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Medication Treatment of Eating Disorders

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This presentation does include discussion of off-label uses of medications.

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Proposed Etiological Factors

- Genetic vulnerability
- Biological abnormalities
- Developmental/maturational crisis
- Family and systems issues
- Psychodynamic: Ego deficits
- Social/cultural pressures
- Cognitive-behavioral factors

Corticostriatal Taste Pathway

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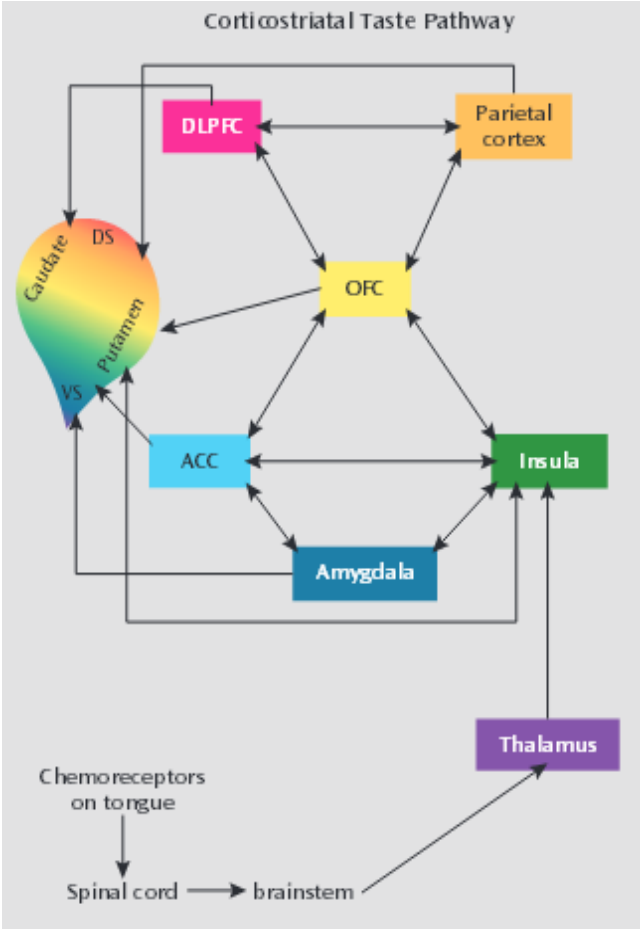
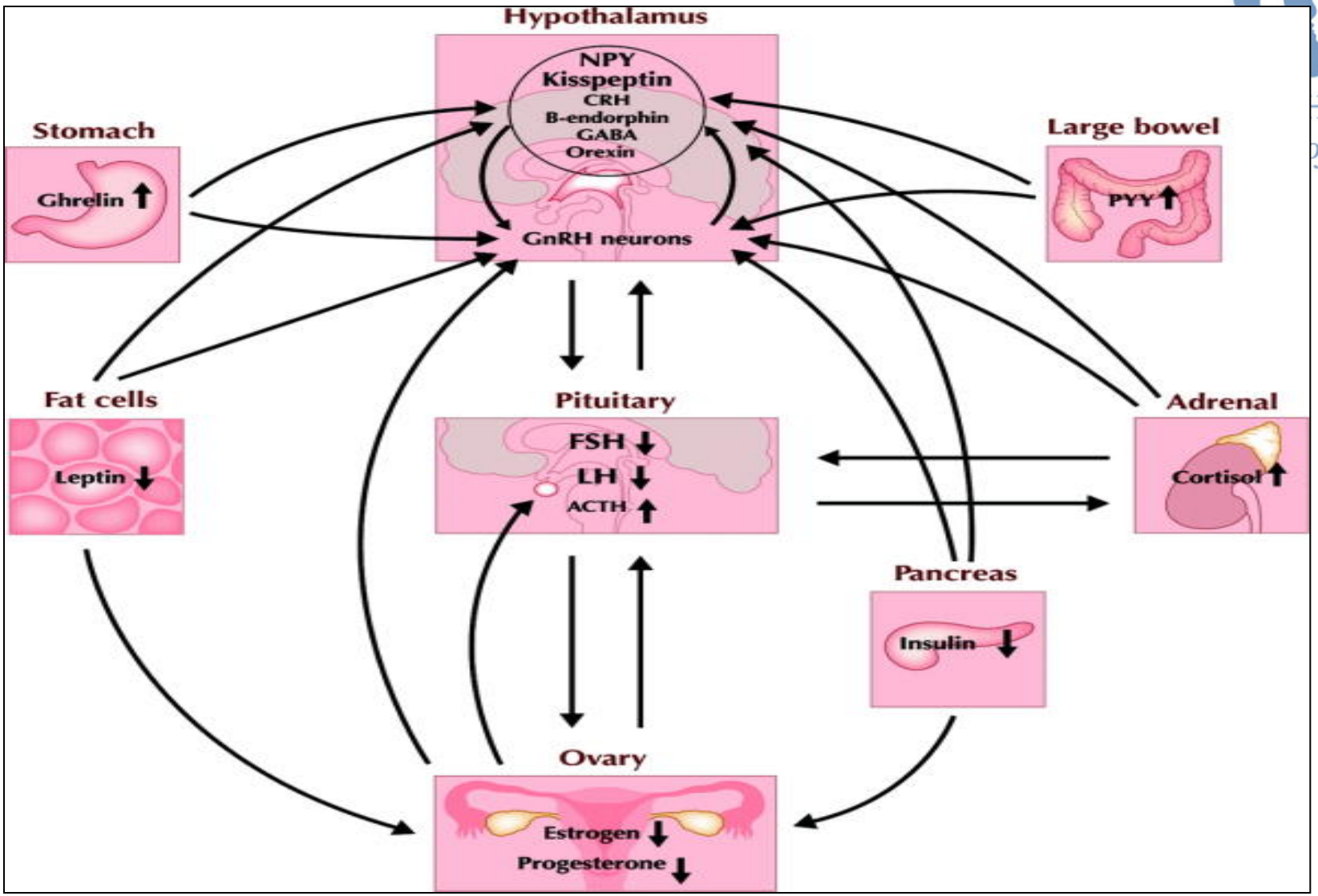


Oberndorfer TA et al., Am J Psychiatry 2013;170:1143-51.



Anderson AE & Ryan GL, Obstet Gynecol 2009;114:1353-67.

Eating Disorder Assessment

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Clinician-administered measures

- Eating Disorder Examination (EDE) (Gold Standard)
- Structured Clinical Interview for Axis I Disorders (SCID)

Self-report measures

- Eating Disorders Examination Questionnaire (EDE-Q)
- Eating Disorders Inventory (EDI-3)
- Bulimia Test-Revised (BULIT-R)
- Eating Attitudes Test (EAT)
- Eating Disorders Questionnaire (EDQ)

Am J Psychiatry 2006;163(7 Suppl):4-54.

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Treatment of Eating Disorders

- Treatment needs to address both the ED symptoms and the underlying or associated issues
- Assessment of Symptoms
- Assessment of Motivation
- Conditions of treatment
  - Inpatient vs. Outpatient
- Multidisciplinary treatment team

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Inpatient or Outpatient?

Inpatient

- More aggressive goals
- ED specific protocols
- Hospitalization costly, and (often) lengthy
- Better outcomes

Outpatient (Usually an individual and/or family therapist, nutritionist, internist and/or gastroenterologist)

- More gradual progress, takes 5-6 years
- Monitor eating through "food records", weighing, setting goals
- Poorer outcomes

Am J Psychiatry 2006;163(7 Suppl):4-54.

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Antidepressant Treatment of AN

- There is NO evidence that antidepressants are effective for underweight AN patients
- Fluoxetine is not helpful for the maintenance of weight in weight-restored AN
- Antidepressants are sometimes used with severe depression and/or suicidal ideation

Weight-Restored AN Patients Receiving Fluoxetine or Placebo Remaining in Treatment

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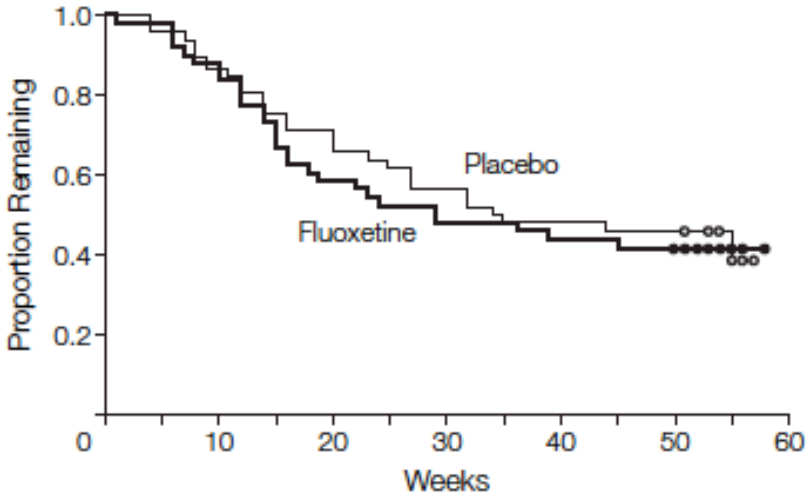
Figure 2. Patients Receiving Placebo and Fluoxetine Remaining in Treatment vs Number of Weeks After Treatment Inception



No. at Risk				
Placebo	44	33	25	20
Fluoxetine	49	32	24	21

Walsh BT et al., JAMA 2006;295:2605-12.

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Meta-Analyses of Antipsychotics for Anorexia Nervosa

- Pooled analyses of olanzapine, quetiapine, risperidone, amisulpride and pimozide (n=201)[1], (n=221)[2], and (n=197)[3] did not demonstrate superiority of antipsychotics vs. placebo or usual care on:
  - Weight/BMI
  - AN-related psychopathology

- Low compliance/high drop-out

[1]Dold M et al., Psychother Psychosom 2015;84:110-6; [2]Lebow J et al., Int J Eat Disord 2013;46:332-9; [3]Kishi T et al., J Clin Psychiatry 2012;73:e757-66.

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Other Treatments for Anorexia Nervosa

- Not effective: zinc, D-cycloserine, alprazolam, delta-9-tetrahydrocannabinoid, DHEA, transdermal estradiol
- Mixed results: lithium, naltrexone, growth hormone
- Potential: dronabinal, intranasal oxytocin, rTMS

McElroy SL et al., Curr Psychiatry Rep 2015;17:573.

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Anorexia Nervosa and Osteopenia/Osteoporosis

- Achieve and maintain IBW
- Partially reversed after 10 years at IBW
- Oral contraceptives not beneficial
- Unclear efficacy:
  - Calcium and Vitamin D
  - Insulin-like growth factor-1
  - Bisphosphonates

Mehler PS & MacKenzie TD. Int J Eat Disord 2009;42:195-201; Sim LA et al. Int J Eat Disord 2010;43:118-25.

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Pharmacotherapy of BN

- ALL antidepressants decrease binge and purge frequency and ED cognitive pathology in BN
- Fluoxetine is the only FDA approved antidepressant for BN at a recommended dose of 60 mg per day
- Bupropion is contraindicated due to possible seizures
- Antidepressant efficacy is independent of depression
- Antidepressant efficacy may be short-term only

Mitchell JE et al., Int J Eat Disord 2013;46:470-7; Shapiro JR et al., Int J Eat Disord 2007;40:321-36; Flament MF et al. Int J Neuropsychopharmacol 2012;15:189-207.

Pharmacotherapy of BN

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Class	Drug	Response	
		Binge Eating	Abstinence (%)
TCAs	Amitriptyline	0	Not reported
	Imipramine	++	Not reported
	Desipramine	++	14.5
SSRIs	Fluoxetine	++	17.9
	Fluvoxamine	++	Not reported
	Citalopram	0	Not reported
MAO-Is	Brofaromine	±	31.5
	Moclobemide	0	0.0
5-HT2 antagonists	Trazodone	++	10.0
AD Other Classes	Bupropion[a]	++	30.0
Anti-Epileptics	Topiramate	++	22.6
Other Classes	Ondansetron	++	Not reported
	Lithium	0	17.0
	Flutamide	++	Not reported

AD-antidepressants

a Bupropion contraindicated due to risk of seizures.

Mitchell JE et al., Int J Eat Disord 2013;46:470-7.

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Other Treatments for Bulimia Nervosa

- Not effective: lithium, reversible MAOIs
- Potential but not widely used: ondansetron, light therapy, flutamide, naltrexone
- Potential: zonisamide, rTMS

McElroy SL et al., Curr Psychiatry Rep 2015;17:573;WFSBP Guidelines, 2011.

Pharmacotherapy for BED

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Antidepressants

- Modestly efficacious for decreasing binge eating
- Minimal weight loss
- Long-term efficacy unknown

Topiramate

- Reduces both binge eating and weight
- May enhance effectiveness of CBT for BED

Orlistat

- May enhance weight loss and possibly reduce binge eating when used in combination with CBT

Vyvanse® (lisdexamfetamine) 50-70 mg

- FDA approved for moderate-severe BED January 2015

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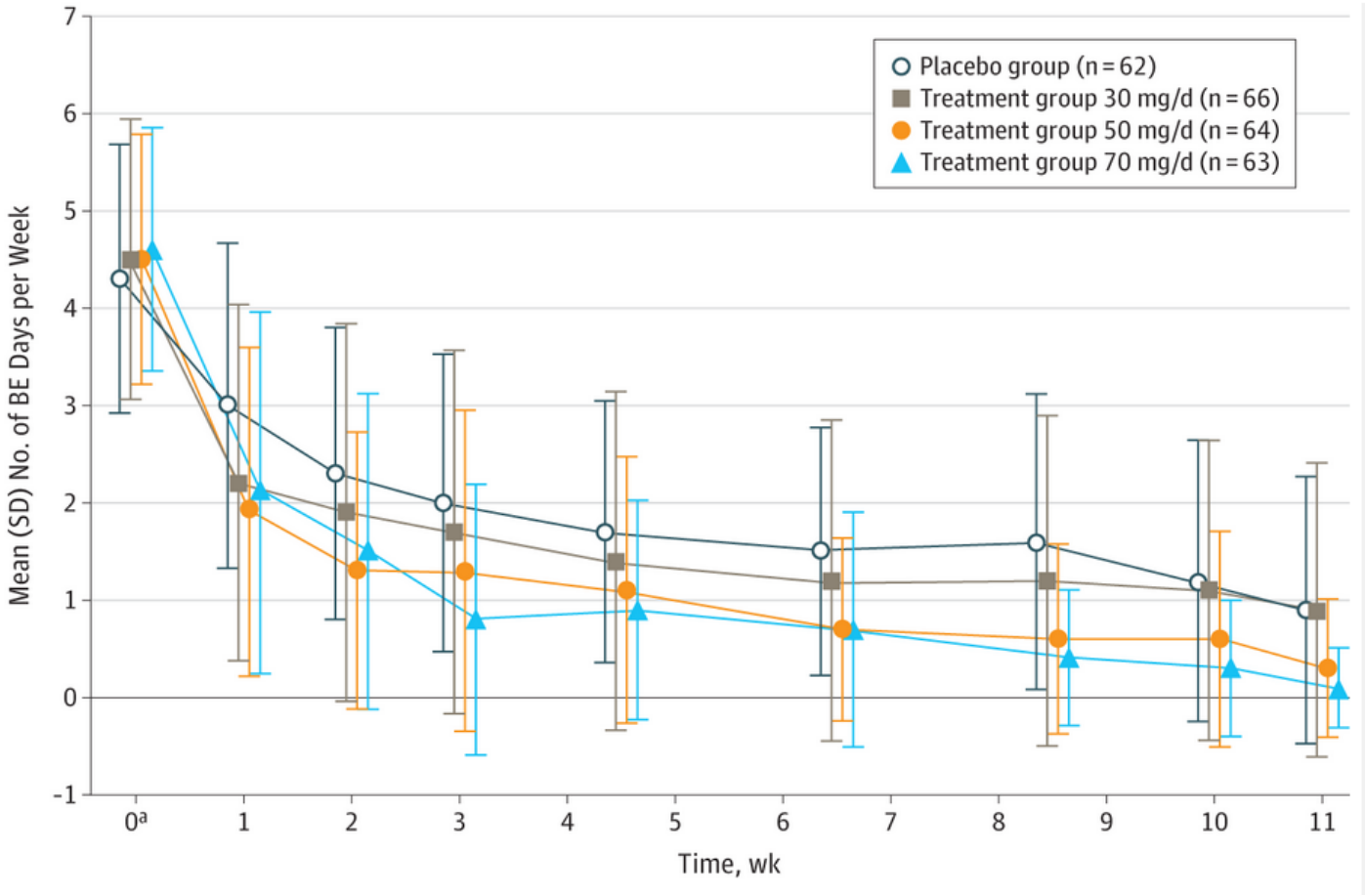
Lisdexamfetamine for Adults with BED



McElroy SL et al. JAMA Psychiatry 2015;72:235-46.

Pharmacotherapy of BED

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Class	Drug	Responses	
		Binge-eating	Weight Loss
Tricyclics	Imipramine	++	±
	Desipramine	++	±
SSRIs	Citalopram	++	+
	S-citalopram	++	+
	Fluvoxamine	++	+
	Sertraline	++	+
SNRIs/NRIs	Atomoxatine	++	+
	Venlafaxine	++	+
	Duloxetine	++	+
Orlistat	Orlistat	±	++
Anti-Epileptics	Topiramate	++	+++
	Zonisamide	++	+++
Other Classes[a]	Baclofen	+	–
	Na Oxybate	+	+
	Lamotrigine	–	+
	Acamprosate	–	–

a None of these have been adequately studied.

Mitchell JE et al., Int J Eat Disord 2013;46:470-7.

Level I Recommendations from Recent Practice Guidelines for ED

AN

- Family or individual psychotherpay
- NO: Antidepressant or antipsychotic medications

BN

- CBT, CBT-E, IPT
- Antidepressants, topiramate

BED

- CBT, CBT-E, IPT
- Antidepressants, topiramate
- Lisdexamfetamine*

Hay P et al., Aust N Z J Psychiatry 2014;48:977-1008; *McElroy SL et al., JAMA Psychiatry 2015;72:235-46.

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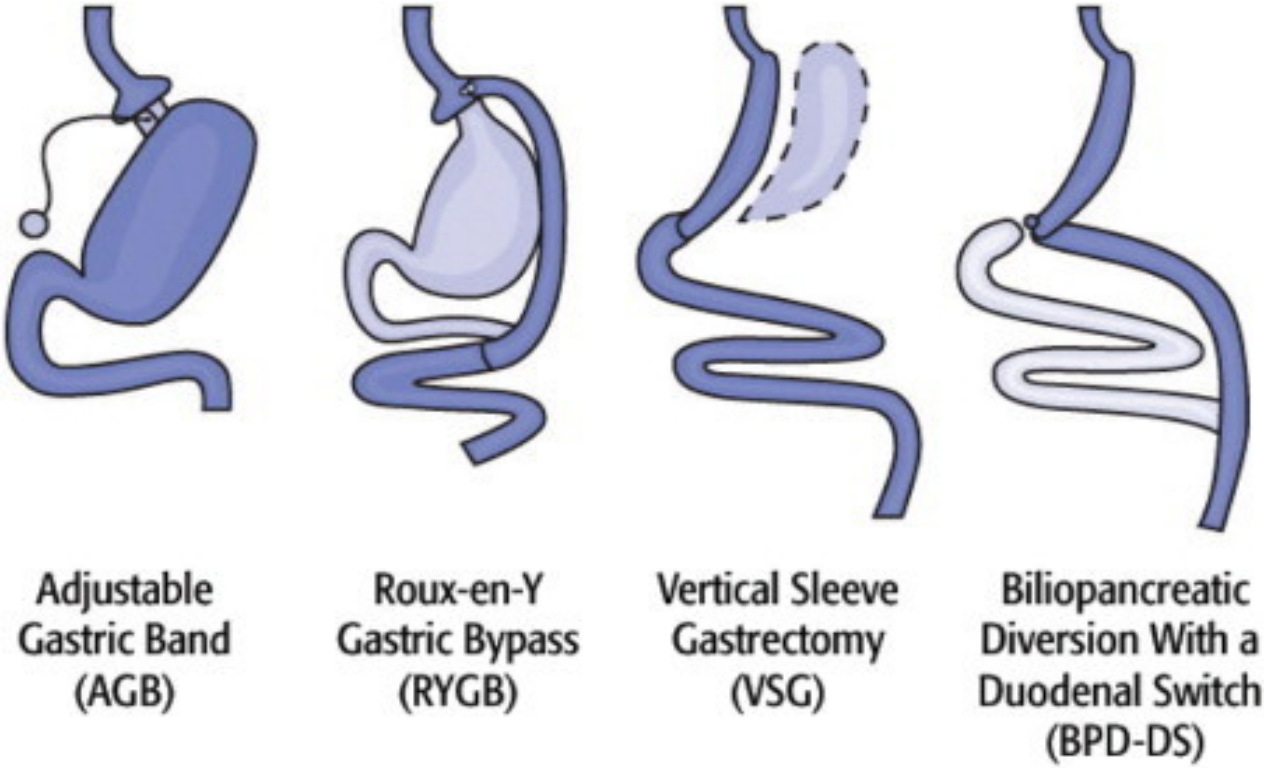
Bariatric Surgery



Vetter ML et al., Psychiatr Clin N Am 2011;34:881-93.

Bariatric Surgery Candidates: Psychiatric Issues

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- 30% have BED, 50% binge eat[1,2]
- Less weight loss with post-surgery loss of control over eating[3]
- Increased risk of alcohol misuse post-surgery[4]
- Increased risk of suicide post-surgery[5]
- Reduced absorption of many medications
- Potential risk of post-surgery depression, body image dissatisfaction, addiction transfer, interpersonal relationship changes

[1]Niego SH et al., Int J Eat Disord 2007;40:349-59; [2]Wadden T et al., Obesity 2011;19:1220-8; [3]Meany G et al., Eur Eat Disord Rev 2014;22:87-91; [4]King WC et al., JAMA 2012;307:2516-25; [5]Peterhansel C et al., Obes Rev 2013:14:369-82.