

Medical Management of Obesity: Multidisciplinary Team and Pharmacologic Therapy

Shelby Sullivan

University of Colorado School Of
Medicine



Disclosures

- Research Support / Grants
 - R01DK094483-02 Klein/Mittendorfer (PI); Aspire Bariatrics, ReShape Medical, GI Dynamics, USGI Medical, Obalon, BAROnova, Paion, Allurion
- Consulting / Employment
 - USGI Medical, Obalon, Spatz, Elira Therapeutics, SynerZ, Aspire Bariatrics

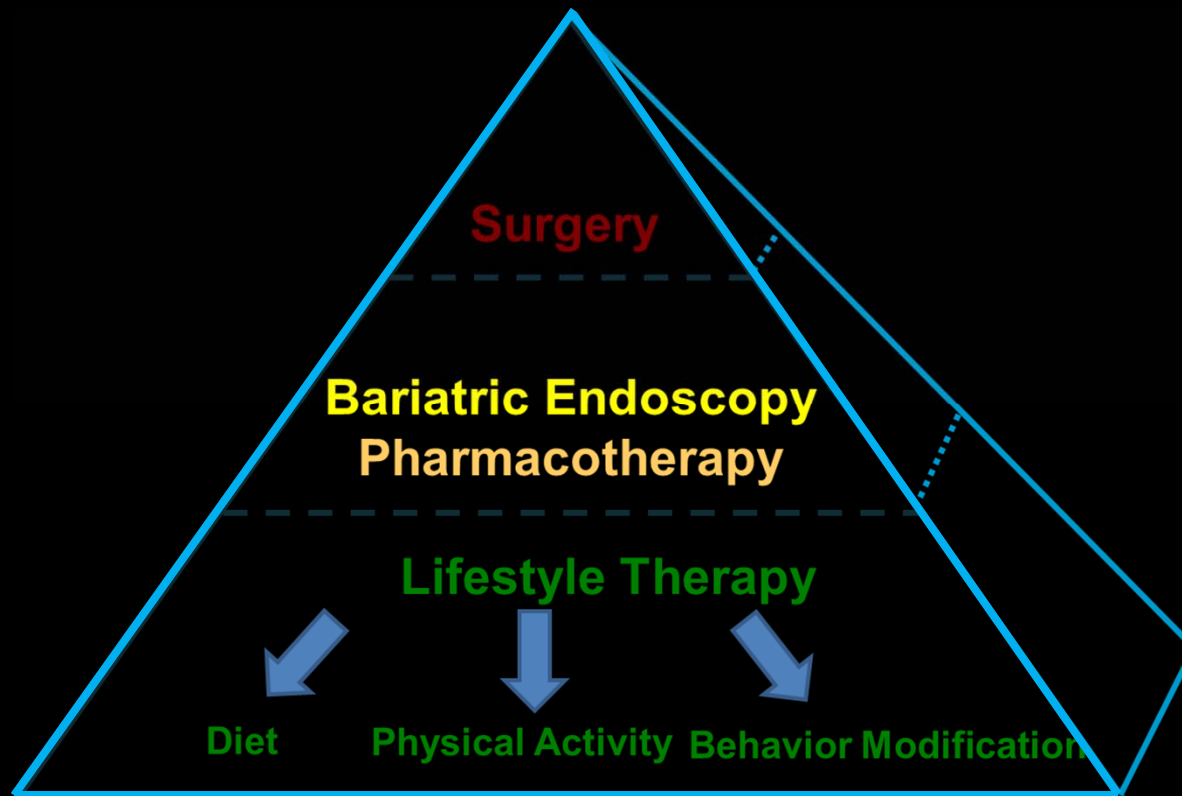


Learning Objectives

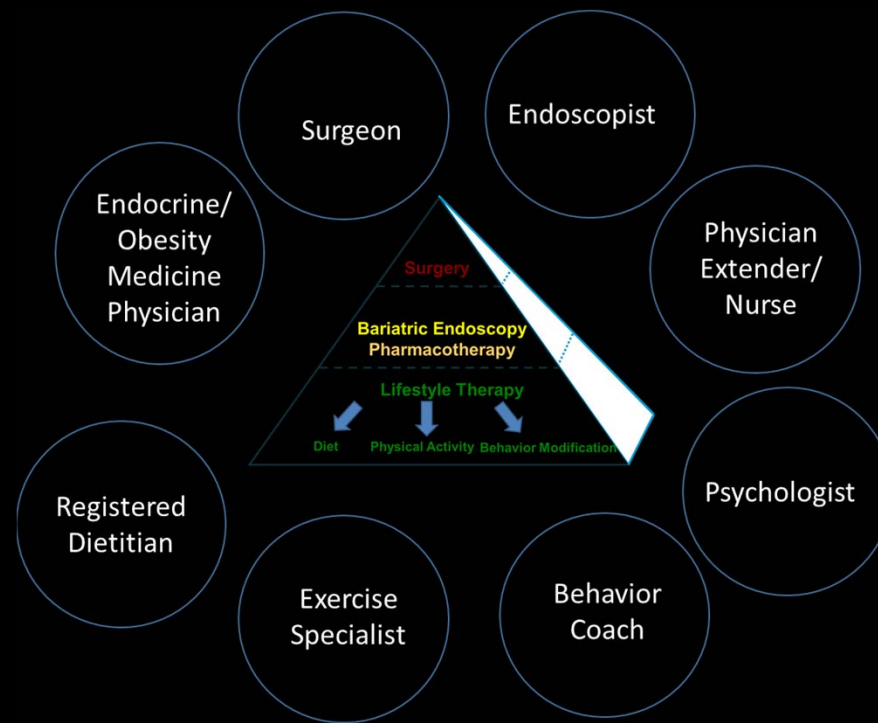
- Understand the importance of a multidisciplinary team to optimize patient outcomes
- Understand the basic principles for lifestyle intervention
- Understand the risk, benefits, and contraindications for weight loss medications



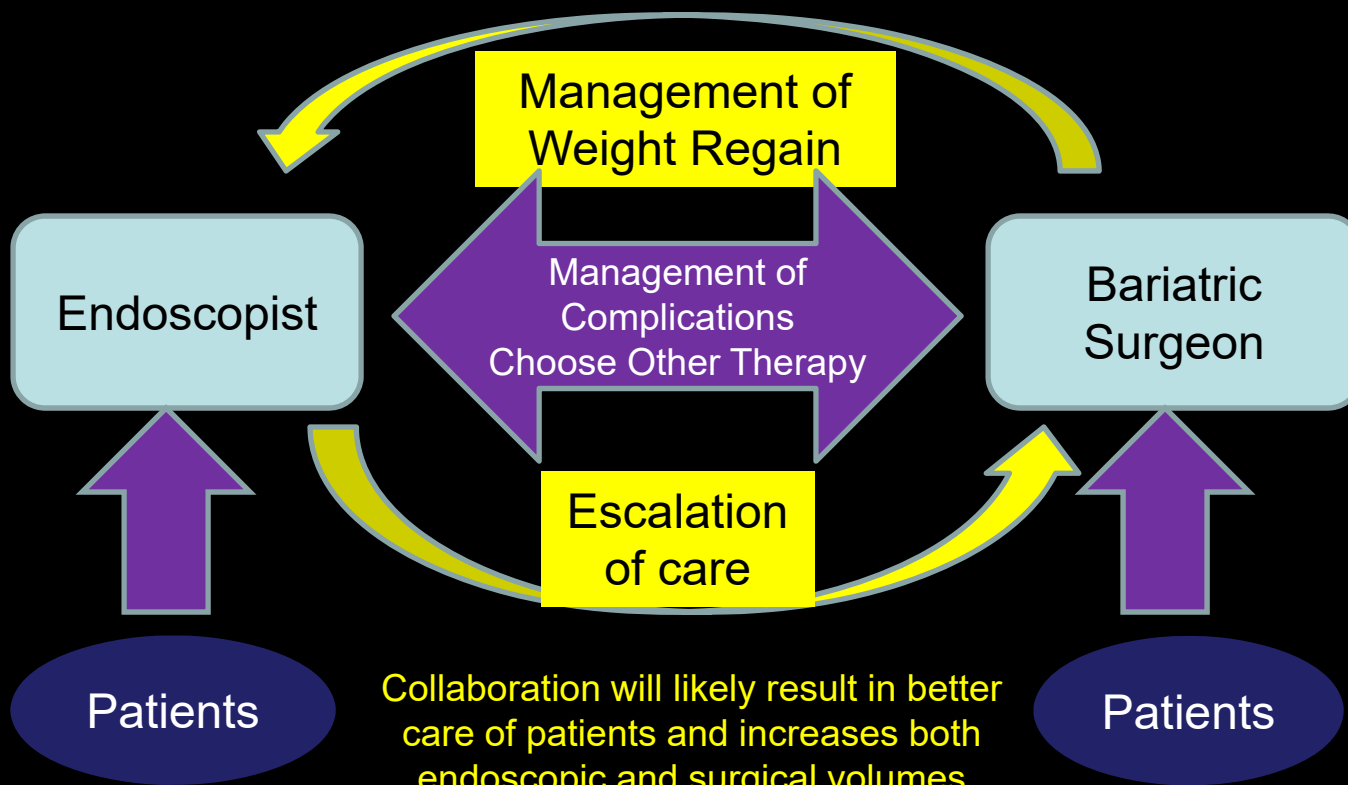
Comprehensive Obesity Treatment



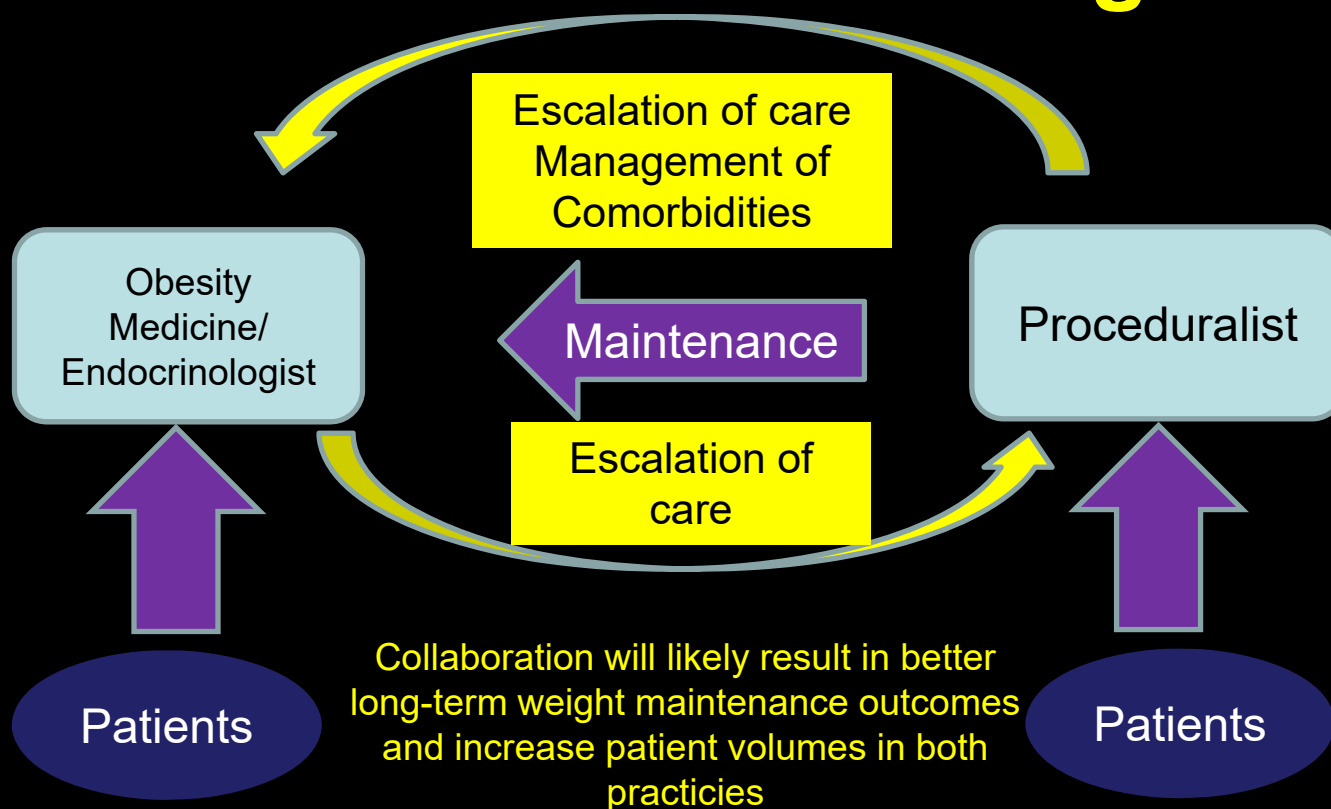
Requires Collaboration



Endoscopist – Bariatric Surgery Collaboration



Proceduralist– Obesity Medicine/Endocrinologist



Registered Dietitian Nutritionist

- Medical Nutrition therapy
 - Establish calorie prescription and adjust as needed
 - Manage nutritional complications
 - Nutrition education
- Behavioral Therapy
 - Cultural and population specific sensitivity
 - Motivational interviewing
 - Use of open-ended questioning to identify barriers to successful weight loss
 - Establishing SMART goals (Specific, Measurable, Attainable, Relevant, Timely)
- Certificate in Adult Weight Management



Ancillary Staff

- Front desk, nurse, nurse practitioner
- Friendly and helpful
 - Coordinate visits
 - Payment issues
 - Medical issues



Type of Practice

- Multi-disciplinary clinic with service line
 - All practitioners under one roof
 - Patients go to one location
 - May not be financially feasible
- Partnerships
 - Contract with or refer to practitioners outside of your office
 - May be more financially feasible



Pharmacotherapy for Obesity

- Stop medications that cause weight gain
- Choose medications based on:
 - Patients other co-morbidities
 - Contraindications



Medications that Cause Weight Gain

Cardio	Diabetes	Hormones	Anti-Seizure	Other
Propranolol	Insulin	Steroids	Carbamazepine	Tamoxifen
Atenolol	Sulfonylureas	Estrogens	Gabapentin	MTX
Metoprolol	Thiazolidinediones		Valproate	Cyclophosphamide
Nifedipine	Meglitinides			Aromatase Inh
Amlodipine				HAART
Felodipine				



Medications that Cause Weight Gain

Antidepressants	Mood	Antipsychotics	Antipsychotics	Hypnotics
TCA's (tertiary amines)	Gabapentin	Clozapine	Asenapine	Diphenhydramine
SSRIs (paroxetine)	Lithium	Olanzapine	Chlorpromazine	
MAOI	Valproate	Zotepine	Quetiapine	
Mirtazapine	Vigabatrim		Risperidone	
			Sertindole	
			Iloperidone	
			Paliperidone	



Medications with Weight Loss

Diabetes	Hormones	Anti-Seizure	Anti-Depression
Metformin	Progestins	Topiramate	Bupropion
GLP-1 antagonists	Testosterone	Zonisamide	
SGLT-2 Inhibitors		Lamotrigine	
Alpha glucosidase Inhibitors			



Pharmacotherapy for Obesity

Generic Name	Trade Name	Mechanism	Use (DEA Schedule)
Orlistat	Xenical, Alli	Intestinal Lipase inhibitor	Long-term
Lorcaserin	Belviq	Selective Serotonin Agonist: Satiety	Long-term
Phentermine-topiramate	Qsymia	Stimulant/anti-seizure: Satiety	Long-term (IV)
Naltrexone-bupropion	Contrave	Opioid antagonist/norepi and dopamine reuptake inhibitor: Satiety	Long-term
Liraglutide	Saxenda	GLP-1 receptor agonist: Satiety and delayed gastric emptying	Long-term
Phentermine	Adipex, Ionamin	Stimulant: Satiety	Short-term (IV)
benzphetamine	Didrex	Stimulant: Satiety	Short-term (IV)
diethylpropion	Tenuate	Stimulant: Satiety	Short-term (III)
phendimetrazine	Bontril, prelu-2	Stimulant: Satiety	Short-term (III)



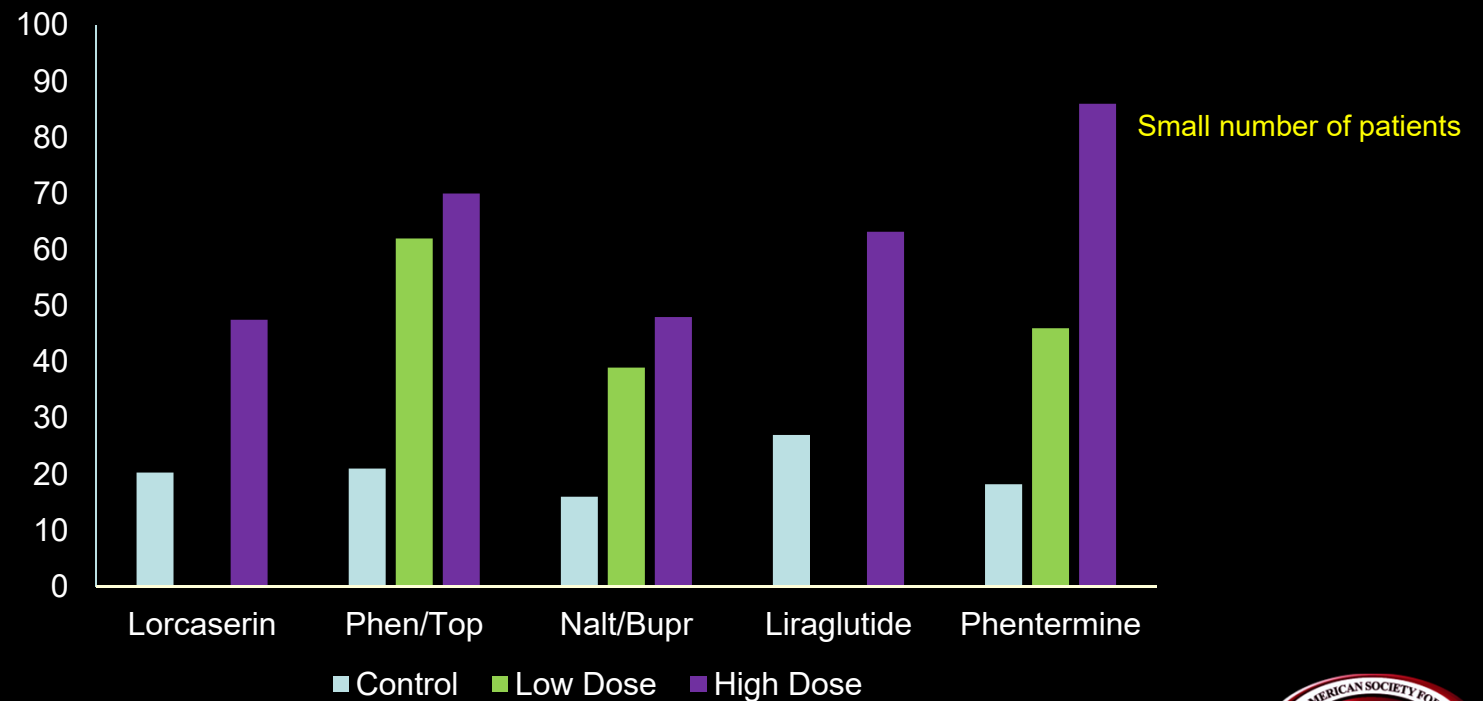
Weight loss

Drug	Loss Relative to Baseline Weight (%)	≥5% Loss of Baseline Weight (%)	≥10% Loss of Baseline Weight (%)
Orlistat			
60 mg	7.1 - 8.6	48.8	24.4 – 31.2
120 mg	5.0 – 10.2	35 - 72.8	13.5 – 38.9
Lorcaserin			
10 mg x 1	4.7 – 5.0	40.2 – 44.7	17.4 – 18.1
10 mg x 2	4.5 – 5.8	37.5 – 47.2	16.3 – 22.6
Phentermine/Topiramate			
7.5 mg/ 46 mg	5.1 – 7.8	44.9 – 62.0	18.8 – 37.0
15 mg/ 92 mg	9.8 – 10.9	66.7 – 70.0	47.2 – 48.0
Naltrexone/Bupropion			
16 mg/ 360 mg	5.0	39	20
32 mg/ 360 mg	6.1 – 9.3	48 – 66.4	25 – 41.5
Liraglutide			
3.0 mg (injection)	8.0	63.2	33.1

Yanovski, SZ. JAMA. 2014; 311:74-86; Greenway, FL. Lancet. 2010; 376:595-605
Wadden, TA. Obesity. 2011; 19:110-120; Pi-Sunyer, X. NEJM. 2015;373:11-22



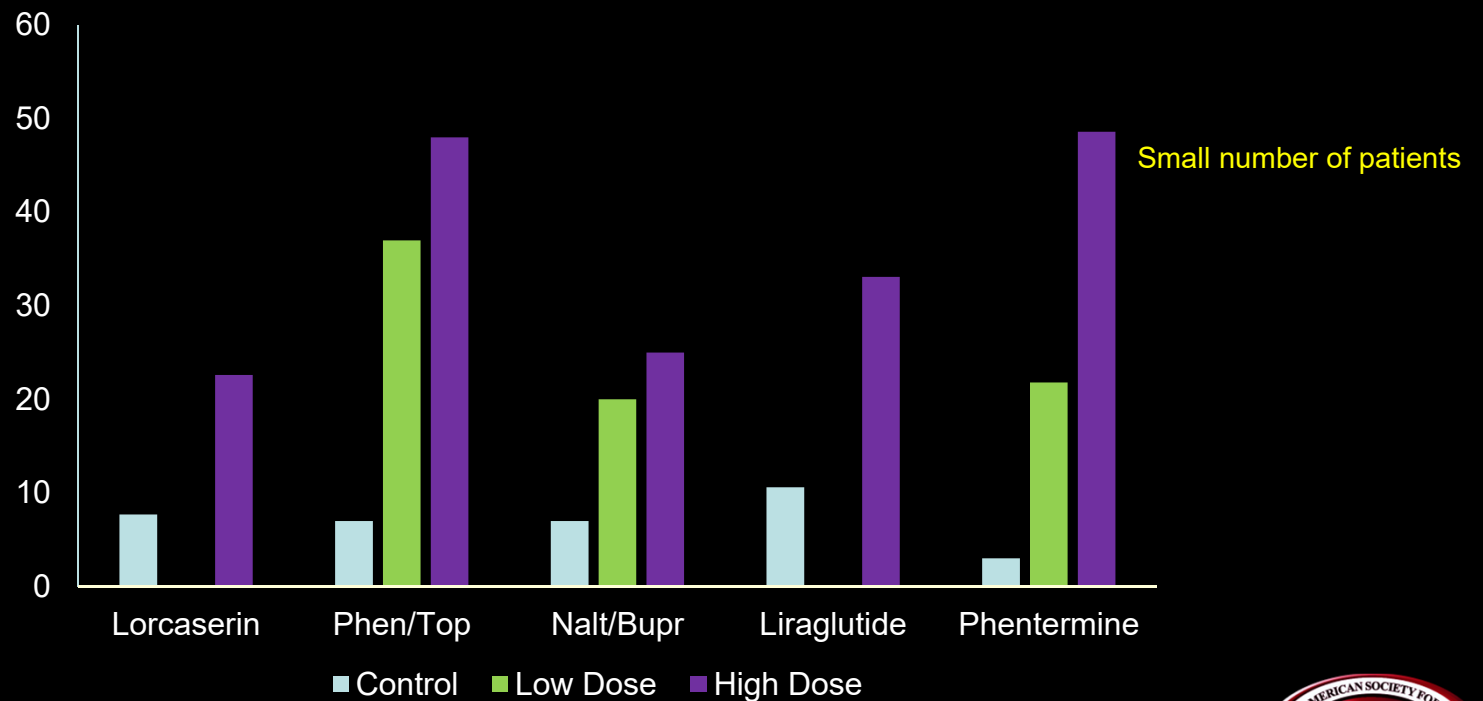
Percentage of subjects with 5% weight loss at 1 year



Smith, SR. NEJM.2010;363:254-256; Gadde, KM. Lancet.2011;377:1341-1352
Greenway, FL. 2010;376:595-605; Pi-Sunyer, X. NEJM. 2015;373:11-22; Arrone, LJ.
Obesity.2013; 21:2163-2171; Kang, JG. Diabetes, Obesity, and Metabolism.2010;12:876-882



Percentage of subjects with 10% weight loss at 1 year



Smith, SR. NEJM.2010;363:254-256; Gadde, KM. Lancet.2011;377:1341-1352
Greenway, FL. 2010;376:595-605; Pi-Sunyer, X. NEJM. 2015;373:11-22

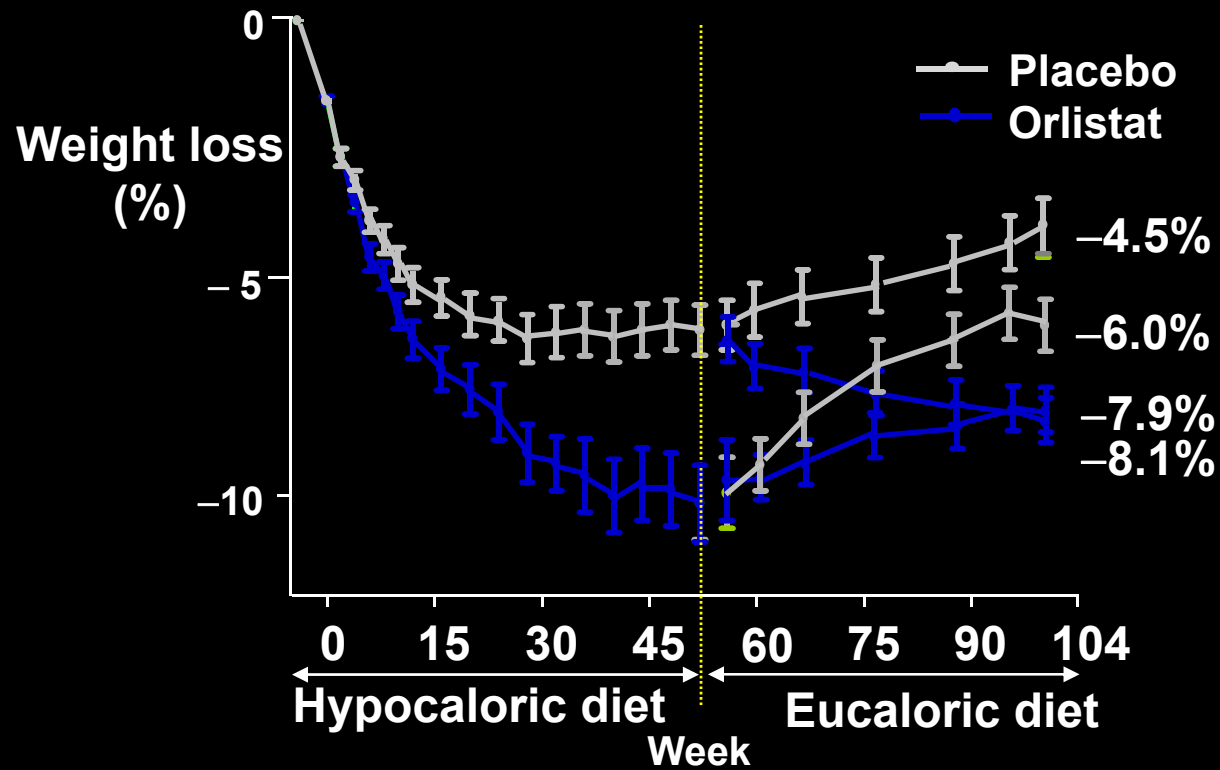


Contraindications

- Orlistat
 - Pregnancy, chronic malabsorption, cholestasis
- Lorcaserin
 - Pregnancy, renal insufficiency, valvular heart disease, hypoglycemia, history of priapism
- Phentermine/Topiramate
 - Pregnancy (monthly pregnancy tests), MAO inhibitor, breastfeeding, cardiovascular disease, hyperthyroidism, glaucoma, avoid abrupt withdrawal
 - Stop if suicidal behavior, sleep or mood disorders, cognitive impairment, pregnancy
- Naltrexone/Bupropion
 - Pregnancy, MAO inhibitor, end stage renal disease, uncontrolled hypertension, seizure disorder or a history of seizure, chronic opioid use
- Liraglutide
 - Pregnancy, History of thyroid cancer, MEN II, gastroparesis, history of pancreatitis, type I diabetes



Effect of Orlistat Therapy on Body Weight



Sjostrom et al. *Lancet* 352:167, 1998



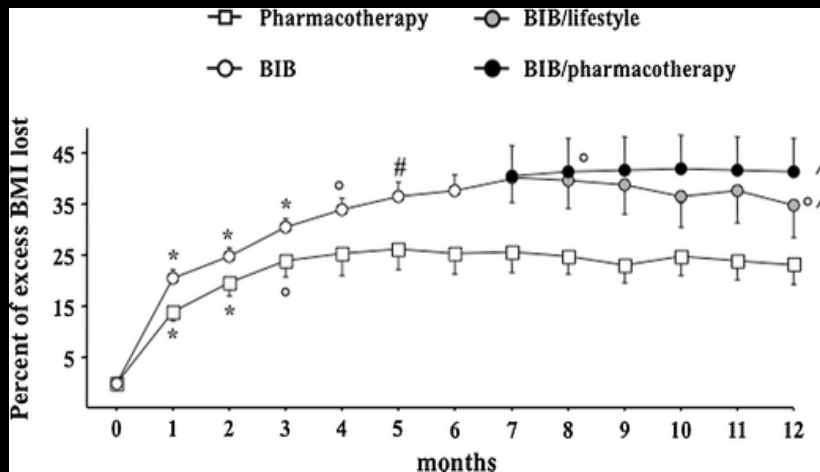
Obesity Medications

- Maximal effectiveness only occurs with lifestyle therapy
- If the patient has <5% total body weight loss at 3 months, the patient is a non-responder and the medication should be stopped
- Medications must be continued long-term for continued weight loss benefit
- Many insurance companies do not cover the cost of weight loss medications

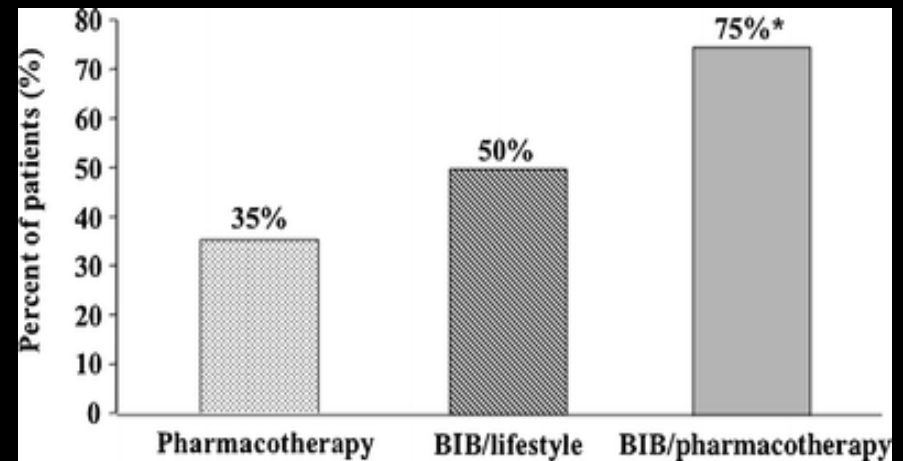


On the Horizon: Combination Therapy

Percent excess BMI loss at 12 Months



Percent of Patients with >10% Total Body Weight Loss



Farina MG. Obesity Surgery. 2012;22:565-571



Conclusions

- Comprehensive approach to obesity management is recommended
- Physical multi-disciplinary Center or through referral network
- Pharmacotherapy is an important adjunct
 - Stop medications that cause weight loss
 - Add weight loss medications that can enhance weight loss

