

Treating Obesity in Primary Care Medical Practice

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Disclosures:

- None

Last Plea

- PLEASE FILL OUT MY SHORT SURVEY!

Educational Objectives

1. Develop evidence-based strategies for counseling patients about their weight without using drugs or surgery
2. Identify patients who are appropriate for use of pharmacotherapy to treat obesity and learn appropriate criteria for long term use of phentermine
3. Identify patients who meet criteria for and would benefit from bariatric surgery

Financial Disclosure

- Vindico Medical Education, online book chapter about commercial weight loss programs
- Nutrisystem: in-kind research support for a clinical trial that was funded by American Heart Association

Additional Disclosure

- It is not possible to cover all of obesity evaluation and treatment in 50 minutes
- I am happy to provide you with additional readings for areas where you are interested

Educational Objectives

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Should PCPs Treat Obesity? (or should we just outsource it to Weight Watchers)

- Patients want us to help them with their weight
- Its good for their health
- We (and our dietitian and behavioral health colleagues) can do more to help a patient than Weight Watchers can

And if That's not Enough to Convince You...

- Counseling on weight is a quality metric in some settings
- The AMA declared obesity a disease in 2013
- Medicare now reimburses for up to 20 visits per year
- The USPSTF recommends high intensity treatment of obesity and this is covered under the ACA
- 4 new drugs have been approved since 2012
- First ever pharmacotherapy guideline published in 2015
- All systems go!!!

Case #1

Ms. Smith is a 68 year old patient of yours. You've known her for 5 years. She has hypertension and dyslipidemia and takes medications for both of these including a statin. She also has osteoarthritis of the knees that sometimes requires Tramadol or Hydrocodone. Her body mass index is 29 kg/m². She heard on the radio about "some medical study" which said that if your body mass index was in the overweight range, that it was the lowest risk for death. She is confused because the body weight charts in your office tell her she needs to weigh about 25 lbs less to have a "normal" body weight. What do you tell her?

Case #1

1. The body charts are correct, she needs to lose 25 pounds



2. The study she heard about is correct, a BMI in the overweight is best for patients aged 60 and older



3. The Studies conflict with each other and it's best if she see a weight specialist about this



4. She is likely to improve her overall function and quality of life the most with exercise rather than weight loss



From: **Association of All-Cause Mortality With Overweight and Obesity Using Standard Body Mass Index Categories: A Systematic Review and Meta-analysis**

JAMA. 2013;309(1):71-82. doi:10.1001/jama.2012.113905

Table 1. Summary Random-Effects Hazard Ratios (HRs) of All-Cause Mortality for Overweight and Obesity Relative to Normal Weight

	Self-reported or Measured Height and Weight			Height and Weight					
				Measured			Self-reported		
	No. of HRs	Summary HR (95% CI)	I ² , %	No. of HRs	Summary HR (95% CI)	I ² , %	No. of HRs	Summary HR (95% CI)	I ² , %
BMI of 25-<30									
All ages	140	0.94 (0.91-0.96) ^a	85.0	89	0.93 (0.89-0.95) ^a	75.8	51	0.96 (0.92-1.00) ^a	90.4
Mixed ages	107	0.95 (0.92-0.98) ^a	86.8	67	0.93 (0.89-0.96) ^a	79.6	40	0.98 (0.93-1.03) ^a	90.7
Age ≥65 y only	33	0.90 (0.86-0.94) ^a	51.2	22	0.90 (0.84-0.95)	31.2	11	0.90 (0.84-0.96) ^a	71.0
BMI of ≥30									
All ages	84	1.18 (1.12-1.25) ^a	86.7	56	1.13 (1.06-1.19) ^a	73.4	28	1.29 (1.18-1.41) ^a	89.7
Mixed ages	63	1.23 (1.16-1.31) ^a	87.2	41	1.16 (1.10-1.24) ^a	74.6	22	1.36 (1.25-1.48) ^a	86.1
Age ≥65 y only	21	1.03 (0.94-1.12) ^a	61.5	15	0.98 (0.86-1.12) ^a	61.1	6	1.09 (0.96-1.23) ^a	67.0
BMI of 30-<35									
All ages	53	0.95 (0.88-1.01) ^a	86.8	30	0.94 (0.86-1.03) ^a	80.5	23	0.95 (0.85-1.06) ^a	90.1
Mixed ages	42	0.96 (0.89-1.04) ^a	87.7	24	0.95 (0.86-1.06) ^a	83.2	18	0.97 (0.87-1.09) ^a	90.0
Age ≥65 y only	11	0.87 (0.72-1.05) ^a	76.3	6	0.89 (0.71-1.11)	56.2	5	0.83 (0.58-1.20) ^a	85.7
BMI of ≥35									
All ages	53	1.29 (1.18-1.41) ^a	81.7	30	1.25 (1.13-1.39) ^a	65.4	23	1.34 (1.16-1.55) ^a	88.3
Mixed ages	42	1.32 (1.19-1.45) ^a	82.8	24	1.28 (1.14-1.44) ^a	68.9	18	1.35 (1.16-1.58) ^a	89.0
Age ≥65 only	11	1.20 (0.94-1.52) ^a	70.6	6	1.10 (0.89-1.34)	25.1	5	1.29 (0.77-2.17) ^a	85.2

Abbreviation: BMI, body mass index (calculated as weight in kilograms divided by height in meters squared).

^aIndicates significant heterogeneity ($P < .05$).



In Elderly Patients, Exercise Beats Weight Loss

RCT of diet, exercise training, or both in patients age ≥ 65 and BMI ≥ 30 kg/m². Primary Outcome = modified Physical Performance Test (PPT):

Table 2. Effect of Diet, Exercise, or Both on Primary and Secondary Outcome Variables in Obese Older Adults.*

Outcome Variable	Control (N=27)	Diet (N=26)	Exercise (N=26)	Diet-Exercise (N=28)	P Value†				
					Interaction between Group and Time	Diet vs. Control	Exercise vs. Control	Diet-Exercise vs. Diet	Diet-Exercise vs. Exercise
Primary outcome									
PPT score‡									
Baseline	26.8±4.5	28.6±1.9	27.1±3.1	28.0±2.9					
Change at 6 mo	0.6±1.7	2.3±1.8‡	3.4±2.4‡	4.7±2.4‡					
Change at 1 yr	0.2±1.8	3.1±1.4‡	4.0±2.5‡	5.4±2.4‡	<0.001	<0.001	<0.001	<0.001	0.04

Case #1

- a) The body weight charts are correct, she needs to lose 25 pounds
- b) The study she heard about is correct, a BMI in the overweight range is the best for patients aged 60 and older
- c) The studies conflict with each other and it's best if she sees a weight specialist about this
- d) She is likely to improve her overall function and quality of life the most with exercise rather than weight loss**

Case #2

Mr. Jones is a 45 year old man with a BMI of 38 kg/m². He has sleep apnea and prediabetes by hemoglobin A1c. He hates wearing his APAP mask and often ends up sleeping without it. He knows he needs to lose weight. He feels like he's "tried everything." When asked specifically, he describes losing and then re-gaining 25 lbs with the Atkins diet in 2005, and more recently, following the Paleo diet with his wife but losing only 5 lbs. He feels that "I don't eat a lot – I don't know how I weigh so much." He tries to "eat clean" and "cut out sugar" but his diet recall shows that he consumed 2 sugar-sweetened beverages in the last 24 hours and 0 servings of vegetables.

What do you recommend to him?

Case #2

1. The sleep apnea will get better after he loses weight so don't worry about the APAP mask

 **25%**

2. He just needs to try harder on diet on his own and cut out sugary drinks, he'll lose weight

 **25%**

3. The most effective step at this point is to participate in a 12-16 week group behavioral weight loss program

 **25%**

4. One to two visits with a registered dietitian (RD) should get him on the right path to lose 10% of his body weight

 **25%**

Adherence to Diet is More Important than Macronutrient Content

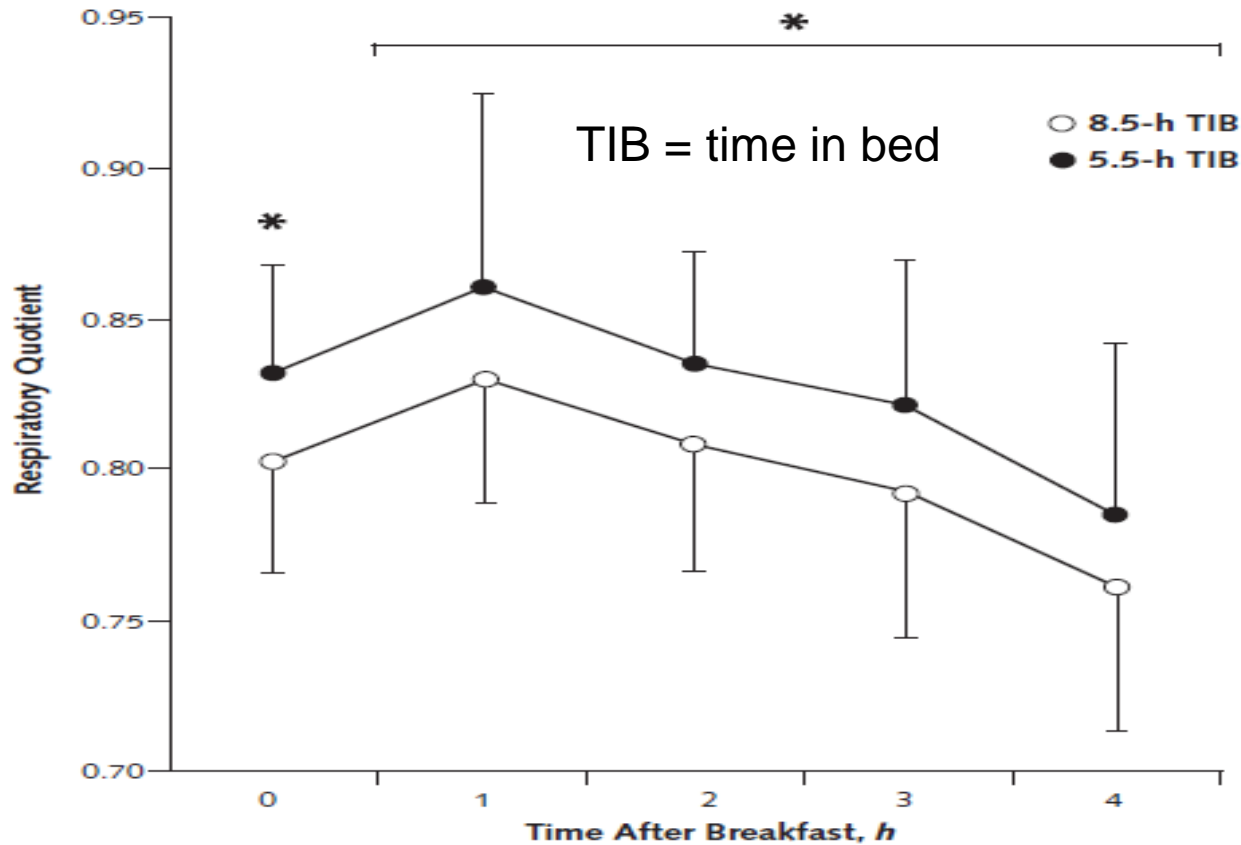
Figure 1. Difference in Mean Weight Loss at 6- and 12-Month Follow-up Across All Diet Classes With 95% Credible Intervals

		12-mo Weight Loss, kg			
6-mo Weight Loss, kg	No diet (6 mo: 0; 12 mo: 0) ^a	5.16 (2.68 to 7.63)	5.70 (4.14 to 7.35)	7.25 (5.33 to 9.25)	7.27 (5.26 to 9.34)
	6.07 (4.23 to 7.84)	LEARN (6 mo: 0; 12 mo: 0.02) ^a	0.55 (-1.71 to 2.87)	2.10 (-0.20 to 4.47)	2.12 (-0.33 to 4.59)
	6.78 (5.50 to 8.05)	0.71 (-0.97 to 2.44)	Moderate macronutrients (6 mo: 0; 12 mo: 0) ^a	1.55 (0.13 to 2.95)	1.56 (-0.17 to 3.30)
	8.73 (7.27 to 10.20)	2.66 (0.93 to 4.44)	1.95 (1.13 to 2.79)	Low carbohydrate (6 mo: 0.83; 12 mo: 0.48) ^a	0.02 (-1.78 to 1.79)
	7.99 (6.01 to 9.92)	1.92 (-0.19 to 4.06)	1.20 (-0.42 to 2.79)	-0.74 (-2.31 to 0.78)	Low fat (6 mo: 0.17; 12 mo: 0.50) ^a

Self-Monitoring without Additional Support alone has Limited Effectiveness

- N = 212 from two academic IM offices
- 6 months of usual care or assistance with downloading and using myfitnesspal
- 0.3 kg more weight loss in the intervention group at 6 months
- Logins decreased sharply after first month
- One participant (control group) lost 13.1 kg, logged in 782 times

Short sleep duration undermines dietary efforts at weight loss



Intervention Intensity

Screening for and Management of Obesity in Adults: U.S. Preventive Services Task Force Recommendation Statement

Virginia A. Moyer, MD, MPH, on behalf of the U.S. Preventive Services Task Force*

Description: Update of the 2003 U.S. Preventive Services Task Force (USPSTF) recommendation statement on screening for obesity and overweight in adults.

Methods: The USPSTF reviewed new evidence on the benefits and harms of screening and primary care–feasible or referable nonsurgical weight-loss interventions.

Recommendation: The USPSTF recommends screening all adults for obesity. Clinicians should offer or refer patients with a body

mass index of 30 kg/m² or higher to intensive, multicomponent behavioral interventions (B recommendation).

Ann Intern Med. 2012;157:373-378.

www.annals.org

For author affiliation, see end of text.

* For a list of the members of the USPSTF, see the **Appendix** (available at www.annals.org).

This article was published at www.annals.org on 26 June 2012.

Case #2

- a) The sleep apnea will get better after he loses weight so don't worry about the APAP mask
- b) He just needs to try harder on diet on his own and cut out the sugary drinks, he'll lose weight
- c) The most effective step at this point is to participate in a 12-16 week group behavioral weight loss program**
- d) One to two visits with a registered dietitian (RD) should get him on the right path to lose 10% of his body weight

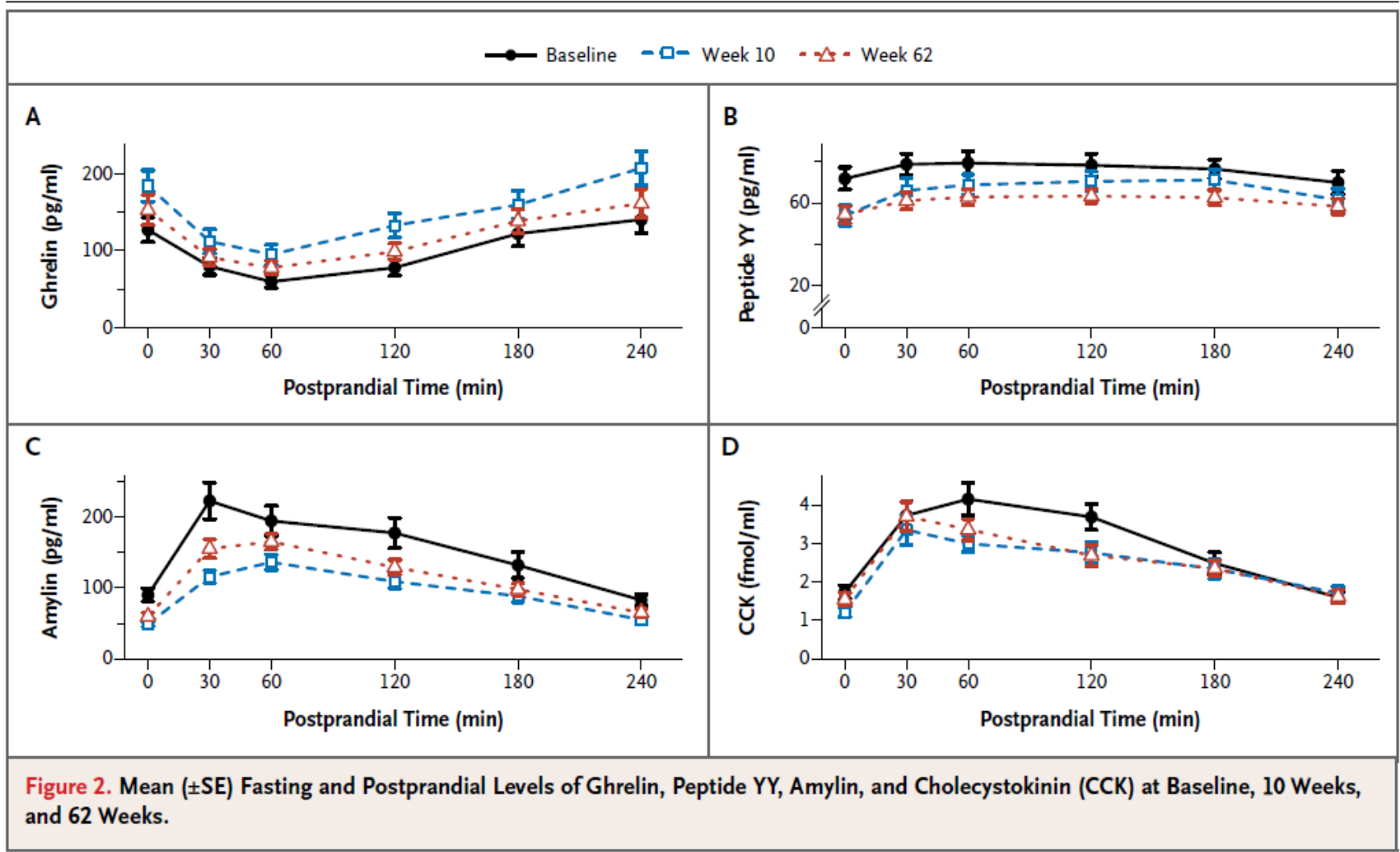
Achieving High Intensity Behavioral Treatment

- Diabetes Prevention Program
- Medicare IBT (intensive behavior therapy) for obesity
- Commercial weight loss programs
- University based programs
- Take Off Pounds Sensibly
- Overeaters Anonymous

Educational Objectives

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A Biological Basis for Weight Regain



Mechanisms of Weight Regain (after an initial weight loss)

- Reversion to previous diet/exercise habits
- Depression
- **Reduced 24 hour energy expenditure**
- Increased ghrelin; reduced leptin
- Increased neural responsiveness to food cues
- Increased adipose tissue cellularity

Leibel, N Engl J Med, 1995

Ochner, Physiology and Behavior, 2013

Ochner, Lancet Diab Endocrinol, 2015

Case #3

Ms. Johnson is a 59 year old woman. She has a BMI of 32 kg/m². She has dyslipidemia, HDL cholesterol is 35 mg/dl. A1c and blood pressure are normal. She wants to try a medication “to jump start my weight loss.”

Indications for Pharmacotherapy for Obesity

Medication are FDA approved for which group of patients?

1. BMI ≥ 40 kg/m²



2. BMI ≥ 35 kg/m²



3. BMI ≥ 30 kg/m²



4. BMI ≥ 30 kg/m² or BMI 27 kg/m² with a co-morbid condition



Indications for Pharmacotherapy for Obesity

Medications are FDA approved for which group of patients?

- a) BMI ≥ 40 kg/m²
- b) BMI ≥ 35 kg/m²
- c) BMI ≥ 30 kg/m²
- d) **BMI ≥ 30 kg/m² or BMI 27 kg/m² with a co-morbid condition**
 - Diabetes, HTN, dyslipidemia, sleep apnea, increased waist circumference, OA of weight bearing joints

Case #3

Ms. Johnson agrees that she's like to try a medication for weight loss. How long do you tell her she'll need to take it for?

Treating Obesity with Medications

1. Until her BMI is less than 25 kg/m²



2. Until she no longer feels she needs to take a medication to reduce their desire to eat



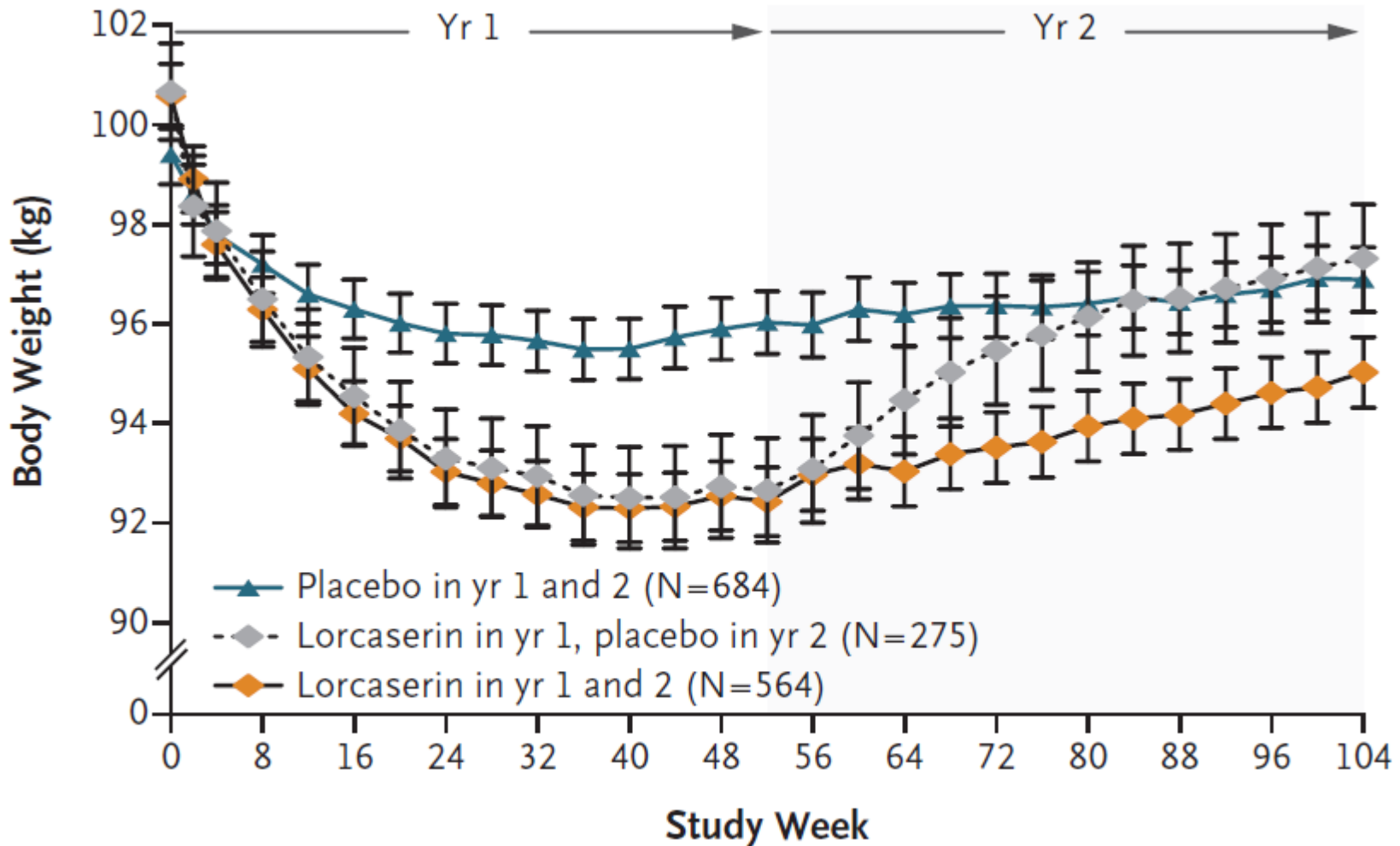
3. Forever



4. 3-6 months maximum



How Long do We Use Medications to Treat Obesity?



Treating Obesity with Medications

- Biological changes occur in the weight reduced state
- In the past, drugs were used short term
- All four drugs approved by FDA since 2012 have been approved for long term use
- Phentermine can be used long term and this is explicitly stated in guidelines

Treating Obesity with Medications

How long do we keep patients on medications for obesity?

- a) Until their BMI is less than 25 kg/m²
- b) Until they no longer feel they need a medication to reduce their desire to eat**
- c) Forever
- d) 3-6 months maximum

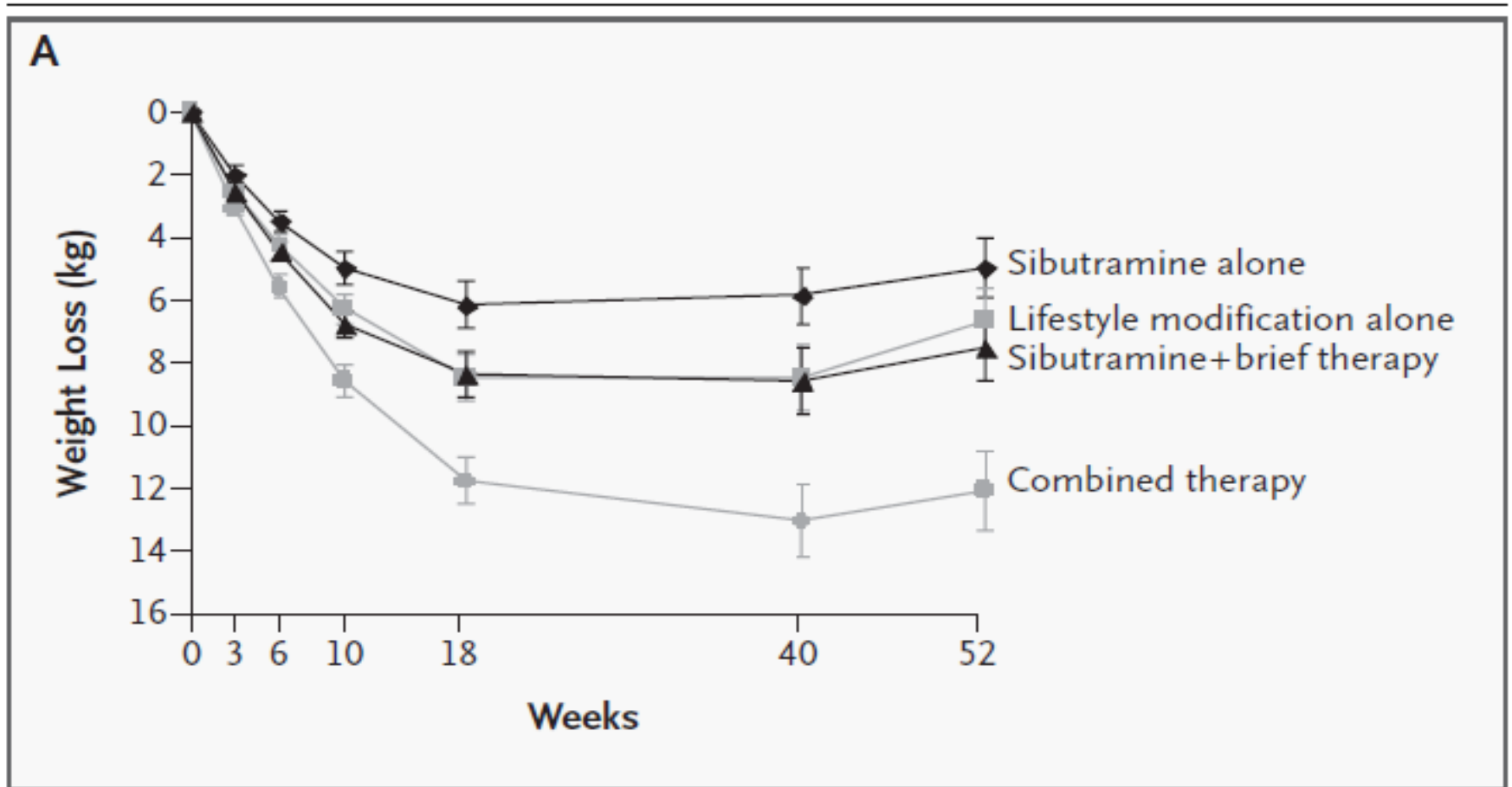
Endocrine Society Guidelines on Pharmacotherapy for Obesity (the highlights)

- Evaluation of concomitant drug therapy (e.g., use weight neutral drugs when possible)
- Using drugs to treat obesity
- Using phentermine long term

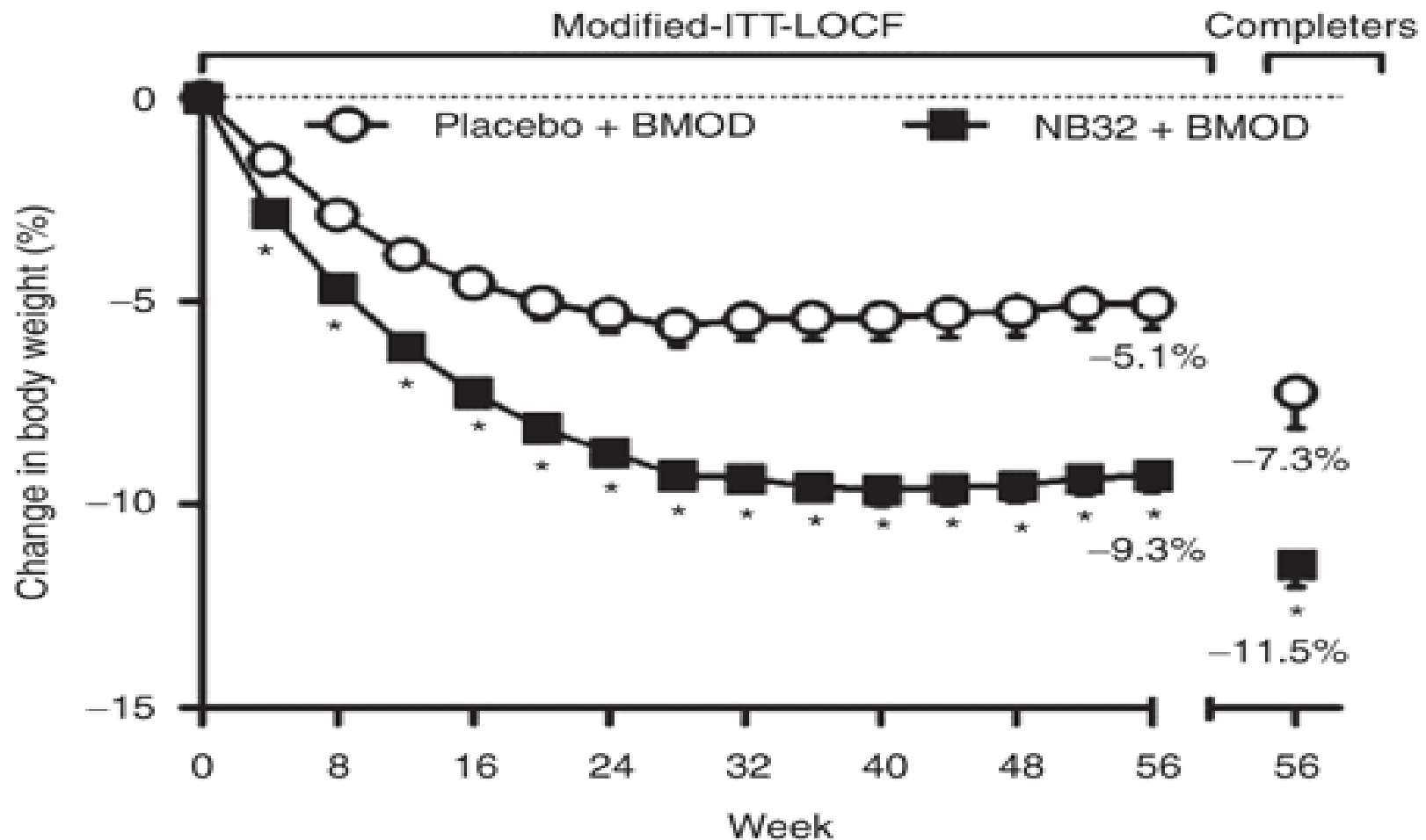
Endocrine Society Guidelines on Pharmacotherapy for Obesity

- Using phentermine long term
 - No CV disease or other contraindications
 - No clinically significant increase in BP or pulse
 - Patient loses 5% of initial body weight and maintains weight loss
 - Patient is informed that this is off label prescribing

Medication plus Structured Behavioral Treatment



Medication plus Structured Behavioral Treatment



Other Medications to Treat Obesity

- FDA approved (short term use)
 - Phentermine
 - Benzphetamine
 - Others (mostly schedule II controlled)
- FDA approved (long term use)
 - Qsymia[®] (phentermine-topiramate ER)
 - Belviq[®] (lorcaserin)
 - Contrave[®] (bupropion-naltrexone)
 - Saxenda[®] (liraglutide high dose)
- Off label medications
 - Byetta[®] (exenatide)

Contraindications to Phentermine

- Uncontrolled blood pressure
- High resting heart rate
- Heart disease (flow-limiting coronary artery blockages, congestive heart failure, or abnormal heart rhythms)
- Glaucoma
- Hyperthyroidism (overactive thyroid) or untreated hypothyroidism (underactive thyroid)
- Recent substance problem or past history of severe substance problem (including alcohol)
- Use of other weight loss medications/supplements, or use of stimulant medications for other conditions (ADHD)
- This medication is NOT recommended if you are pregnant OR trying to become pregnant, or if you are nursing.
- Phentermine is listed as category X

Sample Language for Long Term Phentermine Use

We are prescribing you phentermine for long-term use. Phentermine is FDA-approved only for short term use, and thus, the way we are using this medicine is "off label." There may be long-term risks of phentermine use that we do not know about, including risk of heart disease.

For most patients, the benefits of long term phentermine outweigh the risks, provided that:

- 1) the initial prescription for the medicine was done when your body mass index was 30 (or body mass index was 27 with a weight related medical condition)
- 2) you have lost at least 5% of your body weight since starting the medicine and you have kept off that weight
- 3) you are following up at least every 3 months, either with your primary physician or with the weight management department for monitoring of weight, blood pressure, and pulse.





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3. **Identify patients who meet criteria for and would benefit from bariatric surgery**

Case #4

Mr. Davis is a 42 year old male patient with a BMI of 44 kg/m². He has normal blood pressure, glucose, and lipids. He has participated in Nutrisystem in the past and has done the Atkins diet on his own. He is scared to take phentermine because he had an episode of afib 3 years ago after his TURP. He cannot afford the other medications. What do you tell him about weight loss surgery?

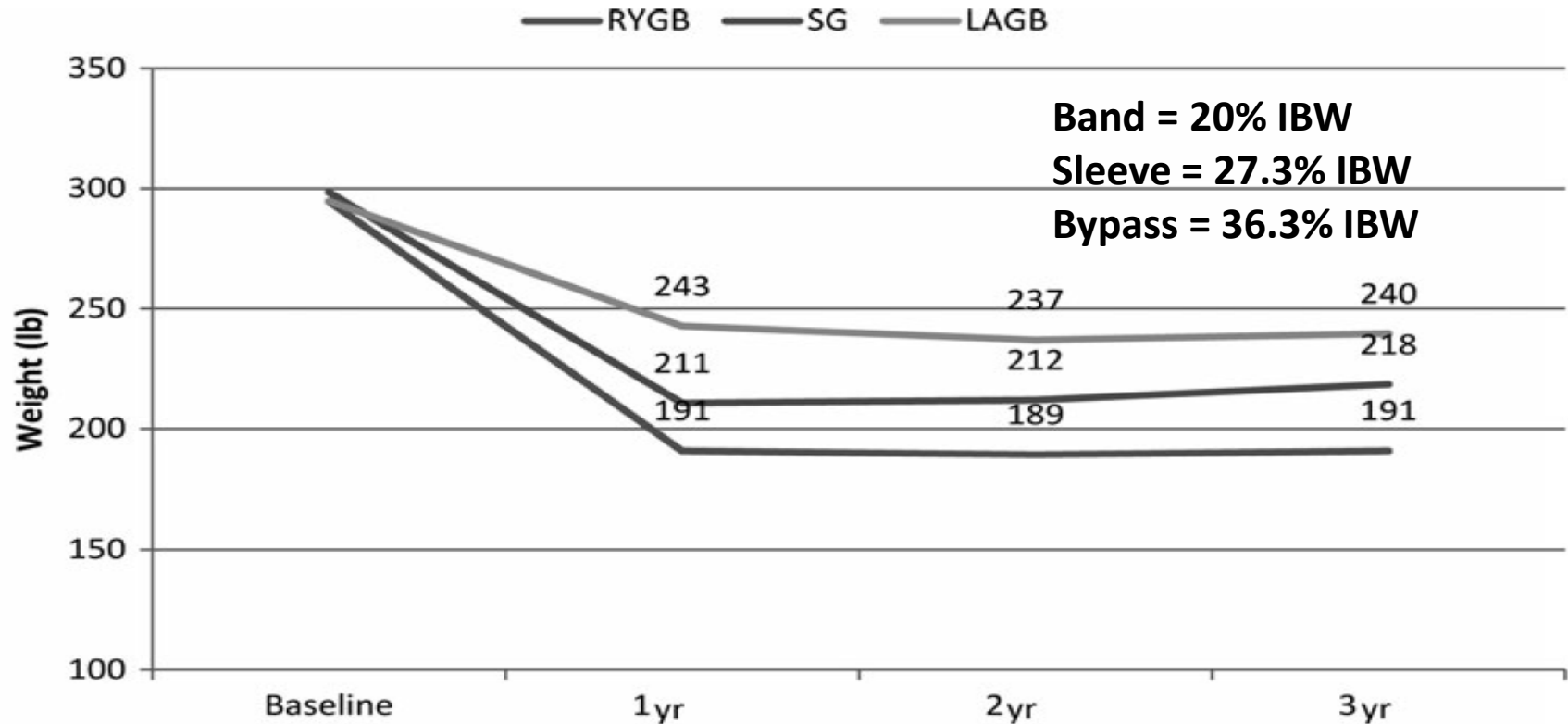
Should My Patient Have Weight Loss Surgery

1. Weight loss surgery produces the largest and most durable weight loss
 25%
2. He must first pursue 6 months of medically supervised weight loss
 25%
3. He doesn't qualify for surgery without a related medical condition
 25%
4. He should not start the process for weight loss surgery until he has tried first tried weight loss medication
 25%

Criteria for Weight Loss Surgery

- BMI ≥ 40 kg/m²
- BMI ≥ 35 kg/m² with:
 - Type 2 diabetes
 - Hypertension
 - Obstructive sleep apnea
 - Dyslipidemia (“severe dyslipidemia on maximally tolerated medical therapy”)
 - Severe osteoarthritis of weight bearing joints
 - Pseudotumor cerebri
- 6 months of medically supervised weight loss (Medicaid)

Which Operation is the Most Effective?



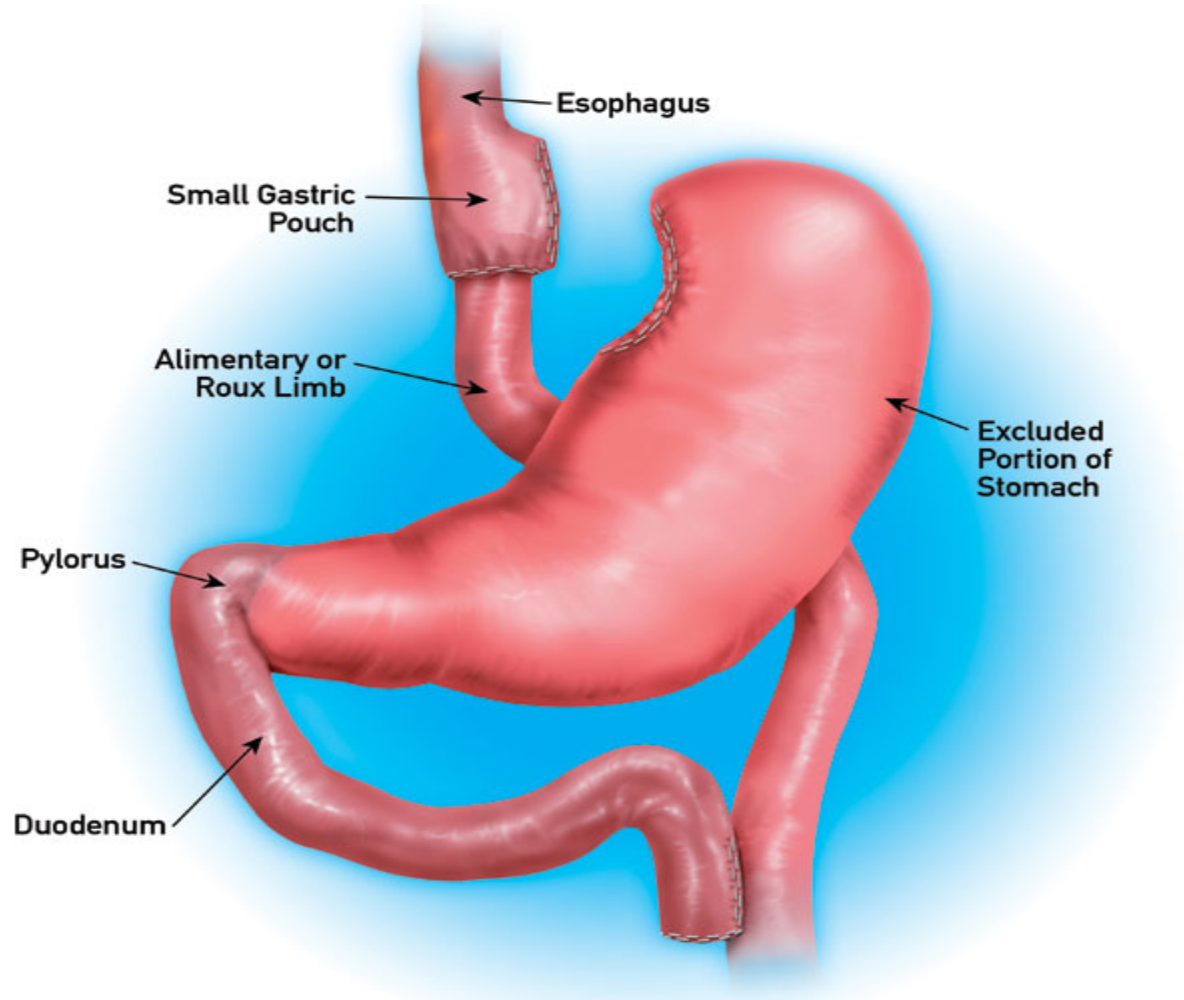
	n	n (%)	n (%)	n (%)
RYGB	2949	967/1754 (55%)	302/809 (37%)	69/315 (22%)
SG	2949	907/1702 (53%)	349/966 (36%)	98/307 (32%)
LAGB	2949	903/1816 (50%)	338/925 (37%)	105/366 (29%)

Carlin et al, Annals of Surgery, 2013

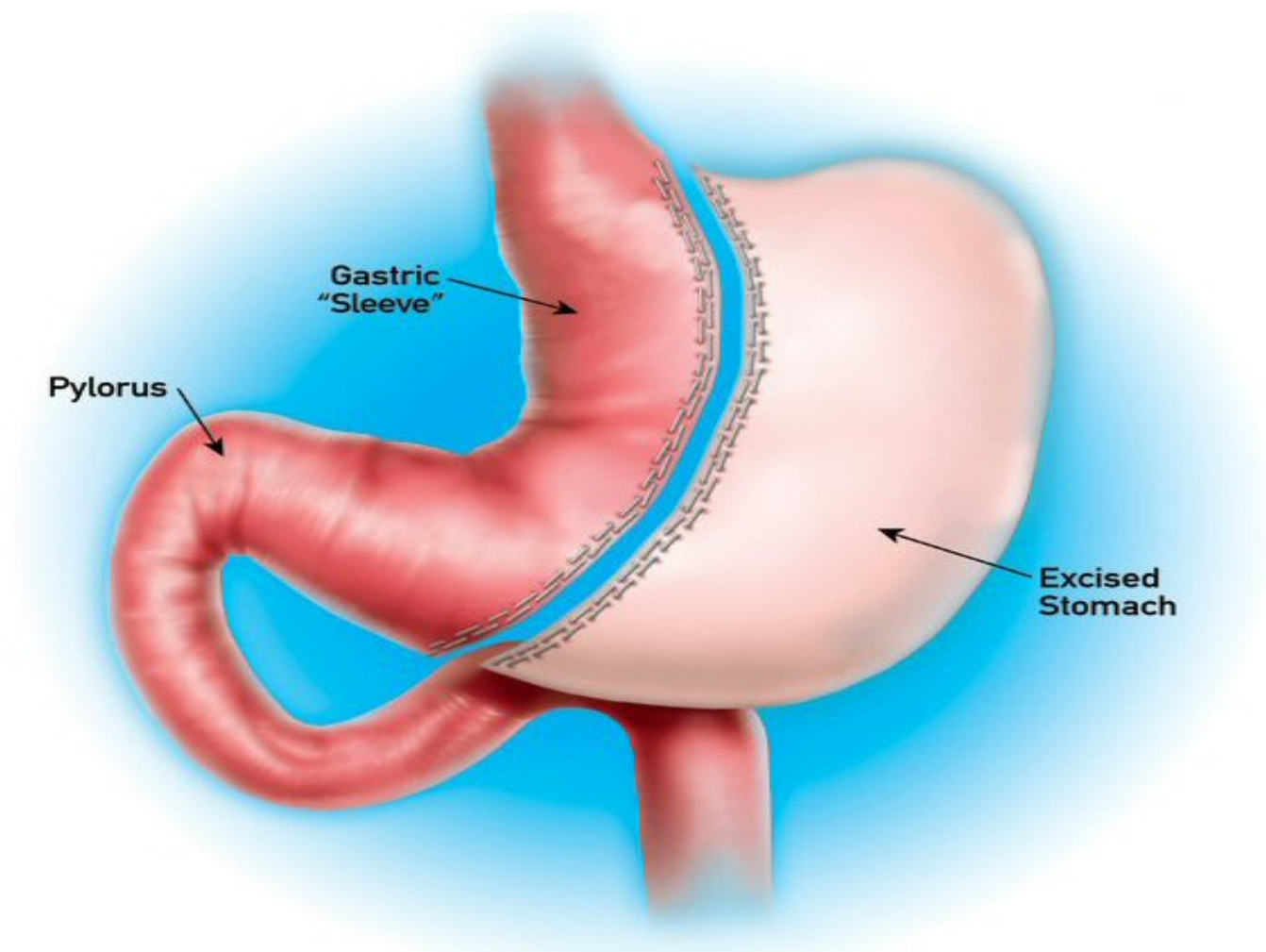
Should My Patient Have Weight Loss Surgery

- a) **Weight loss surgery produces the largest and most durable weight loss**
- b) He must first pursue 6 months of medically supervised weight loss
- c) He does not qualify for surgery without a related medical condition
- d) He should not start the process for weight loss surgery until he has first tried a weight loss medication

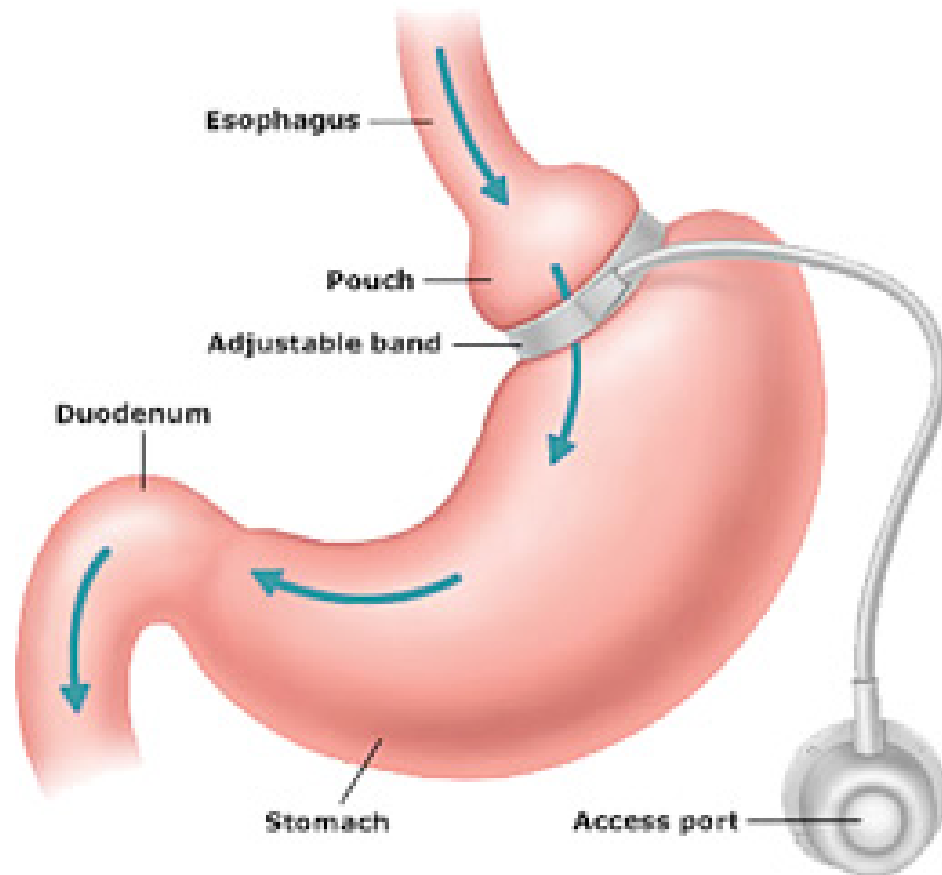
Bariatric Surgery- Gastric Bypass



Bariatric Surgery - Sleeve Gastrectomy



Bariatric Surgery- Lap-Band



Which Patients Should not Have Weight Loss Surgery

- Current health would not allow elective general anesthesia.
- Major pulmonary issues - prevent extubation
- Poor functional status
 - Can the patient walk 1 block?
- Advanced age or pediatrics
- Severe, untreated depression or active psychosis
- Active substance abuse disorder
- Inability to adhere to diet and exercise plan

Bariatric Surgery Costs

- In Colorado, co-insurance varies significantly by plan
- Out of pocket expense commonly \$8,000 to \$14,000
- Most members are responsible for a co-pay/ co-insurance, and/or deductible for the hospital, surgeon and anesthesiologist.
- The silver plan on the Colorado health insurance exchange will cover weight loss surgery starting in 2017

Case #5

Mr. Jordan is a 55 year old patient with a BMI of 45 kg/m². He has type 2 diabetes. He meets criteria for weight loss surgery and wants to start the process for surgery. He asks you what kind of operation he should have. What do you tell him?

Case #5

1. He cannot have a band, the risk of slip is too high



2. He should definitely have bypass because it will cure his diabetes



3. He should wait until he meets with the surgeon to discuss this

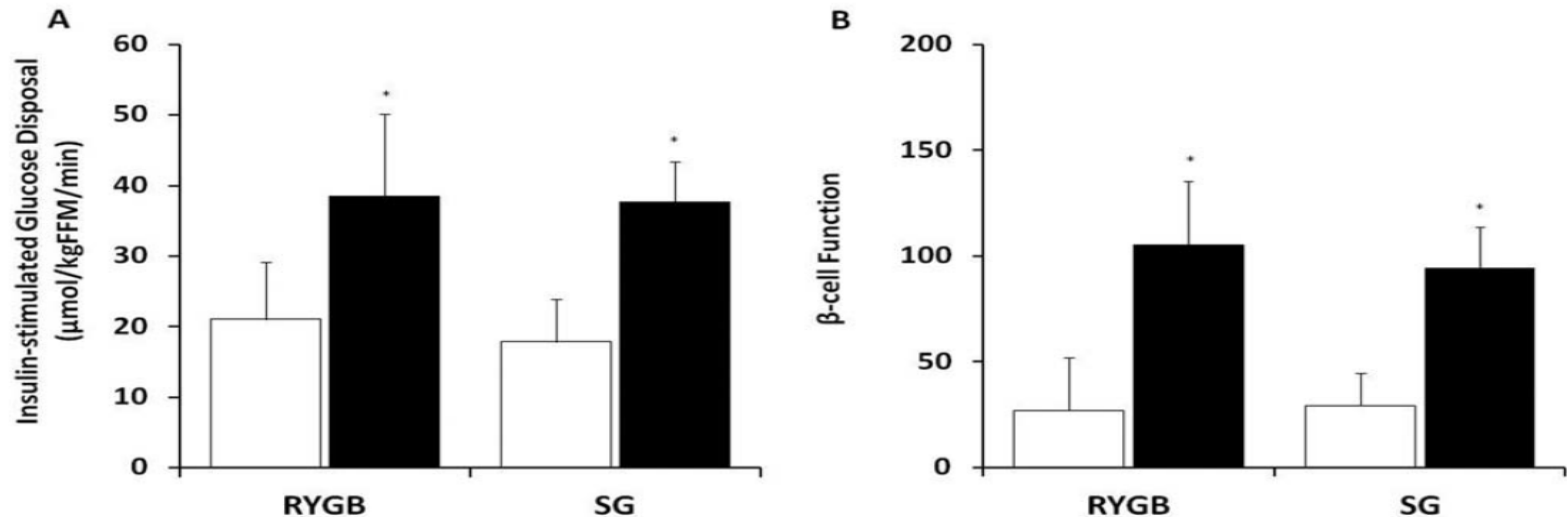


4. Sleeve and bypass similar health benefits if the degree of weight loss is the same



Gastric Sleeve vs Gastric Bypass

- 14 subjects who had sleeve or bypass
- Matched on post op weight loss
- Studied after 21-22% loss of initial body weight



Case #5

- He cannot have a band, the risk of a slip is too high
- He should definitely have bypass because it will cure his diabetes
- He should wait until he meets with the surgeon to discuss this
- **Sleeve and bypass probably have similar health benefits if the degree of weight loss is the same**

SUMMARY

- Obesity is a chronic metabolic disease
- Behavioral treatment is effective, even with weight regain
- Medications can be used safely but must be used long term
- Surgery produces the largest and most durable weight loss

Donald H. Gilden, MD



Thank you for your attention!

Questions?

Comments?

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