Patient information booklet

Adjustable gastric banding

for the **treatment of obesity**

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Preface

The aim of this document is to improve your understanding of the different procedures used for the surgical treatment of obesity. This will help you to choose the most suitable technique, with the help of your surgeon. Your surgeon is a specialist who will present you the advantages and disadvantages of each procedure.

Summary

Food intake after the intervention

You will be able to start eating again on the second day after the operation, but only liquid food (soup, yoghurt, etc.) for the first month, as not to irritate your stomach.

You will have to change your eating habits. You must adjust your food intake to your stomach's new and reduced size.

Your diet should be composed of three small meals of solid food per day. You must take the time to eat slowly and chew each mouthful properly.

You must stop eating as soon as you feel full (satisfied), since the amount of food that your stomach is able to contain will be decreased. You may vomit if you fail to take this precaution.

Avoid meals with too much sugar (sodas, chocolate, ice creams etc.), as well as snacking (crisps, sweets, pastries, etc.) in between meals.

Your diet should consist of fresh food to supply essential vitamins and nutrients.

Fibrous foods (asparagus, pineapple, etc.) or very large mouthfuls should be avoided as they may block the stomach.

Sweet, sparkling, or alcoholic drinks should not be consumed.
You should drink in-between and not during mealtimes.

Postoperative instructions

Follow up is highly important.
Regular consultations with your surgeon are required.
These will be scheduled at 1, 3, 6, 9 and 12 months after the operation.

You should be aware that you will undergo some major changes. This is due to the changes in your eating habits, your body image, as well as your relationship with your environment (family, work, social situations, etc.). Psychological support and dietary monitoring are available to help you deal with these changes.

It is not advisable to start a pregnancy during the first year after the operation. Indeed, weight loss affects the unborn child's development.

Return to physical activity is necessary as soon as possible, to increase weight loss and muscle mass. These activities will become easier with time as you will lose more and more weight.

Plastic surgery may be required 18 to 24 months after the operation. Indeed, the weight loss has an impact on your tissues and your skin, which may cause unsightly skin folds.

If you have to undergo gastroscopy (endoscopic examination of the stomach and esophagus), the doctor should be informed about the procedure that you have undergone.

Some medications (anti-inflammatories, aspirin) should not be taken. These may irritate the stomach.

All medical professional (doctor, nurse, pharmacist, etc.) should be informed that you have undergone gastric surgery.

Obesity

The medical definition of obesity is an "excess of fatty mass with adverse consequences for health". The usual cause of obesity is an imbalance between energy intake (food, drink) and expenditure.
Fat mass is calculated using the Body Mass Index (BMI), which is obtained by dividing the body weight in kilograms by the square of the height in meters: BMI = weight (kg) / height x height (m).
The higher the BMI is the greater the risk of having health problems is.

WEIGHT	BMI (kg/m²)	HEALTH RISK
Normal	18,5 to 24,9	Low
Overweight	25 to 29,9	Moderate
Obese	over 30	High

Morbid obesity is defined by a BMI of over 40.

Causes of obesity

Generally, it is the result of an imbalance between an insufficient physical activity and a diet that is too rich in calories.

Other factors may play a role :

- Hereditary and genetic factors,
- Medications,
- Hormonal factors,
- Psychological and sociocultural factors.

Consequences of morbid obesity

The main risks are:

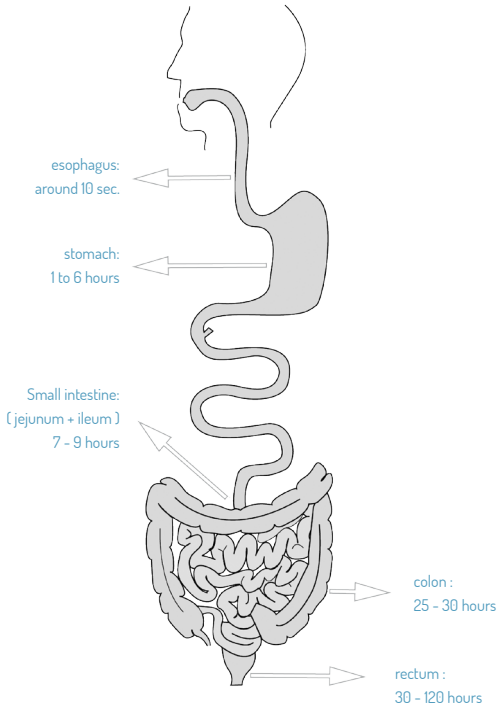
Cardiovascular : hypertension, coronary insufficiency, thromboembolism, enlarged heart, sudden death.
Endocrine : diabetes, virilization, menstrual cycle disturbances, complications during pregnancy, sterility.
Respiratory : dyspnea, sleep apnea syndrome, asthma.
Gastrointestinal : bladder lithiasis, hepatic steatosis, cancer of the colon.
Dermatological : intertrigo, varicose ulcers.
Osteomuscular : osteonecrosis, arthrosis.
Metabolic : dyslipidemia, increase in uric acid (gout).

Obesity also has psychological and socioeconomic consequences.
Severe obesity may have other dramatic consequences for your health.

Obesity is a disease, and should be treated as such.

Digestion

Time for passage of food in the digestive tract
&
Mechanism of digestion



Digestive system :

The digestive system (esophagus, stomach, small intestine, colon and rectum) digests food. Its role is to transform food into substances that can be used by the body (proteins, carbohydrates, lipids, mineral salts, etc.) and to ensure their passage into the bloodstream.

Passage of food :

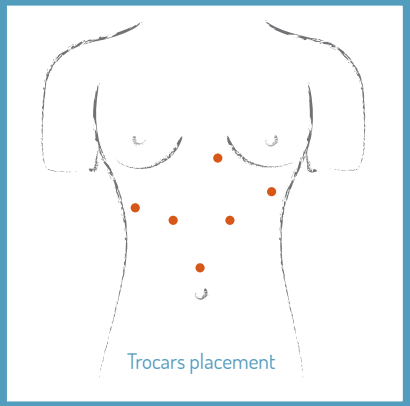
Digestion starts in the mouth, where the food is transformed into a semi-liquid mass by the action of chewing and saliva. It descends via the oesophagus, where the food is attacked by gastric secretions (acid). The food passes into the small intestine, where digestion is continued by the actions of juices from the pancreas, liver and intestines. The digested food is absorbed in this long tube. Only the residues (not absorbable) pass into the colon (where water is absorbed) and the rectum. These are compacted and then expelled voluntarily, through defecation.

Comparative table of the techniques

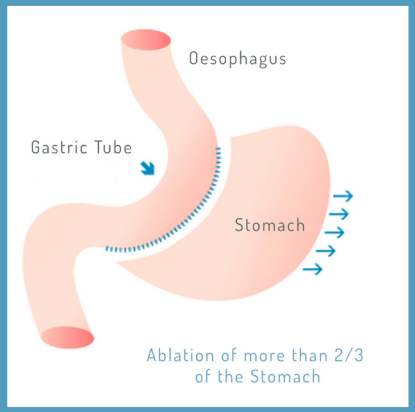
TYPE OF SURGERY	GASTROPLASTY ADJUSTABLE GASTRIC BANDING	SLEEVE GASTRECTOMY	GASTRIC BYPASS
Description	Restrictive : Decreases the quantity of food that can be absorbed	Restrictive : Decreases the quantity of food that can be absorbed	Restrictive and mal-asborbative : Decreases the quantity of food that can be absorbed
Surgical risk	Very low	Moderated	Moderated
Reversibility of the operation	Total and easy	Irreversible	Total but complexe
Excess weight lost after 5 years	50%	60%	70%
Long-term risk	Rare - rare deficiencies - dilatation of the pouch (10%): surgical correction - migration of the banding (1%) : removal of the band	Rare deficiencies unknown as lack of retrospective data	Common - deficiencies - dumping syndrome

Sleeve gastrectomy

Sleeve gastrectomy consists of removing 2/3 of the stomach. To this restriction is added a decrease of the ghrelin rate, which is the hunger hormone. Ghrelin increases appetite and plays a role in body weight.



Trocars placement



Ablation of more than 2/3 of the Stomach

Advantages :

- decreased appetite
- rapid weight loss
- operation possible for patients with a BMI > 60 or with contraindications for a gastric bypass
- rare deficiency

Disadvantages or potential risks:

- complex surgery
- 4 to 6 days hospital stay
- postoperative fistula
- postoperative abscess
- irreversible operation
- recent operation with little retrospective data

Surgical interventions

The two main types of surgery are:

- Restrictive and malabsorbative operations: These consist of short-circuiting a gastrointestinal segment in order to reduce the intake of food (and therefore fat). The bypass technique combines the decrease in food and reabsorption at the level of the small intestine.
- Restrictive operations: This technique reduces the volume of the stomach causing decreased food intake, which results in making the sensation of hunger to disappear. These procedures include sleeve gastrectomy and adjustable gastric banding gastroplasty.

In whom is this surgery performed?

People with a BMI of over 40 or those with a BMI of over 35 presenting health risk factors.

Contraindications

Patients in whom the weight loss may be risky:

- Pregnancy and breast-feeding,
- Serious cardiopulmonary disease,
- Inflammatory disease, congenital or acquired anomalies of the gastrointestinal apparatus (Crohn's disease, ulcerative hemorrhagic colitis),
- Risk of relapse of neoplasia,
- Serious psychiatric disorders (depression, neurosis, or psychosis),
- Elderly patient

Patients with a risk of failure or aggravation:

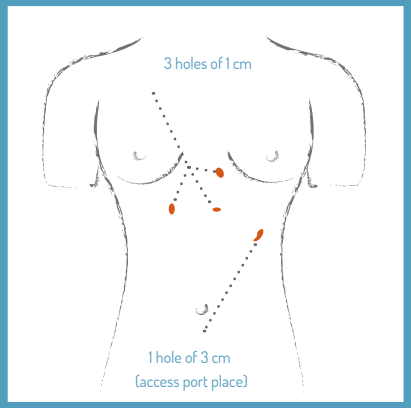
- Eating disorder,
- Drug addicts (alcohol, drugs, etc.),
- Refusal to accept the dietary restrictions imposed by the procedure

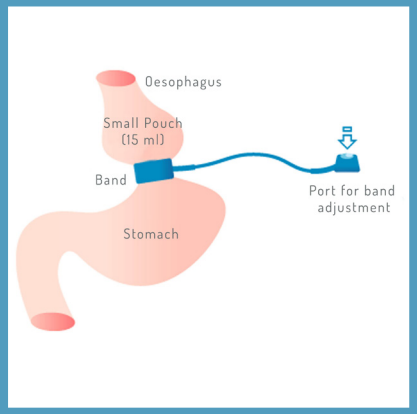
Operation by laparoscopy

General anesthesia is performed. The abdomen is inflated with carbon dioxide, then small incisions are made, into which the tubes (trocars) are positioned and through which the instruments are introduced into the abdomen, as well as the implant, as the case may be.

Adjustable gastric banding gastroplasty

The procedure consists of reducing the capacity of the stomach, by creating a small pouch. The banding divides the stomach into two parts like an hourglass.





Advantages :

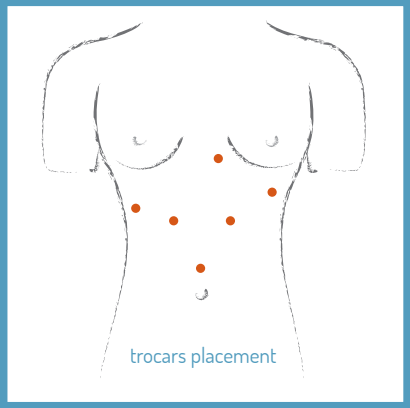
- short hospital stay
- operation totally reversible
- pouch created by the banding can be adjusted
- reduced scarring
- minimal pain
- few complications of the abdominal wall (abscess, eventration)
- rare and benign deficiency
- regular weight loss
- simple surgery

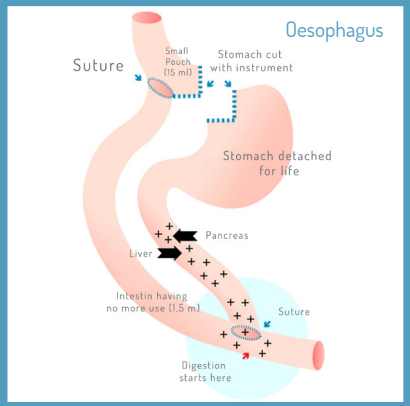
Disadvantages or potential risks :

- opening of the band
- slippage of the band
- dilatation of the gastric pouch
- migration of the band
- port infection
- dysphagia due to foreign bodies
- oesophagitis
- adhesions
- port flicking

Gastric bypass

The procedure consists of connecting the small pouch, created by staples, directly to the intestine.





Advantages :

- rapid weight loss independent of food intake
- enables patients to eat better without discomfort
- rare vomiting
- technique approved for cases of severe obesity
- associated hiatal hernia can also be treated

Disadvantages or potential risks:

- postoperative fistula, peritonitis
- complex surgery
- hardly reversible operation
- risk of nutrient deficiencies (iron, B12...)
- 4 to 6 day hospital stay
- gastrointestinal stenoses - occlusions
- abdominal wall lesions (abscess, hernia)
- abundant stool or diarrhea
- dumping syndrome : the ingestion of sugary foods may cause nausea, cramps, sweating and diarrhea.
- strict postoperative monitoring is required