

Indications and Contraindications for Bariatric Surgery

Objectives

1. To assess the risk-benefit ratio and indications of bariatric surgery
2. To discuss contraindications to bariatric surgery

Indications for Metabolic and Bariatric Surgery:

NIH Consensus Development Conference Statement on Gastrointestinal Surgery for Severe Obesity(1991) Potential candidates include:

- Patients whose body mass index (BMI) exceeds 40 kg/m²
- Patients with BMIs between 35 and 40 kg/m² who also have high-risk comorbid conditions or lifestyle-limiting obesity-induced physical conditions

Comorbid condition examples:

- | | |
|---------------------------|---------------------------------------|
| 1)Hypertension | 2)Diabetes mellitus |
| 3)Obstructive sleep apnea | 4)DJD |
| 5)Gout | 6) Hyperlipidemia |
| 7)PCO | 8)Nonalcoholic fatty liver disease |
| 9)GERD | 10)Cancers;breast,colon,gynecological |
| 11)Asthma | 12)Venous stasis disease |
| 13)Urinary incontinence | |

NIH Consensus :

- Multidisciplinary team with access to medical, surgical, psychiatric, and nutritional expertise.
- The pros and cons of various treatment options
- Metabolic and bariatric surgery should be performed by a surgeon experienced with the appropriate procedure, working in a program with adequate support for all aspects of perioperative and postoperative care.
- Postoperative surveillance should continue indefinitely.
- No upper age limit for bariatric surgery was recommended
- Bariatric surgery to be safe in both extremes of age.

Risk-benefit ratio:

Significant advances in surgical techniques, reductions in operative risk, and greater knowledge of the potential risk of untreated obesity have greatly altered the risk-benefit ratio of surgery since 1991.

Risk-benefit ratio evolving changes:

1. The marked increase in the incidence of obesity
2. Expansion of available operative procedures
3. Significant reductions in perioperative mortality and morbidity
4. The introduction of laparoscopic techniques
5. Increased experience with a team management approach
6. Increased experience with metabolic and bariatric surgery in adolescents and the elderly
7. Greater demonstration of the effect of surgery in improving or reversing obesity-related comorbidities
8. Demonstration that metabolic and bariatric surgery improves life expectancy

The IDF position statement:

from March 2011 recommends that surgery should be considered as an alternative treatment option in patients with a BMI between 30 and 35 kg/m² when the diabetes cannot be adequately controlled with an optimal medical regimen, especially in the presence of other major cardiovascular disease risk factors.

Contraindications to Metabolic and Bariatric Surgery:

No absolute contraindications specific to bariatric surgery.

There are few absolute contraindications to bariatric and metabolic surgery like any elective surgical procedure.

Relative contraindications:

- 1) Severe heart failure
- 2) Unstable coronary artery disease
- 3) End-stage lung disease
- 4) Active cancer diagnosis or treatment
- 5) Cirrhosis with portal hypertension
- 6) Uncontrolled drug or alcohol dependency, and severely impaired intellectual capacity
- 7) Crohn's disease may be a relative contraindication to RYGB and BPD
- 8) Patients deemed a prohibitive operative risk should not be offered surgery including those with contraindications to general anesthesia or uncorrectable coagulopathy.

Keep in mind:

- ❑ Metabolic and bariatric surgery should be postponed in patients with active peptic ulcer disease until successful treatment has been confirmed.
- ❑ Patients who are pregnant or who expect to be pregnant within 12–18 months of surgery should be deferred.
- ❑ Patients who are on the transplant list or who have received transplants are candidates for bariatric surgery.

Specific Considerations

1) Extremes of Age:

- NIH Consensus Conference Statement did not include an upper age limit for bariatric surgery.
- Many authors have restricted metabolic and bariatric surgery to patients less than 65 years of age.
- Numerous publications, have demonstrated that surgery can be performed safely and effectively in the older patient population.

2) Psychiatric Illness:

- No consensus recommendations exist regarding preoperative psychological evaluation
- Patients with active psychosis or recent hospitalization for psychosis, as well as patients with suicidal ideation or recent suicidal attempts, should have surgery delayed or postponed and treatment initiated.
- A diagnosis of psychopathology, including eating disorders, does not preclude metabolic and bariatric surgery.

3)Cirrhosis:

- Nonalcoholic fatty liver disease is common in nearly 90% of patients undergoing metabolic and bariatric surgery and unexpected cirrhosis identified in 2% of patients.
- Surgery may be safely performed in patients with stable cirrhosis.
- When cirrhosis is an incidental finding at surgery,it is recommended to proceed in the absence of findings of significant portal hypertension including severe ascites and perigastric varices.
- If evidence of portal hypertension is encountered unexpectedly, the procedure should be aborted.

4) HIV Infection:

- 20% of HIV population patients progressing from normal/overweight to obesity within 2 years of starting antiretroviral therapy.
- Patients with HIV infection considered for surgery should demonstrate a stable, appropriate response to antiretroviral therapy as determined by CD4 counts.
- Preoperative and postoperative consultation with an HIV infectious disease specialist is mandatory.
- HIV and AIDS is not a contraindication to surgery.

5) Nonambulators:

Nonambulatory status is considered a relative contraindication to bariatric surgery.

Nonambulatory status and poor functional capacity have been demonstrated to increase perioperative morbidity and reduce postoperative weight loss.

Conclusion:

- Metabolic and bariatric surgery produces durable weight loss well beyond that achieved with medical and behavioral therapies, with resultant improvement in obesity-related comorbidities and quality of life.
- Advances in the field have led to an expansion of the indications for surgery.
- Appropriate patient selection is mandatory to ensure optimal results while minimizing perioperative risks.

Operation of choice for metabolic surgery

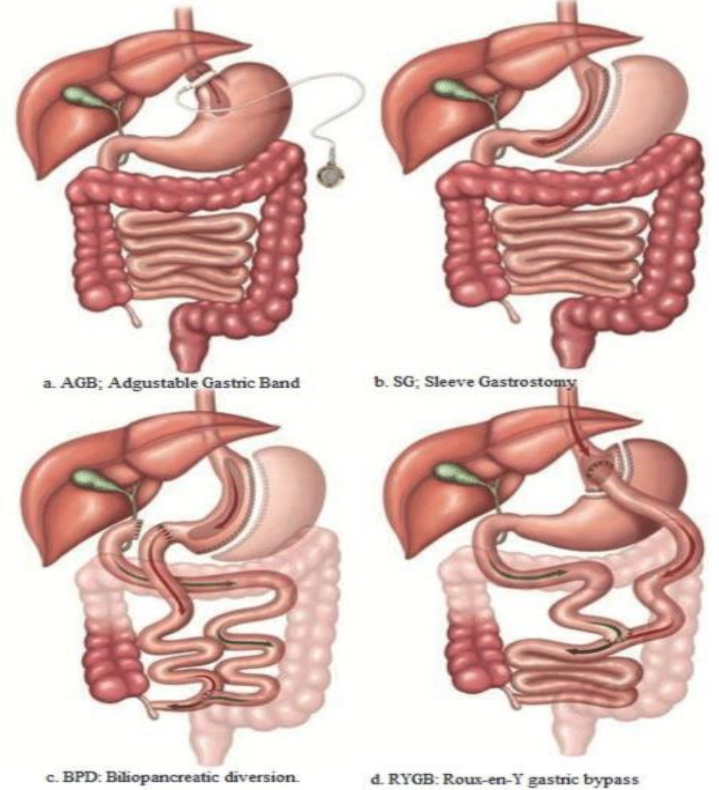
Chapter Objectives

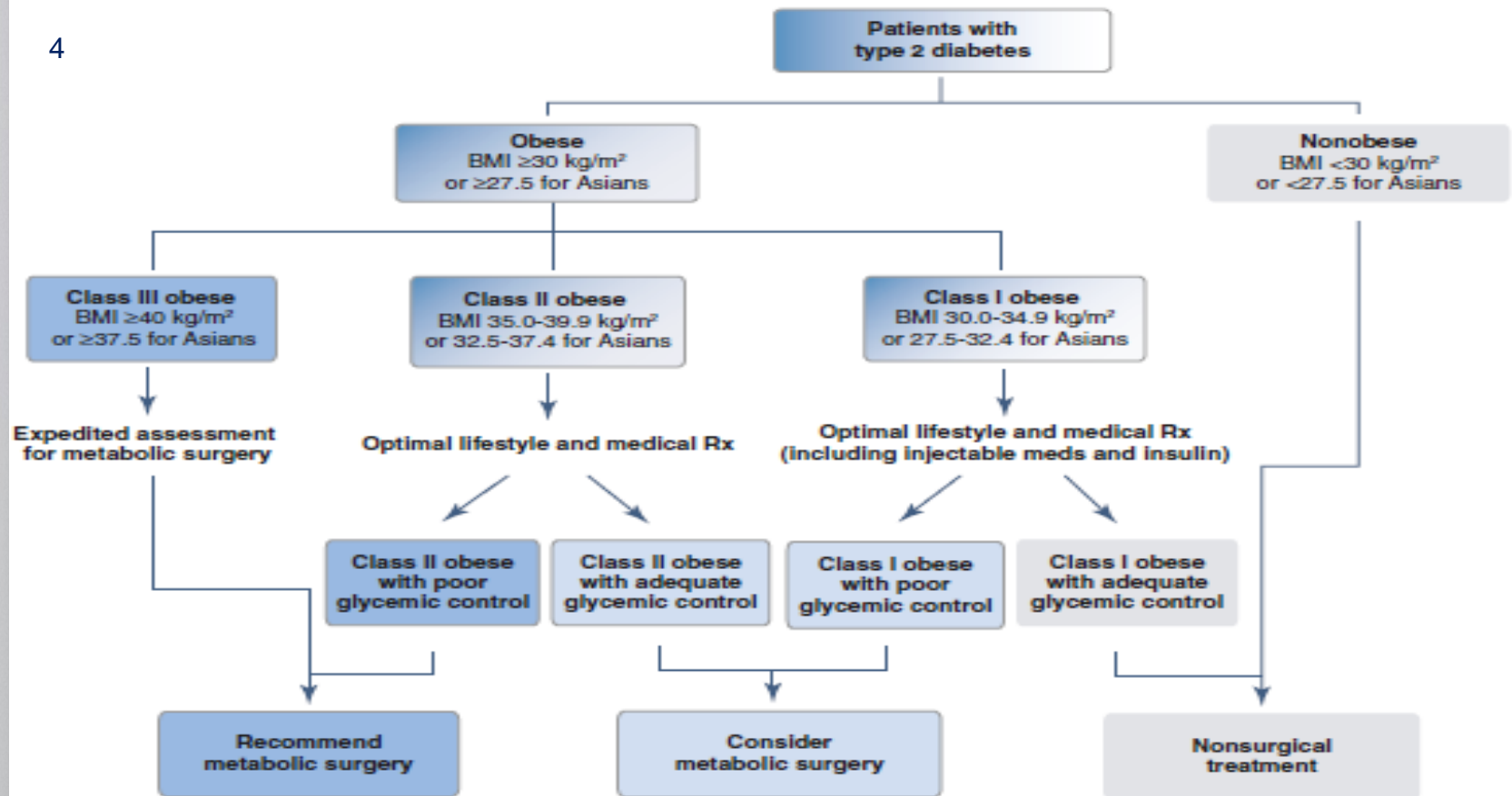
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1. To report the high level of evidence studies regarding efficacy of metabolic procedures in treatment of type 2 diabetes mellitus (T2DM)
2. To present and compare established gastrointestinal procedures aimed at controlling T2DM
3. To present published guidelines in the field of metabolic surgery
4. To overview underlying mechanisms for improvement of T2DM following metabolic procedures
5. To explain decision-making in choosing the appropriate metabolic surgical procedure

Algorithm for the treatment of T2DM

Standard metabolic surgical procedures





Efficacy of standard metabolic operations according to the two meta-analyses

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Outcome	Total(%)	ABG(%)	RYGB(%)	BPD(%)
Resolution of type 2 diabetes	78	57	80	95
Resolution of hypertension	62	43	68	83
Improvement of dyslipidemia	79	59	97	99
% EBWL (long term)	59	49	63	74

Mechanism of action of standard metabolic operations

Summary of outcomes after standard metabolic operations

Outcome	AGB	SG	RYGB	BPD
Resolution of type 2 diabetes	+	++	+++	++++
% excess weight loss	+	++	+++	++++
Operation morbidity and mortality	+	++	+++	++++
Nutritional deficiencies	+	++	+++	++++



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*The IDF presented a list of factors
to consider when choosing a
metabolic procedure*

Long-term complete remission rate (%) of T2DM after RYGB and SG in RCTs

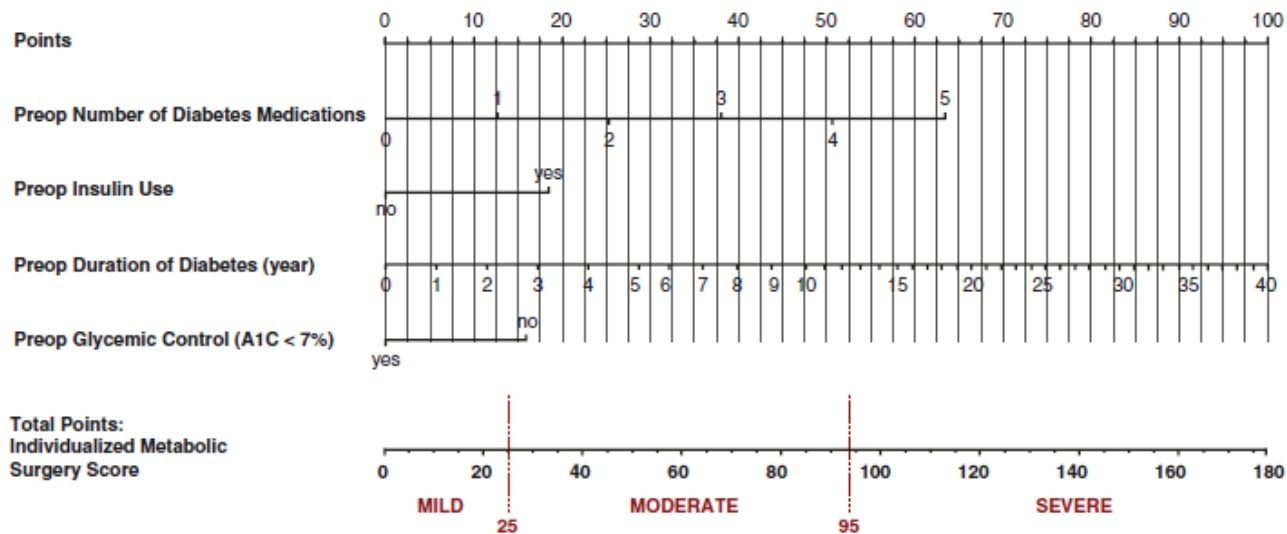
RCT	RYGB % (n with remission/n with T2DM)	SG % (n with remission/n with T2DM)	P value
STAMPEDE	22% (11/49)	15% (7/47)	0.49
SLEEVEPASS	25% (10/40)	12% (5/41)	0.23
SM-BOSS	68% (19/28)	62% (16/26)	0.84
Ruiz-Tovar et al.	79% (47/59)	77% (48/61)	0.92
4 RCTs	50% (87/176)	43% (76/175)	0.31

Long-term remission rate (%) of T2DM after RYGB and SG in RCTs

RCT	RYGB % (n with remission/n with T2DM)	SG % (n with remission/n with T2DM)	P value
STAMPEDE	31% (15/49)	23% (11/47)	0.57
SLEEVEPASS	45% (18/40)	37% (15/41)	0.59
SM-BOSS	75% (21/28)	77% (20/26)	0.88
Ruiz-Tovar et al.	86% (51/59)	82% (50/61)	0.67
4 RCTs	60% (105/176)	55% (96/175)	0.42

Individualized Metabolic Surgery Score

25 25



Recommendation in Average Risk Patients

RYGB is suggested.
Both procedures are highly effective.

RYGB is recommended.
SG is less effective.

SG is suggested.
Both procedures are less effective.

Bariatric procedure selection (RYGB or SG) based on patient's condition

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Patient's condition

<u>Average-risk patient</u>	<u>RYGB or SG</u>
<u>High-risk patient</u>	<u>SG</u>
<u>Extremely high BMI</u>	<u>SG</u>
<u>Complex large abdominal wall hernia</u>	<u>SG</u>
<u>Multiple small bowel resections</u>	<u>SG</u>
<u>Crohn's disease</u>	<u>SG</u>
<u>Transplant recipient/candidate</u>	<u>SG</u>
<u>Complex psychiatric history requiring polypharmacy</u>	<u>SG</u>
<u>Active smoker</u>	<u>SG</u>
<u>NSAID user</u>	
<u>SG</u>	
<u>severe GERD, Barrett's esophagus</u>	<u>RYGB</u>
<u>Type 2 diabetes</u>	
<u>Mild (IMS score ≤ 25)</u>	<u>RYGB \geq SG</u>
<u>Moderate ($25 < \text{IMS score} \leq 95$)</u>	<u>RYGB</u>
<u>Severe (IMS score > 95)</u>	<u>RYGB = SG</u>

Choice of metabolic surgery for T2DM

		Operative risk status	
		Low to moderate	High
Diabetes severity status	Prediabetes	RYGB or SG	SG
	Mild	RYGB (preferred)	SG
		SG (alternate)	
	Moderates	RYGB (preferred)	SG
BPD-DS (alternate)			
Severe	SG or RYGB or BPD-DS	SG	

THANKS!

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Any questions?

