 90 mg/dL, TG: 181 mg/dL, HDL: 38 mg/dL

39-year-old Man with Progressive Weight Gain

- He met with a registered dietitian briefly when he was diagnosed with type 2 diabetes several years ago and found this to be helpful, but shortly into the counseling process he had a job change and stopped working with the dietitian.
- He generally skips breakfast, eats his first meal at 1 to 2 pm, often with clients or at his desk, snacks around 4 pm on food around the workplace or from the vending machine, then has dinner with his family, dining out 3 to 4 nights per week.
- Physical activity is minimal. He has a treadmill in the basement but has not used it. A gym is available at work.

What is your primary clinical focus?

- a. No changes are indicated. He is in good reasonable control.
- b. Focus primarily on improved hypertension control, as this is his major concern.
- c. Focus primarily on improved diabetes control, as he is not at goal.
- d. Focus primarily on weight loss, as his blood pressure and glucose should favorably respond.

Which of the following steps do you recommend?

- a. Self-directed changes in dietary and physical activity behaviors
- b. Referral to RDN and/or CDE for nutrition and diabetes education
- c. Referral for community or commercial weight loss program
- d. Attention to weight-gaining medications
- e. Consideration for obesity pharmacotherapy
- f. Consideration for bariatric surgery

Which of the following diabetes medication changes would you consider?

- a. Replace losartan with metoprolol
- b. Replace losartan with HCTZ
- c. Replace glyburide with metformin
- d. Replace glyburide with SGLT-2 inhibitor
- e. Replace escitalopram with fluoxetine
- f. Replace escitalopram with bupropion

After several months of nutrition counseling, changing glyburide to metformin, and ongoing attention to weight loss, David has lost 5 lbs. Although his blood pressure has improved, his A1C is now 7.3%. Which of the following obesity medications would likely be the best option to cause further weight loss and improved glycemic control?

- a. Phentermine
- b. Lorcaserin
- c. Naltrexone SR/bupropion SR
- d. Liraglutide 3.0 mg

Rhonda and Shawn

- A married couple, Rhonda and Shawn, came to your office together requesting advice and treatment for weight loss.
- They both have struggled with obesity for decades, and they have tried several diets together over the years. After engaging in Weight Watchers last year, losing a few pounds only to regain them, they thought to ask for your advice about what to do next. In particular, they asked about bariatric surgery – they have a friend who had surgery last year and has lost a lot of weight.

Rhonda

- Rhonda is a 52 year old woman with BMI of 44 kg/m². She remembers always being overweight, even as a 5-year-old child. She went on her first diet at age 13, attended "fat camp" every summer during high school, and her weight has steadily increased throughout her adulthood.
- PMH: hypertension, metabolic syndrome, GERD
- Medications: Lisinopril 20 qd, OTC antacids prn.
- Physical exam is normal other than mild pedal edema
- Weight: 295 lbs, BMI 44 kg/m², BP: 128/84 mmHg, HR: 80 bpm
- A1c: 5.9%, TG: 140, LDL: 110, HDL: 44, eGFR 90

Shawn

- Shawn is 54 year old male with BMI of 28 kg/m². He was thin as a child through his 20s, and only remembers gaining weight when he started working in a stressful job in his 40s. Since then, however, weight has increased by about 50 lbs over less than a decade. He has tried several diets alongside his wife, as well as Weight Watchers and Jenny Craig. He also met with a registered dietitian a few years ago. But he has not been able to lose more than a few pounds with any attempt, and then quickly regains the weight.
- PMH: Hypertension, obstructive sleep apnea, metabolic syndrome, dyslipidemia, GERD
- Medications: Lisinopril/HCTZ, amlodipine, atorvastatin, aspirin

Rhonda

- Weight: 200 lbs, BMI 28 kg/m²
- BP: 133/89 mmHg, HR: 90 bpm
- A1c: 6.4%
- TG: 233
- LDL: 135
- HDL: 33
- eGFR 80

Rhonda and Shawn

- They generally eat breakfast together before work, usually oatmeal. Rhonda brings lunch to work, usually a salad or leftovers from dinner. Shawn gets so busy at work that he usually skips lunch and then picks at whatever candy or baked goods are around the office. If he goes out to eat with clients, he'll usually order a healthful option but eat large portions and he has a hard time turning down dessert. For dinner, they either cook or order in. When cooking, it's fairly healthy, though they both feel driven to eat multiple portions and then eat dessert afterwards.
- They have minimal time to exercise during the week, but they both walk their dog each day after work, and they try to go to the gym both days on the weekends. They recently started using step counter, which shows they get around 10,000 steps most days, even higher when they go to the gym.

They ask about dietary supplements for weight loss. Which have rigorous evidence of benefit for weight loss?

- a. Garcinia cambogia
- b. HCG injection
- c. Vitamin B12 injection
- d. Lipozyme injection
- e. Yohimbe
- f. Green tea extract
- g. Green coffee bean extract
- h. Fiber supplementation

They want to start a diet together. Which dietary pattern would best help them lose weight?

- a. Low fat diet
- b. Low carbohydrate diet
- c. Paleo diet
- d. Keto diet
- e. Vegetarian diet
- f. Mediterranean diet

Which of the following weight loss treatments are indicated for these patients?

- a. Both are candidates for bariatric surgery
- b. Both are candidates for obesity medications but not surgery
- c. Rhonda is a candidate for bariatric surgery or obesity medications; Shawn is a candidate for medications, but not for bariatric surgery
- d. Shawn is a candidate for bariatric surgery or obesity medications; Rhonda is a candidate for medications, but not for bariatric surgery
- e. Neither Rhonda nor Shawn are candidates for bariatric surgery or obesity medications

15-year old Female with Multiple Comorbidities

Marcia is a 15-year old adolescent female with BMI of 45 kg/m². She has borderline hypertension, metabolic syndrome, dyslipidemia, and likely obstructive sleep apnea. She is generally happy, performs well in school and participates in extracurricular activities, and has many friends. However, she gets sad when describing that she used to be teased all the time because of her weight, and this still happens at times. She has done many diets, worked with a dietitian, attended Weight Watchers and Jenny Craig religiously, and worked with a mental health therapist for support (though she has never been diagnosed with depression or other mental health conditions).

15-year old Female with Multiple Comorbidities

Marcia and her parents have learned about bariatric surgery for adolescents during a lecture by Dr. Tom Inge. They agree that this would be the best treatment option for Marcia. However:

- 1) their insurance plan will not cover surgery for adolescents, and
- 2) they are hesitant to allow anyone but Dr. Inge to operate, and he has a years-long waiting list.

For now, they want to know if obesity medications are an option.

Which of the following would you recommend?

- a. Phentermine
- b. Orlistat
- c. Metformin
- d. Lorcaserin
- e. Liraglutide
- f. Naltrexone-bupropion
- g. Obesity pharmacotherapy is not approved in adolescents
