OBJECTIVES

• To improve the long-term efficacy of obesity surgery and reduce the incidence of complications through:
  - better selection, information and preparation of patients
  - choice of the technique that provides the best benefit/risk ratio in the patients selected
  - better definition of the members and role of the multidisciplinary team.

• To reduce the severity of complications through early detection and management

The following guidelines are based on studies with an intermediate or most often low level of evidence.

Obesity surgery (or bariatric surgery or weight loss surgery) consists of two main types of intervention:

• those based exclusively on gastric restriction: adjustable gastric banding [AGB], vertical banded gastroplasty [VBG] which tends to no longer be practised and sleeve gastrectomy [SG];
• those containing an intestinal malabsorption component: biliopancreatic diversion [BPD] or gastric bypass [GBP].

It is not possible to make a classification of the different techniques based on their benefit/risk ratio. The weight loss expected (40 to 75 % of excess weight), the complexity of the technique, the risk of postoperative complications, the risk of nutritional consequences (risk of deficiencies some of which may lead to serious neurological conditions) and mortality increase with the following operations: AGB, VBG, SG, GBP, BPD.

Patients who are candidates for obesity surgery must be managed within multidisciplinary teams, in collaboration with the general practitioner. This management process must be personal to each individual patient.

Obesity surgery is indicated for adult patients presenting all of the following conditions:

• patients with a BMI $\geq 40$ kg/m$^2$ or with a BMI $\geq 35$ kg/m$^2$ combined with at least one comorbidity that is likely to improve following surgery (in particular high blood pressure, obstructive sleep apnoea syndrome (OSAS) and other severe respiratory disorders, severe metabolic disorders, in particular type 2 diabetes, incapacitating joint disorders, non-alcoholic steatohepatitis)
• patients who have attempted to lose weight without success by non operative means (medical, nutritional, dietetic and psychotherapeutic treatment) properly conducted for 6-12 months
• well informed patients, having undergone multidisciplinary preoperative assessment and management
• patients having understood and accepted the need for lifelong medical and surgical follow-up
• acceptable operating risk
INFORMING THE PATIENT

- The patient must be provided with the relevant information at all phases of obesity surgery care process.
- The information must cover the following:
  - the different surgical techniques: principles, benefits, risks and disadvantages;
  - the need to change eating habits and lifestyle before and after the operation;
  - the need for lifelong medical and surgical follow-up and the risks associated with insufficient follow-up;
  - the possibility of reconstructive surgery after the obesity surgery.
- It is important to ensure that the patient has fully understood this information.

ASSESSING AND MANAGING THE PATIENT BEFORE THE OPERATION

- The medical and surgical preoperative process includes:
  - assessment and management of comorbidities (cardiovascular, metabolic, respiratory etc.);
  - assessment of eating behaviour and management of any eating disorders;
  - detection of nutritional and vitamin deficiencies (determination of albumin, haemoglobin, ferritin and transferrin iron saturation, calcium, vitamin D, vitamin B1, B9 and B12) and correction of any deficits;
  - assessment of mastication capacity;
  - upper gastrointestinal endoscopy and testing for *Helicobacter pylori*.
- A therapeutic education programme on diet and physical activity should be introduced from the preoperative period.
- Psychological and psychiatric assessment is recommended for all patients who are candidates for bariatric surgery.

MAKING THE DECISION TO OPERATE

- The decision to operate is made following discussion and consensus between the multidisciplinary team.
- The multidisciplinary team includes at least one surgeon, one physician specialising in obesity (nutritionist, endocrinologist or internist), one dietician, one psychiatrist or psychologist and one anaesthetist.
- A coordinator is identified within the multidisciplinary team and acts as the referral point for each patient.
- The conclusions of this consensus must be:
  - formalised and recorded in the patient’s file;
  - communicated to the patient, to all members of the multidisciplinary team and to the general practitioner.
FOLLOWING UP AND MANAGING THE PATIENT AFTER THE OPERATION

- Follow-up and management of the patient after the operation must be carried out lifelong, as obesity is a chronic disease and because of the risk of late complications (surgical or nutritional complications).
- Frequency of consultations: at least 4 times in the first year, then once or twice a year after that.
- Medical and surgical follow-up must focus on:
  - prevention of and detection of vitamin or nutritional deficiencies: search of clinical signs (in particular neurological signs) and biological signs of malnutrition or vitamin deficiencies, supplementation after malabsorptive surgery (multivitamins, calcium, vitamin D, iron and vitamin B12);
  - identification of complications or malfunctioning of the surgical assembly.
- Treatments must be suitably adapted:
  - treatment of comorbidities (cardiovascular, metabolic, respiratory etc.);
  - ongoing treatments that may be poorly absorbed following malabsorptive surgery (for example, antivitamin K, thyroid hormones, antiepileptic drugs, etc.).
- The therapeutic education programme on diet and physical activity established in the preoperative phase is continued.
- Psychological and psychiatric follow-up is recommended for patients who presented eating disorders or psychiatric pathologies in the preoperative phase; it is proposed on a case-by-case basis for other patients.
- Reconstructive surgery is possible 12 to 18 months after obesity surgery, once weight loss has stabilised and in the absence of malnutrition.
- Pregnancies must be adequately prepared for.

REOPERATION (SECOND RESTRICTIVE OR MALABSORPTIVE WEIGHT LOSS SURGICAL PROCEDURE)

- Reoperations are indicated if the obesity surgery fails (weight loss that is judged insufficient by the patient and the medical and surgical team) or if the surgical assembly malfunctions.
- Patients must be informed of the higher risk related to reoperations compared with initial interventions.
- The BMI to be taken into account is the maximum BMI recorded (a BMI lower than 35 kg/m\(^2\) does not contraindicate a second operation).
- The indications for surgery are approved following preoperative assessment and management comparable to those conducted before the initial operation. In particular, it is necessary to identify the cause of the failure and to offer appropriate management.
- The decision to perform a reoperation is made following multidisciplinary discussion and consensus.
Figure 1. Care pathway for patients who are candidates for obesity surgery

Adult patient who failed to lose weight by non medical means properly conducted for 6-12 months

1st consultation with a practitioner experienced in the surgical management of obesity

Indication for surgery

Yes

No

Steer towards nonsurgical management

Multidisciplinary management

Patient informed in writing and orally by the multidisciplinary team

Information understood by patient

No

Repeat and rephrase the explanations

Yes

Medical and educational assessment and management

Psychological and/or psychiatric assessment and management

Decision on treatment by multidisciplinary team

Surgery contraindicated

Yes

Steer towards nonsurgical management

Surgery agreed

Surgery postponed

Yes

Complete the information and/or the assessment and/or patient management

Treatment given

Follow-up by multidisciplinary team in collaboration with the general practitioner

Medical and educational follow-up and management

Psychological and/or psychiatric follow-up and management

Surgical follow-up