



Obesity Surgery

*What you need to know
before making a decision!*

HAS

HAUTE AUTORITÉ DE SANTÉ

Visit the HAS Internet site: www.has-sante.fr

Here you will find additional information and tools to help you prepare for your appointments with health professionals.

The Haute Autorité de Santé (HAS) is an independent public institution responsible for improving the quality, safety and organisation of healthcare.

This information brochure, intended for obese patients and their families, has been produced using the clinical practice guidelines for healthcare professionals entitled "Obesity surgery in adults" which can be downloaded from www.has-sante.fr

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Obesity is a chronic disease. It can result in difficulties in everyday life, particularly if it is severe or massive. It can also threaten health and lead to diseases such as diabetes, high blood pressure, high cholesterol levels, sleep apnoea syndrome, etc.

Obesity surgery helps the patient lose weight in a sustainable way and control these diseases. However, the decision to have an operation is an important one and requires good preparation.

It is essential to know as much as possible about the operation and the conditions required to ensure its success, so that you can:

- participate fully in the decision and commit to the process with full knowledge of the facts;
- prepare properly for the operation;
- understand and accept the fact that you will need lifelong medical follow-up.

This brochure contains explanations on:

- the different surgical techniques;
- the conditions required to benefit from obesity surgery;
- the organisation of patient management, from the first appointment with the doctor to post-operation follow-up;
- the precautions required to guarantee the best chances of success.

This brochure should allow you to have a better dialogue with health professionals. However, it does not replace the information provided by your doctor and the obesity surgery team that you may come into contact with.

Is obesity surgery **effective?**

“ “ **Yes, it is effective!**

Obesity surgery helps patients to:

- 1** **lose weight** in a sustainable way;
- 2** **improve the disorders** connected with obesity;
- 3** **improve quality of life**, in particular self-esteem, opportunities for physical activity, social relationships, sexual activity, etc.

“ “ **But beware!**

- 1** **Surgery on its own does not result in sustainable weight-loss.** It is only effective if eating habits are changed, physical activity is increased and the patient is willing to commit to lifelong medical follow-up.
- 2** **Surgical intervention can result in complications and day-to-day difficulties**, even a long time after the operation:
 - problems related to the surgical procedure (for example: slipping of a band or leakage from a suture). These can be corrected, however;
 - nutritional deficiencies. Taking vitamin, mineral and trace element supplements together with a varied diet will prevent these from occurring;
 - difficulties related to a change in body image and relationships with others. You may benefit from psychological support to overcome these difficulties.
- 3** **Mortality rates for obesity surgery are not zero.** Nevertheless, they are less than or equal to 1 %. As an example, for other diseases, operative mortality is:
 - 0.1 to 0.5 % following gall bladder removal;
 - 2 % following coronary bypass surgery.

Am I eligible for obesity surgery?

Who is it suitable for?

Obesity surgery is suitable for adults:

- suffering from massive obesity (BMI \geq 40 kg/m²) or severe obesity (BMI \geq 35 kg/m²) when it is combined with at least one complication that could be improved through surgery (diabetes, high blood pressure, sleep apnoea syndrome, joint disorders, etc.);
- who have attempted, without success, to lose weight by non-operative means (including nutritional and physical activity follow-up, psychological care) over several months;
- and who present no contraindications to surgery (e.g.: alcohol abuse) and to general anaesthesia.

How to calculate your BMI

The body mass index (BMI) is used to estimate excess fat in the body and to define how overweight a person is. The higher the BMI, the greater the risks associated with obesity. To calculate it, divide your weight (in kg) by your height times your height (in m):

$$\text{BMI (kg/m}^2\text{)} = \frac{\text{weight (kg)}}{\text{height (m)} \times \text{height (m)}}$$

Consult the **body mass index (BMI)* table** to find out how overweight you are.

Do you think that obesity surgery might be right for you?

In order to make a decision, you must firstly:

- 1 talk to your general practitioner about it and if necessary an obesity specialist (endocrinologist, nutritionist, digestive or visceral surgeon, psychiatrist or psychologist, dietician, etc.).** They will direct you to a multidisciplinary team specialising in obesity surgery;
- 2 on the advice of your general practitioner or obesity specialist, consult a member of the team specialising in obesity surgery.** Following this consultation, you will know whether or not you are eligible for obesity surgery:
 - you are eligible: before any decision to go ahead with the operation, you will receive additional information, undergo a health assessment and start preparing for the operation.
 - you are not eligible: the doctor or surgeon will suggest another type of treatment (non-surgical) in hospital or at your doctor's office.

You can also get more information from the websites of the SOFFCO (Société Française et Francophone de Chirurgie de l'Obésité) and patient associations (see section "Some useful contacts").

* Available for consultation at www.has-sante.fr

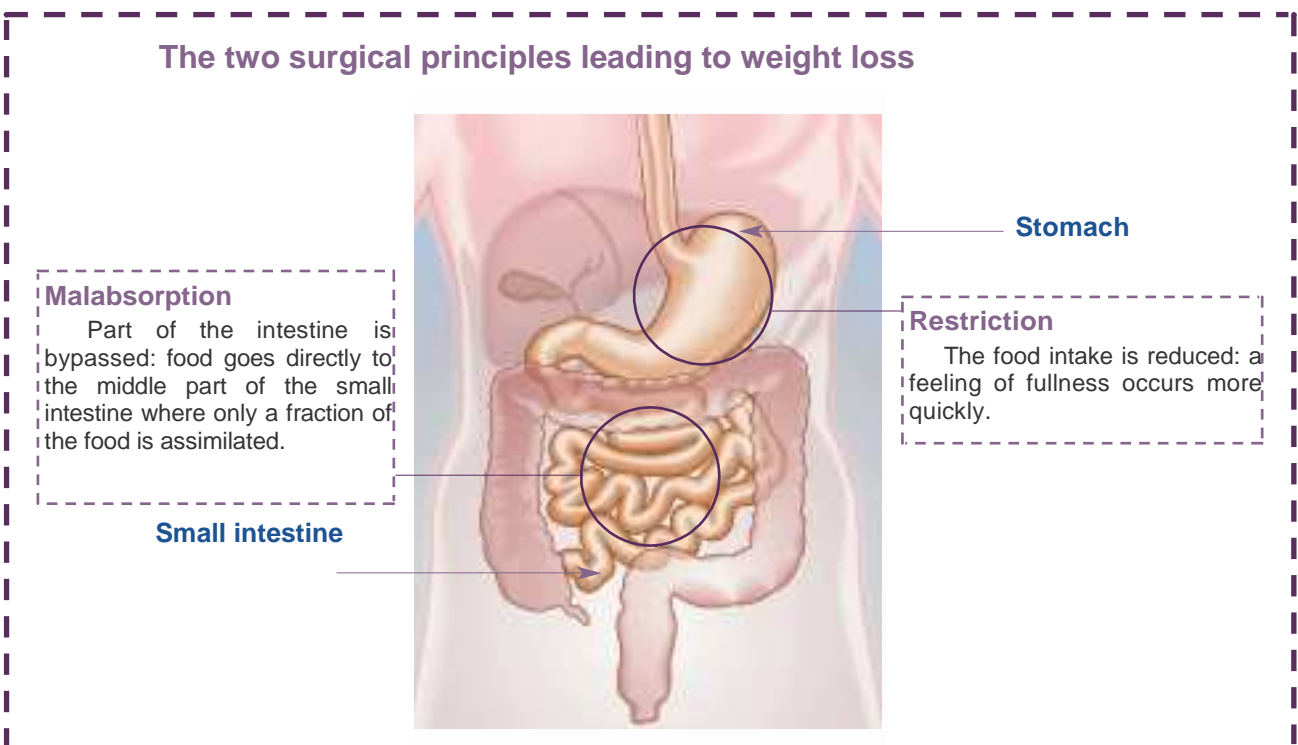
Obesity surgery:

how does it work?

Obesity surgery (known as "bariatric" surgery or "weight loss" surgery) modifies the anatomy of the [gastrointestinal tract](#)*. It is a mechanical and metabolic form of assistance which reduces the food intake (principle of restriction) and/or the absorption of food by the organism (principle of "malabsorption").

There are two main types of surgical technique (see box below):

- **purely restrictive techniques**, which reduce the size of the stomach:
 - adjustable gastric banding (see page 12),
 - sleeve gastrectomy (see page 13),
 - vertical banded gastroplasty (less and less practised as a technique);
- **mixed restrictive and "malabsorptive" techniques**, which reduce the size of the stomach (restriction) and reduce absorption of food by the organism (malabsorption):
 - gastric bypass (see page 14),
 - biliopancreatic diversion (see page 15).



◦ ◦ **Each technique has its advantages and disadvantages! The multidisciplinary team will suggest the technique most appropriate to your situation, in accordance with your needs and your risk factors.**

* Available for consultation at www.has-sante.fr

Before the operation

Preparation

This preparatory phase is essential and requires real commitment on your part. Over several months, you will meet various professionals who are members of a multidisciplinary team (surgeon, nutrition doctor, dietician, psychiatrist or psychologist, anaesthetist, etc.) who will provide you with information and examine you.

They will also request various examinations (blood tests, upper gastrointestinal endoscopy* and, if necessary, X-rays, assessments of respiratory and cardiac function, pregnancy test and an examination of the mouth and teeth). The objectives of these investigations are to make:

- a complete assessment of the obesity and your state of health in order to treat the disorders you may be suffering from (nutritional or vitamin deficiencies, diabetes, high blood pressure, high cholesterol levels, cardiac disorders, sleep apnoea syndrome or other respiratory problems, joint disorders, etc.);
- a psychological assessment in order to offer you psychotherapy if appropriate;
- an assessment of your physical activity and eating habits;
- information on pregnancy and contraception for women of childbearing age.

During this preparation phase, it is useful to meet patients who have already been operated on.

Help with eating better and moving more!

Very early in the process, before you even have the operation, you must adopt new eating habits and choose a physical activity appropriate to your state of health, your preferences and possibilities. Health professionals (doctors, dieticians, nurses and physiotherapists) are available to help you and suggest various individual or group educational activities: cookery courses, shared mealtimes, physical exercise programmes, etc.

The decision

On completion of the preparatory phase, the multidisciplinary team makes one of three decisions:

- 1 The operation can go ahead.** The team will then give you more information on the operative technique chosen. If you have decided to have the operation, you will be given an operation date and a request for your health insurance fund to agree to help with the operation costs (to find out more: www.ameli.fr).
- 2 Your preparation for the operation is not sufficient.** You will have to undertake additional preparations. On completion of these, the multidisciplinary team will re-examine your request and make a new decision.
- 3 Surgery is not suitable in your case.** The multidisciplinary team will explain the reasons why and offer you another treatment (non-surgical).

* **Upper-gastrointestinal endoscopy:** a technique used to directly view the walls of the digestive tract (oesophagus, stomach, intestines) using a very fine tube consisting of optic fibres and a video camera, which is introduced through the mouth and goes down to the intestines.

The operation

The operation and hospitalisation

The operation is conducted under general anaesthetic, usually via laparoscopy*. This technique is recommended because it reduces the amount of pain experienced and allows the patient to return to normal activity quickly. In some cases, during the operation it is necessary to open up the abdomen (laparotomy) for safety reasons.

The time spent in hospital will vary from 2 to 10 days depending on the type of operation and the general health of the patient. It may be extended if complications occur after the operation. In this case, your surgeon may decide to perform a second emergency operation.

You should plan to have at least 2 weeks off work when you come out of hospital.

Like any operation on the abdomen, obesity surgery can be painful. You will be given painkillers if necessary.

Eating after the operation

After the operation, the consistency of the food you eat will be different from what you are used to, starting off with only liquid food and then soft moist food. Gradually, you will return to normal foods. In order to avoid unpleasant surprises (vomiting, pain, etc.), it is very important to follow the dietary advice given.

New eating habits!

- Eat small quantities at each meal and chew slowly.
- Sit down to eat your meals and do so in a calm environment.
- Stop eating at the first gnawing pain and as soon as you no longer have the feeling of being hungry (fullness).
- Do not drink while eating (but drink sufficiently between meals).
- Eat a varied and balanced diet to prevent nutritional deficiencies and increase the chances of losing weight.
- Make sure that you eat enough protein (meat, fish, eggs, dairy products).
- Avoid fizzy drinks, sugary drinks, sauces and fried foods, as well as sweets and fatty foods: eating them is likely to prevent you from losing weight.

“ “ **These new eating habits will be adapted to your specific circumstances over time. They can sometimes be restrictive but they do not prevent you from having a social life (meals with friends, meals out) and from enjoying eating.**

* **Laparoscopy:** a technique used to view the inside of the abdomen using a very fine probe fitted with a camera inserted through small holes in the abdominal wall; the operation is carried out through these holes. This technique means that the abdominal wall does not need to be cut open, limiting the risk of infection and speeding up the healing process.

After the operation

From the first few weeks

In most patients:

- weight decreases: weight loss is fast in the first few months and then slows down. Usually, the maximum amount of weight has been lost after 12 to 18 months. After that, moderate regaining of weight is possible.
- the disorders connected with obesity improve (e.g.: diabetes).

However, having an operation is a big commitment!

You must now, and for the rest of your life:

- 1 stick to your new eating habits (see the box on page 9) and take regular physical exercise suitable to your circumstances;
- 2 have regular check-ups with the multidisciplinary team that performed the operation, in collaboration with your general practitioner (at least 4 consultations in the first year with a member of the multidisciplinary team, and after that at least one consultation a year).

These appointments have 6 main objectives:

- assess your weight loss;
- check that you are in good health, identify and treat any surgical complications and nutritional deficiencies that may occur soon after the operation or at a later stage;
- if necessary, adapt the medications you are taking: some medications may be less well assimilated or not assimilated at all after a malabsorptive operation while others may no longer be necessary in the longer or short term because of the weight loss achieved;
- check that you have successfully adapted to your new eating habits and physical exercise regime, and help you solve any day-to-day problems;
- detect any psychological problems related to the change in your body and, if necessary, offer appropriate care;

Weight loss changes the body and its appearance: this can lead to psychological distress that may or may not be easy to deal with. A period of adaptation to the change is necessary and normal for yourself and your family. If you wish, or if your doctor feels it is necessary, you may be offered support from a psychologist or psychiatrist.

- if necessary, offer reconstructive surgery to remove excess skin that may remain in certain places after weight loss (breasts, stomach, arms and thighs);

- 3 in most cases, take daily vitamin, mineral and trace element supplements (orally or sometimes via injection).

“ Failure to take these supplements can lead to nutritional deficiencies and serious neurological complications. Regular nutritional and vitamin assessments are recommended.

Do not forget to tell any doctor who treats you that you have had obesity surgery.

Answers to my questions

‘ Can I get pregnant after the operation?

Yes. Pregnancy is possible after obesity surgery. In this case, regular nutritional follow-up is necessary, from the desire for pregnancy until several months after the birth.

However, as a precaution, we recommend waiting until your weight has stabilised (12 to 18 months after the operation) and your nutritional condition has been checked before planning a pregnancy. Various contraception methods can be used during this period. Your doctor will advise you about these.

‘ Does National Health Insurance reimburse the costs of the operation?

Yes. National Health Insurance reimburses the costs of the operation and hospitalisation once agreement has been given to the request for help with payment of costs.

However, National Health Insurance does not reimburse some vitamin supplements (multivitamins for example; cost: 9 to 25 euros a month), most protein supplements, consultations with private psychologists and dieticians, some blood tests (for example vitamin B1 test) and some reconstructive operations. Speak to your surgeon and obtain information from your health insurance fund, and if applicable, your private health insurance provider.

‘ Should certain medications be avoided?

Yes. Medications that are toxic to the stomach (aspirin, anti-inflammatory drugs, corticosteroids) should be avoided as far as possible.

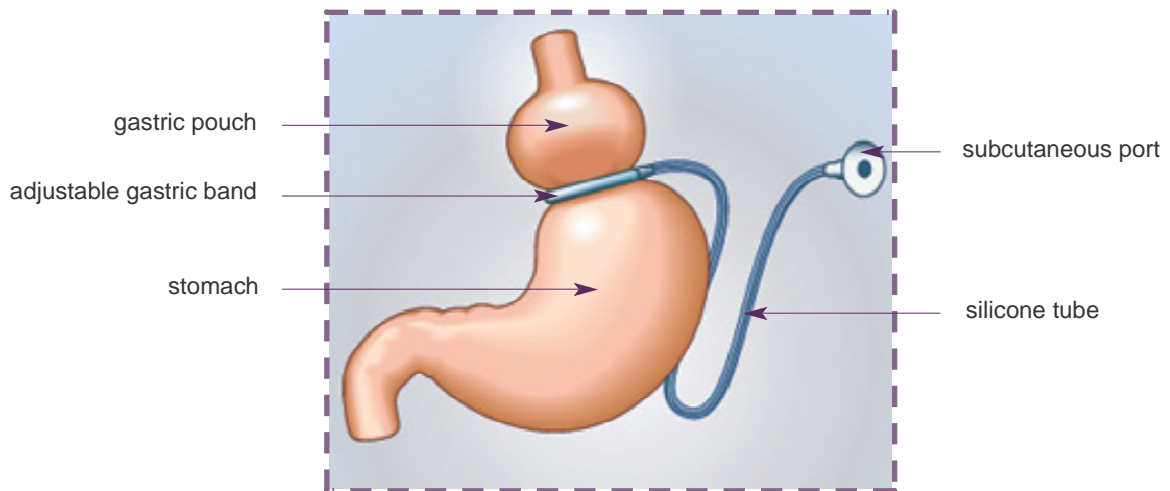
Before taking any medication, you must consult your doctor and remind him or her that you have had obesity surgery.

‘ If I'm not losing enough weight, what should I do?

Consult the multidisciplinary team that performed the operation in order to identify the cause; you may be offered dietary education or physical activity sessions, psychotherapy (if poor eating habits, psychological problems) or a new operation (if problem related to the surgical procedure).

Technique of

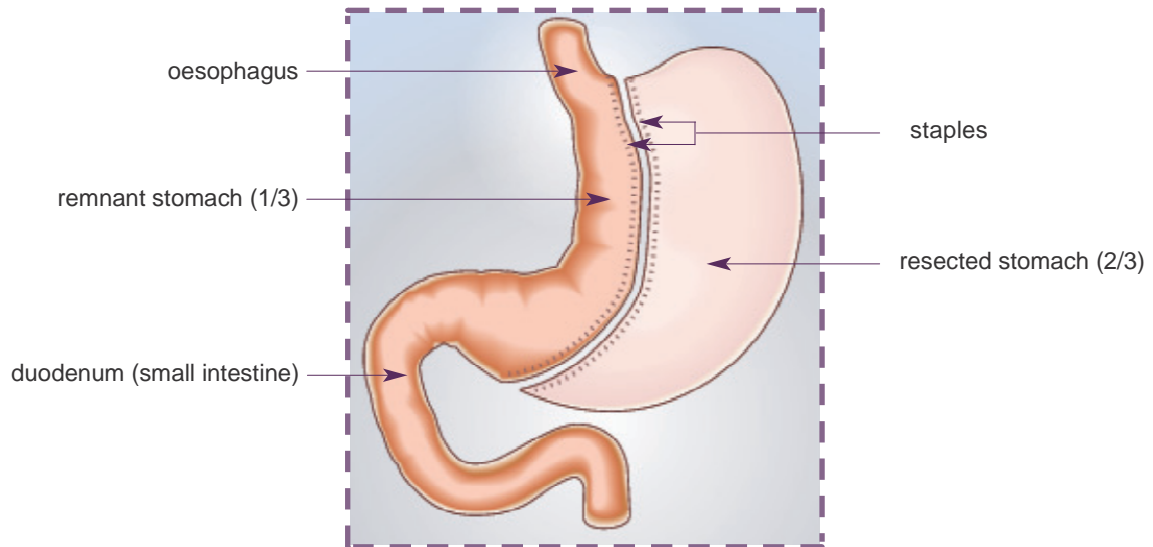
adjustable gastric banding



Principle	<p>Restrictive technique that reduces the size of the stomach and slows the passage of food. Digestion of food is not affected.</p> <p>A band (adjustable in diameter) is placed around the upper part of the stomach, creating a small pouch. Only a small amount of food is required to fill this pouch and a feeling of fullness occurs quickly. Based on the same principle as an hourglass, foods will pass through the stomach very slowly.</p>
Characteristics	<p>The only adjustable technique</p> <p>The band is linked to a port placed under the skin via a small tube. This band can be tightened or untightened by injecting liquid into the port, through the skin. Radiological monitoring is necessary during follow-up.</p> <p>The band can be removed through a new operation in the event of complications, lack of efficiency or at the patient's request.</p>
Expected weight loss	<p>About 40 to 60 % excess weight loss, corresponding to a weight loss of approximately 20 to 30 kg. (studies with 10 years follow-up).</p> <p>If the band is removed, weight is usually regained.</p>
Mean operating time ²	1 hour
Mean length of hospital stay ³	2 to 3 days
Operative mortality rate	0.1 %
Main complication risks	<p>Mechanical complications can occur after the operation, even after several years:</p> <ul style="list-style-type: none"> • Problems related to the port: access port can twist or become infected, pain at the port site, disconnection between tube and port. • Band slippage and pouch dilation above the band can lead to significant vomiting problems and even make it impossible to eat. • Problems with the oesophagus (reflux, oesophagitis, motility disorders). • Damage to the stomach caused by the band (gastric erosion, migration of the band). <p>A new operation may be necessary to remove the band or to perform another obesity surgery technique.</p>

1. For a person of average height (1.7 m) with a BMI of 40 kg/m².
2. Provided there are no complications during the operation.
3. Provided there are no complications after the operation.

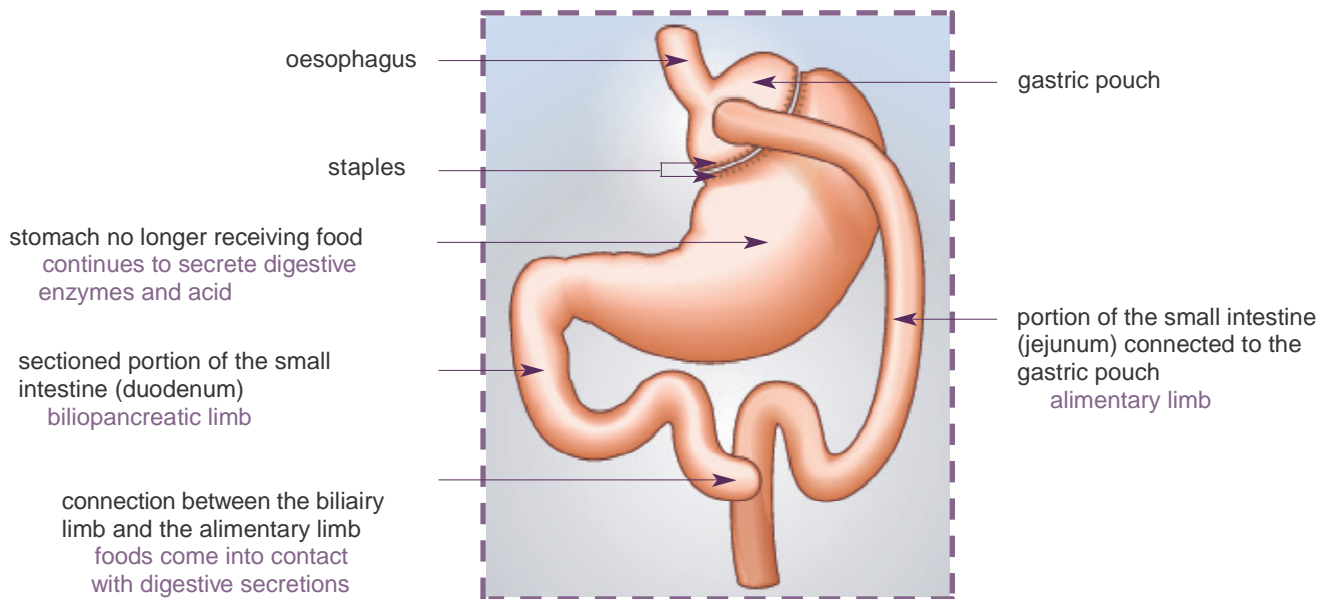
Technique of sleeve gastrectomy



Principle	Restrictive technique which consists of removing approximately two thirds of the stomach and, in particular, the part containing the cells that secrete the hormone that stimulates appetite (ghrelin). The stomach is reduced to a vertical tube and food passes quickly into the intestine. Appetite is also reduced. This technique does not interfere with the digestion process. Sleeve gastrectomy is sometimes the first step in a biliopancreatic diversion procedure (see technique on page 15).
Expected weight loss	Around 45 to 65 % excess weight loss after 2 years, corresponding to a weight loss of approximately 25 to 35 kg ¹ . (studies with 2 years follow-up).
Mean operating time ²	2 hours
Mean length of hospital stay ³	3 to 8 days
Operative mortality rate	Estimated at 0.2 %
Main complication risks	<ul style="list-style-type: none"> ◦Ulcers, leakage or stenosis of the remnant stomach. ◦Early postoperative bleeding. ◦Possible nutritional deficiencies (to be monitored). ◦Gastrooesophageal reflux (acids and foods coming back up the oesophagus) and inflammation of the oesophagus. ◦ Dilation of the stomach.

1. For a person of average height (1.7 m) with a BMI of 40 kg/m².
2. Provided there are no complications during the operation.
3. Provided there are no complications after the operation.

Technique of gastric bypass



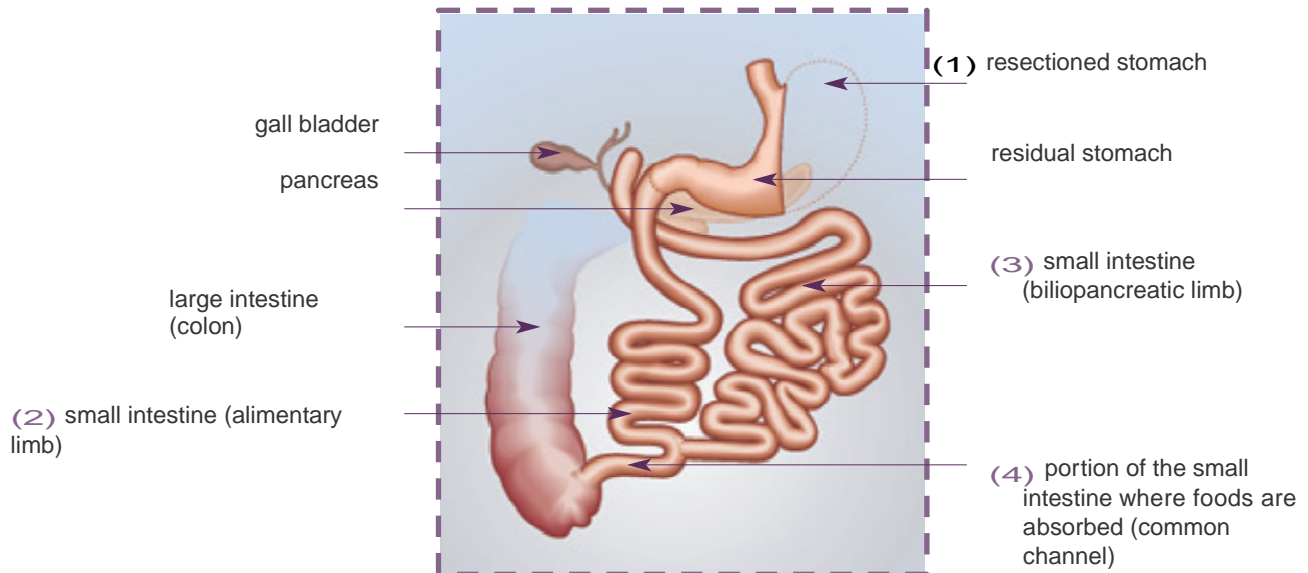
Principle	Restrictive and malabsorptive technique used to both reduce the food intake (the size of the stomach is reduced to a small pouch) and the absorption of this food by the organism, through bypassing part of the stomach and intestine (no organs are removed). Food goes directly to the middle part of the small intestine and is therefore assimilated in smaller quantities.
Expected weight loss	Around 70 to 75 % excess weight loss, corresponding to a weight loss of approximately 35 to 40 kg; (studies with 20 years follow-up)..
Mean operating time ²	1.5 to 3 hours
Mean length of hospital stay ³	4 to 8 days
Operative mortality rate	0.5 %
Main complication risks	<ul style="list-style-type: none"> •Surgical complications: ulcers, leakage or stenosis at the junction between the stomach and the intestine, bleeding, occlusion of the intestine. •Nutritional deficiencies. •Functional complications: hypoglycaemia after meals, <i>dumping syndrome</i>*, constipation.

1. For a person of average height (1.7 m) with a BMI of 40 kg/m².
2. Provided there are no complications during the operation.
3. Provided there are no complications after the operation.

* **Dumping syndrome**: feeling of dizziness (with palpitations, headache, nausea, diarrhoea) that can occur just after a meal. This syndrome is caused by the sudden arrival of large amounts of fatty or sweet foods in the intestine.

Technique of

biliopancreatic diversion



Principle	<p>Restrictive and malabsorptive technique: this complex technique is used to limit the food intake and its absorption by the intestine.</p> <p>The size of the stomach (1) is reduced by gastrectomy and the small intestine divided into two parts (2) and (3). The stomach is connected to the part (2) which is used to transport food to the large intestine. Part (3), which is used to transport digestive secretions from the liver and pancreas, is connected to the end of the small intestine (4). Food is therefore only digested by the gastric juices and assimilated over a short portion of the small intestine (4); most foods pass directly into the large intestine without being absorbed.</p>
Characteristics	This technique is reserved for patients with a BMI ≥ 50 kg/m ² and/or after the failure of another technique. It must be carried out by a team specialising in this type of operation.
Expected weight loss	About 75 to 80 % excess weight loss, corresponding to a weight loss of approximately 60 to 65 kg ¹ . (studies with 25 years follow-up).
Mean operating time ²	4 to 5 hours
Mean length of hospital stay ³	8 to 10 days
Operative mortality rate	1 %
Main complication risks	<ul style="list-style-type: none"> • Significant risk of nutritional deficiencies (proteins and vitamins). • Significant risk of malabsorption of medications. • Functional complications: diarrhoea, foul-smelling stools. • Surgical complications: ulcers, leakage or stenosis at the junction between the stomach and the intestine, bleeding, occlusion of the intestine.

1. For a person of average height (1.7 m) with a BMI of 50 kg/m².
2. Provided there are no complications during the operation.
3. Provided there are no complications after the operation.

Do you know enough about obesity surgery?

To find out, answer the following questions:

1 Obesity surgery

- What are the principles of the two main types of operation?
- What are the advantages and disadvantages of the different techniques?
- What are the main complications of them?
- Is surgery alone sufficient for losing weight?
- Is obesity surgery suitable for all obese people?

2 Treatment before, during and after the operation

- What preparations are necessary before the operation?
- What does the preoperative assessment cover?
- Should eating habits be changed before the operation?
- Is the operation automatically carried out at the end of the preoperative period?
- Who makes the decision to carry out the operation?
- What is the average length of hospital stay?
- Is there a risk of needing a further operation if things go wrong?
- What is the purpose of follow-up?
- How long does follow-up last for after the operation?
- How can nutritional deficiencies be prevented?
- Are vitamin, mineral and trace element supplements and blood tests reimbursed by National Health Insurance?

3 Eating after the operation

- What quantity of food should be eaten?
 - Should certain foods be avoided?
- What conditions should meals be eaten under?

Remember that you can only have an operation if...

- you have sufficient knowledge about the advantages and disadvantages of surgery;
- you have fully understood and accepted the need for lifelong medical and surgical follow-up;
- you have fully understood and accepted the need to change your eating habits and increase your physical activity for life;
- you have undergone a health assessment and prepared for the operation.

Preparing for my appointments

“ Look at the **examples of questions to ask your general practitioner** and the members of the multidisciplinary team*

“ Use this space to write down any questions that you may have:

* Available for consultation at www.has-sante.fr

Some useful contacts

‘ To find out more about the advantages and disadvantages of the different surgical techniques:

Société française et francophone de chirurgie de l'obésité (SOFFCO)

29, rue Antoine-Péridaud 69008 LYON

Tel.: 33 4 78 00 45 87

E-mail: soffco@orange.fr

Website: www.soffco.fr

‘ Patient associations:

Collectif national des associations d'obèses (CNAO)

38, rue des Blancs-Manteaux 75004 PARIS

Tel.: 33 1 42 71 17 57

E-mail: cnao@wanadoo.fr

Website: www.cnao.fr

Allegro Fortissimo

Maison des associations du 14^e arrondissement – Boîte n°13

22, rue Deparcieux 75014 PARIS

Tel.: 33 1 45 53 98 36

E-mail: com@allegrofortissimo.com

Website: www.allegrofortissimo.com

‘ Other information:

Advice on eating better and exercising more

www.mangerbouger.fr (French National Nutrition Health Programme)

Healthcare reimbursement

www.ameli.fr (National Health Insurance website)

‘ The HAS website (www.has-sante.fr):

For additional information and tools

This list of links is not exhaustive and is given for information purposes only. The HAS cannot be held liable for the information contained on these sites.

“ Beware: the information you may find on the Internet (in particular discussion forums, blogs and chats) is not always reliable. The best source of information is still your doctor!