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BARIATRIC SURGICAL MANAGEMENT Laparoscopic Sleeve Gastrectomy

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INTRODUCTION

- ▶ Obesity is a major health issue that is increasing in epidemic proportions and posing a difficult therapeutic challenge for clinicians all over the world , where it is currently the second leading cause of preventable death.

INTRODUCTION

▶ HISTORY:

- ▶ The word “**bariatric**” is derived from the Greek baro, meaning “weight,” and the suffixes iatr (“treatment”) and ic (“pertaining to”)

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Surgical treatment for obesity

► BMI - Body Mass Index

BMI is an acronym of **Body Mass Index**. This is an important medical tool that provides a reliable assessment regarding a person's weight and his likelihood for becoming ill. The higher your BMI is, the higher your chances of developing complications and diseases related to weight gain

Surgical treatment for obesity

- ▶ Conservative measures to achieve weight loss such as diet, exercise, and behavioral modifications have high failure rates in the setting of morbid obesity

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Surgical treatment for obesity

- ▶ Obesity is associated with serious medical comorbidities, and society pays a high cost for this condition in terms of health care and obesity-related deaths...

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WEIGHT-RELATED COMORBIDITIES

- ▶ Diabetes type II
- ▶ Hypertension
- ▶ Dyslipidemia
- ▶ Coronary artery disease
- ▶ Congestive heart failure
- ▶ Edema
- ▶ Asthma

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WEIGHT-RELATED COMORBIDITIES

- ▶ Sleep apnea
- ▶ Obesity-hypoventilation syndrome
- ▶ Arthritis Osteoarthritis
- ▶ Back pain
- ▶ Degenerative joint disease
- ▶ Nonalcoholic steatohepatitis (NASH)
- ▶ Gastroesophageal reflux disease (GERD)

WEIGHT-RELATED COMORBIDITIES

- ▶ Gallstones
- ▶ Menstrual irregularity/infertility
- ▶ Polycystic ovary syndrome
- ▶ Urinary stress incontinence
- ▶ Depression
- ▶ Venous Thromboembolic disease
- ▶ Cerebral vascular disease

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Surgical treatment for obesity

- ▶ A surgical approach may be required to prevent or treat the associated morbidities.

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Surgical treatment for obesity

▶ INDICATIONS

- ▶ In 1991, the National Institute of Health Consensus Development Panel recommended criteria for patient selection for bariatric surgery. Patients whose BMI exceeds 40, or whose BMI is between 35 and 40 and have comorbid conditions of obesity such as cardiopulmonary problems, diabetes, or sleep apnea, may be considered for surgery if they have failed medical therapy

Surgical treatment for obesity

- ▶ **Matching the Surgery to the Patient**
- ▶ **Selecting the surgery that is most suitable for you is an intricate process that requires careful attention.**
- ▶ **Prior to the operation, you will discuss the different types of surgery with the patient you've selected, including each operation's advantages and disadvantages, and your personal match to the surgery**

Surgical treatment for obesity

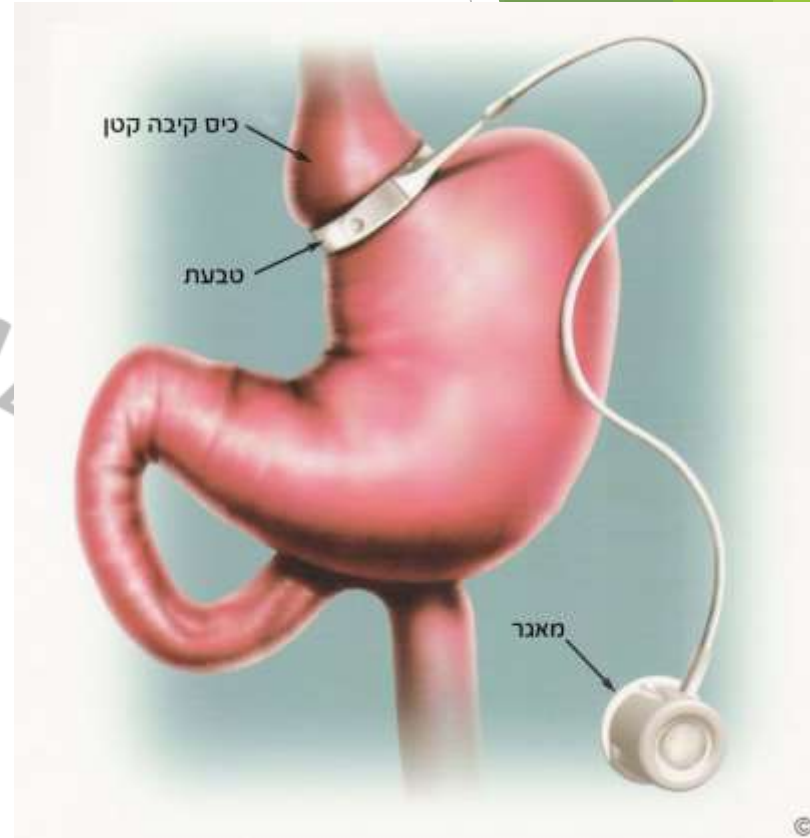
- ▶ Approach in Obesity Treatment
- ▶ The surgery creates a feeling of fullness, thus the patient eats less; but at the same time patients must learn how to become accustomed to a new and healthy lifestyle in order to retain the new weight for a long time

Surgical treatment for obesity

- ▶ Types of Surgery
- ▶ Most weight loss procedures are conducted by way of minimally invasive surgery through small incisions in the abdomen. A number of weight loss procedures have been developed over the last few years

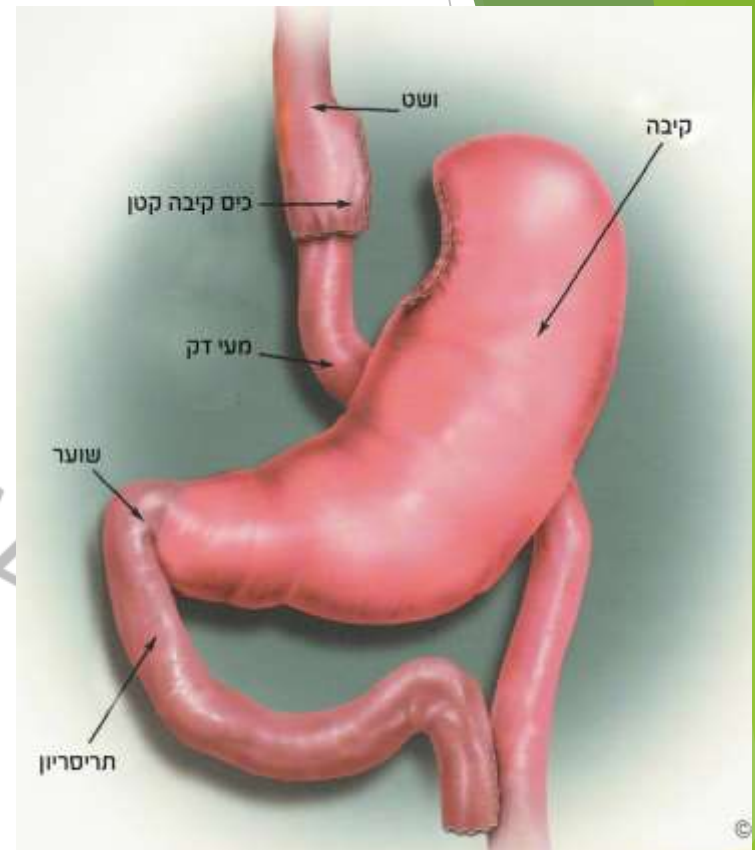
Surgical treatment for obesity

- ▶ **Laparoscopic Adjustable Gastric Banding**
- ▶ In this surgery, an adjustable band (ring) is installed around the upper stomach, in effect, creating a stomach with two compartments, similar to an hourglass



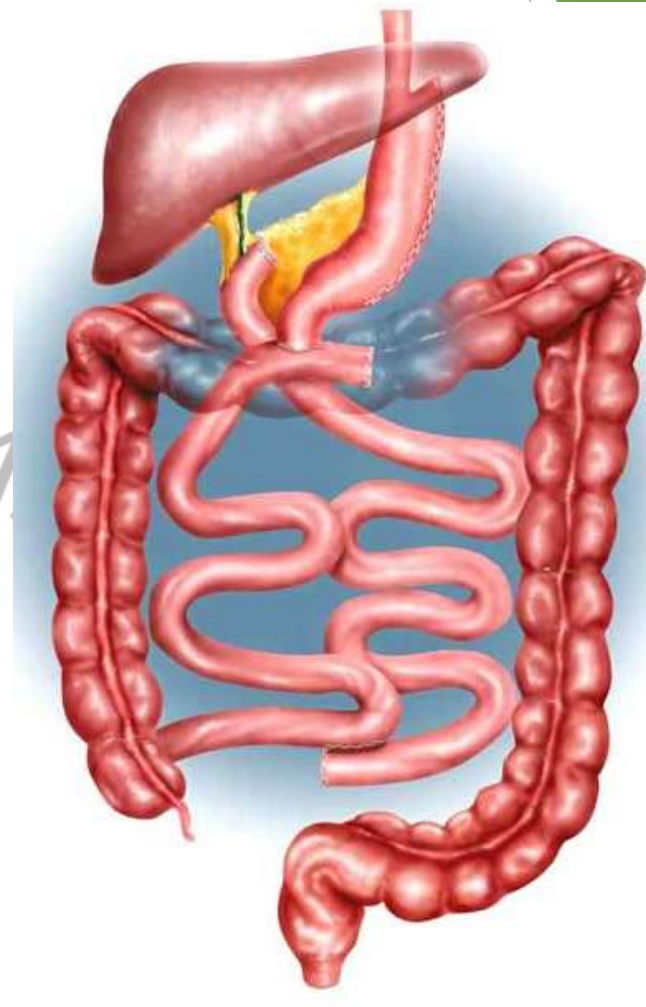
Surgical treatment for obesity

- ▶ **Laparoscopic Roux en Y Gastric Bypass** - The stomach is divided and a small gastric pouch is created. The new gastric pouch is anastomosed directly to the small intestine. The small gastric pouch is stretched by food, leading to satiety



Surgical treatment for obesity

- ▶ **Duodenal switch** - causes significant malabsorption and weight loss by decreasing absorption of calories in the small intestine



Surgical treatment for obesity

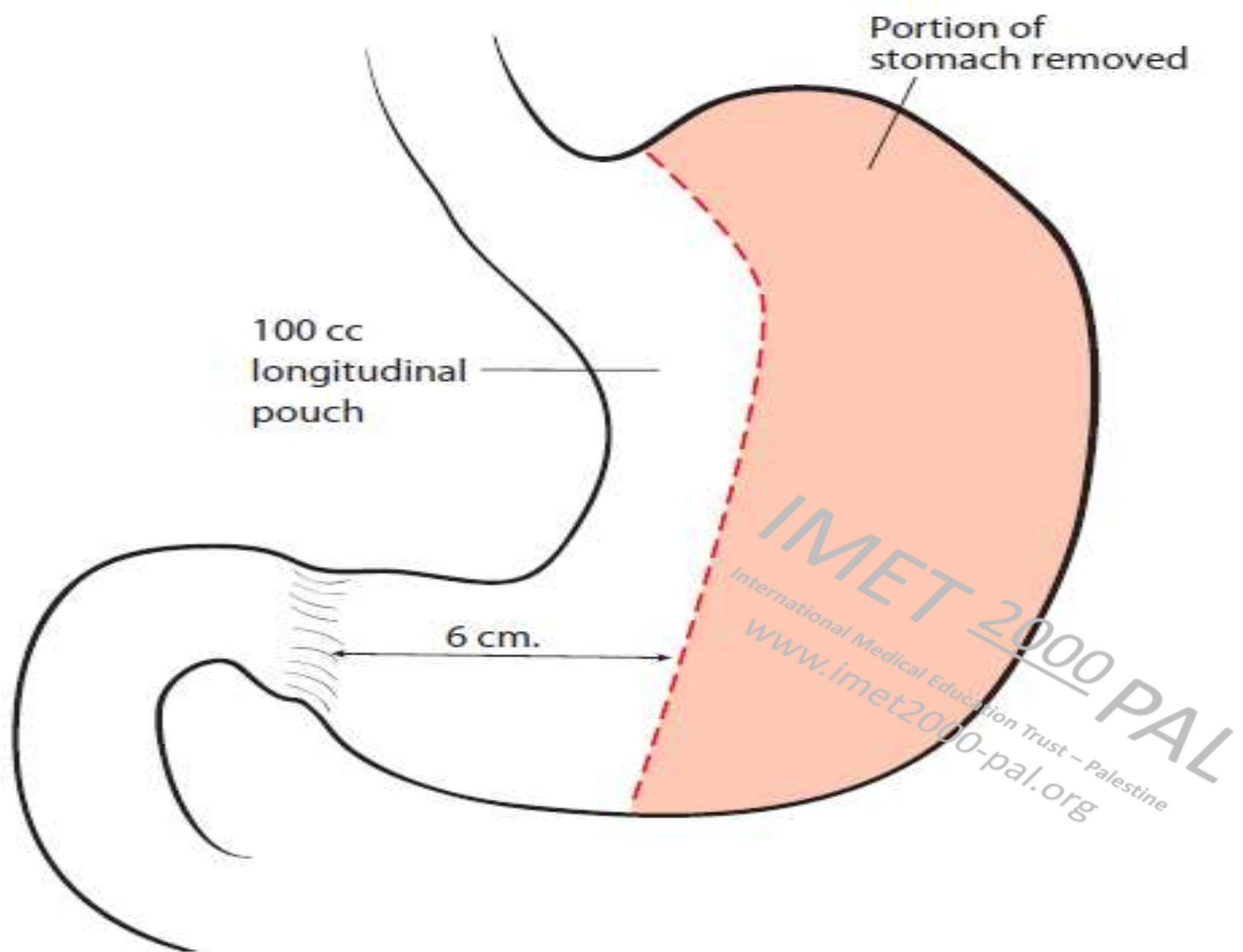
- ▶ Given the higher morbidity and mortality rates seen in several series following DS in super-superobese patients (BMI ≥ 60 kg/m²)
- ▶ The approach consists of laparoscopic sleeve gastrectomy followed by interval duodenoileostomy and ileoileostomy 6 to 12 months later.

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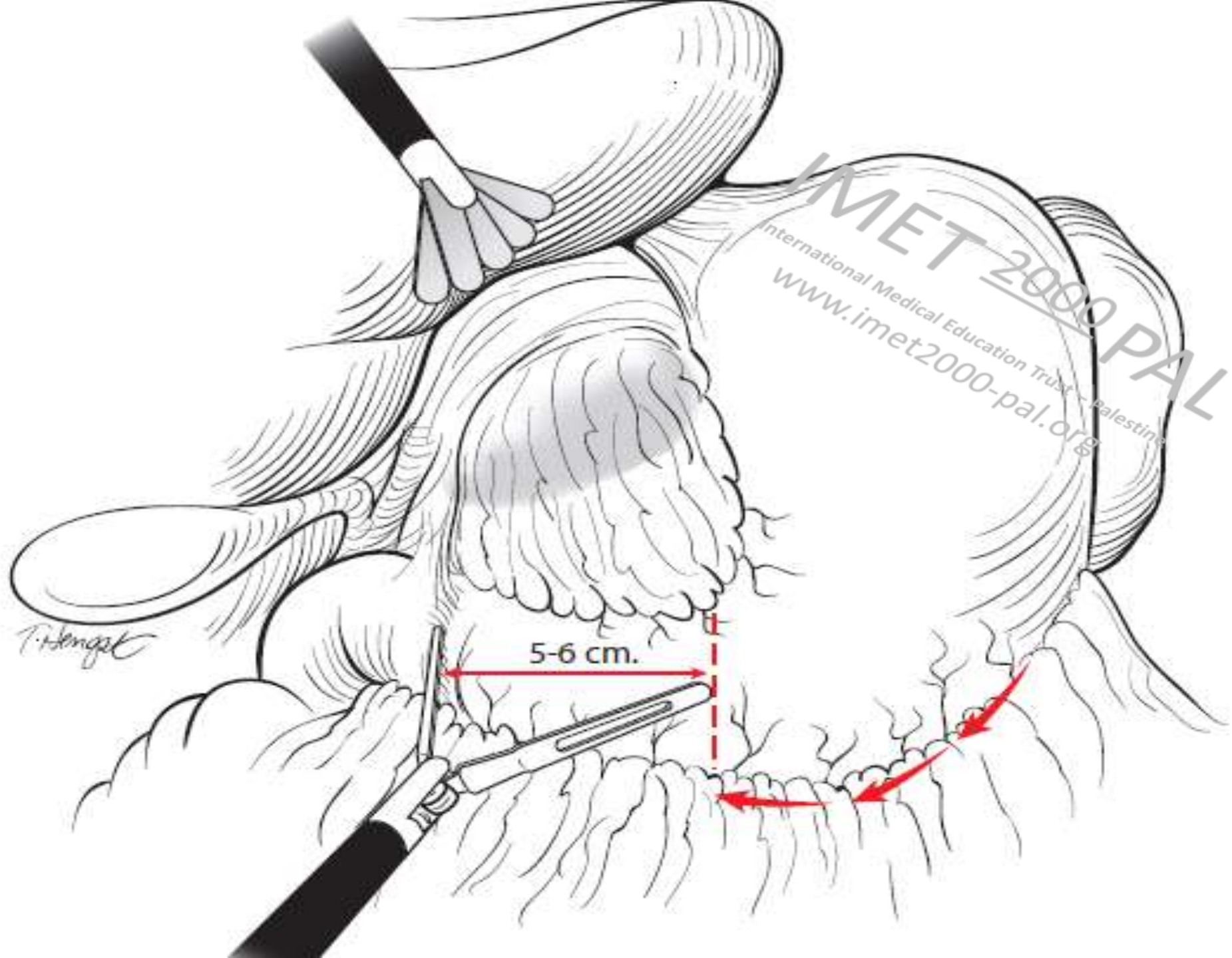
Surgical treatment for obesity

- ▶ Laparoscopic Sleeve Gastrectomy
 - An operation in which a long and narrow pouch, (sleeve) is created. It is fashioned like a sleeve about 150 cubic centimeters in volume, and thus the amount of food is limited to one fifth the volume of a normal meal





Laparoscopic sleeve gastrectomy



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5-6 cm.

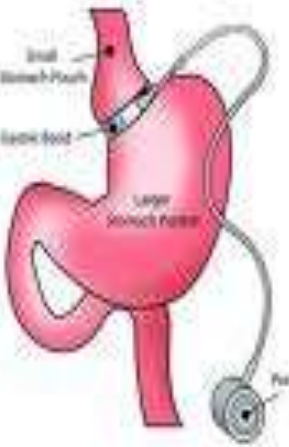
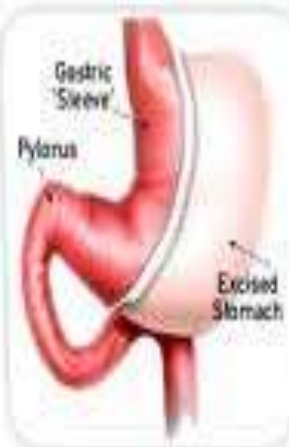

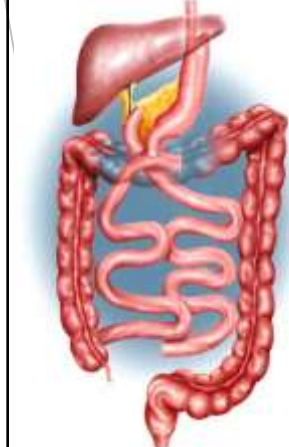
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Surgical treatment for obesity

Surgery Type	Adjustable Gastric Band	Sleeve Gastrectomy	Gastric Bypass	Duodenal Switch
	 <p>Small stomach pouch Gastric band Larger stomach portion Pylorus</p>	 <p>Gastric 'Sleeve' Pylorus Excised Stomach</p>	 <p>Base of T-tubed Bypass Resected Portion of Stomach Resected Portion of Intestine Short Intestine Bypass Pylorus Bypass</p>	
Conducted by laparoscopy	Yes	Yes	Yes	Sometimes
Hospitalization days	1 day	2 day	3 day	5 day

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Surgical treatment for obesity

Duration of the operation	1 hour	1-2 hours	3 hours	4-5 hours
Average excess weight loss	50%	65%	70%	80%
Is the surgery reversible?	YES	NO	NO	NO
Stomach volume restriction	YES	YES	YES	YES

Surgical treatment for obesity

Decrease in ghrelin hunger hormone	NO	YES	YES	YES
Malabsorption	NO	NO	YES	YES
Intestinal anastomosis	NO	NO	YES	YES
Decrease in gastric and esophageal acidity	NO	YES	YES	YES

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Surgical treatment for obesity

Mortality rate	0.1%	0.2%	0.3%	0.6%
Weight loss process	1 to 3 years	One year	One year	One to two years
Eating limitations	Beef, fresh bread, high fiber fruits and vegetables	One can eat normally but with smaller servings	High fiber fruits and vegetables	Oily food will cause diarrhea

Surgical treatment for obesity

Early complications	Bleeding leakage	Bleeding leakage	Bleeding leakage stenosis	Bleeding leakage stenosis
Late complications	Slippage, erosion into the stomach	Enlargement of the gastric pouch	Anastomotic ulcer, internal hernia, vitamins deficiencies	Internal hernia, protein and vitamin deficiencies

Surgical treatment for obesity

<p>Limitations of the surgical procedure</p>	<p>Beverages that are rich in calories will prevent weight loss. Unchewed food and pills may get stuck in the band. Band is inflated by a physician</p>	<p>Beverages that are rich in calories will prevent weight loss.</p>	<p>Requires bi-yearly follow-up on vitamin, iron and calcium levels in blood</p>	<p>Requires bi-yearly follow up on protein and vitamin levels in blood</p>
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Surgical treatment for obesity

Recom- mended additives	Multivita min during the first year	Multivita min during the first year	Multivita min, calcium, B12, folic acid and iron	Multivita min with ADEK fat soluble vitamin
Surgery application	It was the Most common surgery performed worldwide	An innovative procedure that is becoming common around the world	Most common surgery performed in the USA After sleeve	Suitable for extreme obesity

Surgical treatment for obesity

Another surgery is required	20% mainly due to slippage, erosion, or problem in the port or tubes	5% mainly due to dilation of the sleeve	10% mainly due to an internal hernia or a gastro-gastric fistula	5% mainly due to excessive weight loss and lack of proteins
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Surgical treatment for obesity

Who is it suitable	Most people. Not as effective for people who suffer from extreme obesity	Most people, and can always be altered later to one of the other bariatric procedures, for people who suffer from an ulcer	Very suitable for people who suffer from significant reflux or diabetes	For people who suffer from very extreme obesity and regularly eat eggs and meat
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Surgical treatment for obesity

Who is it not suitable	Those who suffer from a large hiatal hernia	Suitable for most people	Those who suffer from a duodenal ulcer or intestinal disease	Vegetarians and those who suffer from intestinal disease
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Surgical treatment for obesity

▶ During pregnancy:

For all types of surgery it is recommended to undergo routine and blood tests every three months

Surgical treatment for obesity

During pregnancy	If vomiting occurs, it is recommended to extract liquids from the band in order to prevent slippage	XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX	It is important to test for iron levels, folic acid, vitamin B12 and calcium	Test for protein level and levels of ADEK fat soluble vitamins
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Surgical treatment for obesity

▶ The most common weight related complications in our country are

- ❖ DM II
- ❖ Hypertension
- ❖ Dyslipidemia
- ❖ Social

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SOCIAL PROBLEM



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SOCIAL PROBLEM



Surgical treatment for obesity

DRUG	MARKET Price	Cost / year	Cost / 5 years
B- aspirin 1X1	12 NIS/ 30 tab	156 NIS	780 NIS
LIPITOR 40 1X1	270 NIS/30 tab	3240 NIS	16200 NIS
CO- DIOVAN 1X1	139 NIS/30 tab	1668 NIS	8340 NIS



Surgical treatment for obesity

GLUCOPHAGE 1X2	12 NIS /30 TAB	288 NIS	1440 NIS
MIXTARD One vial/month	96 NIS	1152 NIS	5760 NIS
TOTAL			32,520 NIS 9000 \$ USD

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CONCLUSION AND SUMMERY



CONCLUSION AND SUMMERY

I- Obesity is a major health
issue

posing a difficult therapeutic
challenge for clinicians

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CONCLUSION AND SUMMERY

II- It is currently the second
leading cause of
preventable death.

CONCLUSION AND SUMMERY

III- The higher the BMI is, the higher chances of developing complications and diseases related to weight gain

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CONCLUSION AND SUMMERY

VI- A surgical approach may be required to **prevent** **or treat** the associated morbidities, and decrease the cost to the patient, government , and insurance company .

So it is not cosmetic procedure.

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CONCLUSION AND SUMMERY

- ▶ V- SLEEVE gastrectomy is increasingly the most common bariatric surgical procedures world wide because of effectiveness, cost, and the least complications and mortality rate.

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CONCLUSION AND SUMMERY

VI- Create a message to the MOH and insurance company that bariatric surgical procedures will improve the quality of life and decrease the cost and make the people more productive and socially accepted

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TRAINING