RECOMMENDATIONS FOR THE DIAGNOSIS, THE PREVENTION AND THE TREATMENT OF OBESITY

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for the expert group

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GRADE OF RECOMMENDATION

The grade of each recommendation is indicated into brackets:

- Grade A: recommendations based on concordant studies with high level of proof, indicative of an established scientific evidence;
- Grade B: recommendations based on concordant studies with intermediate level of proof, indicative of existing scientific arguments;
- Grade C: recommendations based on weak scientific arguments, dependent on an expert’s statement or a strong professional consensus.

1. DIAGNOSIS

- Obesity is defined as an excess of fat mass, leading to detrimental health hazards.
- Obesity should be considered as a disease, as it may implicate the somatic, psychological and social well-being of individuals. (B)
• In clinical practice, the assessment of body fatness is based on the body mass index (BMI). This index is calculated as the weight (in kilograms) divided by the square of the height (in meters).

• In adults, obesity is defined as a body mass index of 30 kg/m² or greater. (B)

• In adults, intra-abdominal (central) fat is associated with metabolic disturbances and cardiovascular diseases. Waist circumference is the simplest anthropometric measurement to estimate the amount of intra-abdominal fat mass. Abdominal obesity is defined as a waist circumference greater than 90 cm in women and 100 cm in men. (C)

• In children, it is proposed to define obesity by using body mass index values beyond the 97th percentile from the abacus printed in the national healthbook (1998 edition). (C)

• In elderly, there is no consensus on obesity definition.

• Clinical research on fat mass measurement and fat distribution should be developed to more precisely define obesity, particularly in childhood. (C)

• To adapt imaging techniques to severe obesity has to be a primary goal to improve the accuracy of complication’s diagnosis. (C)

### 2. PREVENTION

#### 2.1 Prevention in the general population

Preventive interventions in general population are justified by the importance of behavioural and environmental determinants of obesity and by the increasing prevalence of obesity in children. (B)

• These preventive interventions should be centred on:

  − promoting physical activity in every day life and leisure. (B)

  − nutritional information to reduce the excess in calorie intake, which are largely dependent on energy dense diet (lipids) and drinks (alcohol), as well as food intake between meals (snacking, binge eating). (B)

• The preventive messages should:

  − oppose to the current focus on “ideal slimness” leading to eating disorders, and psychological disturbances. (B)

  − promote dietary balance and physical activity, excluding any reference to an “ideal body weight”. (B)

• These preventive actions should:

  − rely on nutritional education at school and college. (B)

  − be reinforced by organizations in charge to promote health education. (C)

  − target population groups markedly affected by the increasing prevalence of obesity (young individuals and unfavorised groups). (C)

### 3. TREATMENT’S GOALS

The management should be global. Treatment objectives do not consist in weight loss only:

• treatment of complications is a primary objective, whatever weight changes and difficulties in controlling weight are. It is of a primary importance to insist on:

  − treatment of hypertension, diabetes, dyslipidaemia. (C)

  − management of pulmonary disorders (obstructive sleep apnea syndrome) and cardiovascular complications (congestive heart failure and coronary heart disease). (C)

• the therapeutic programme should take account of psychological and psychosocial objectives. (C)
• for some individuals, of whom obesity is not a life-threatening risk, but mainly a cause of psychological disturbances, the primary goal should be given to restore self-esteem and body image, as well as to tackle social isolation.

The weight objectives should:
• be realistic and individualised: the tolerance to diet restriction has physiological and psychological limits. These limits, variable from an individual to another one, should be taken into account when targeting weight goals. (A)
• be aimed on the long-term: after the initial weight loss, reached within 6 months, the aim is the weight maintenance over time. (B)

In practice:
− for most cases, a 5 to 15% weight loss from the maximal weight is a realistic goal, resulting in health benefits. (B)
− a 20% and more weight loss may be considered if the needed measures to achieve it, do not compromise the nutritional, somatic, psychological and social functioning of a given individual. (C)
− in some cases, to prevent further weight gain is the only reasonable objective, when diet restriction appears poorly tolerated and when strong biological resistances to weight loss exist. Such an objective should not be judged as a negative result in this disease which worsens spontaneously. (C)

The evaluation of therapeutic approaches should include, besides weight changes, the effects on associated complications and cardiovascular risk factors, as well as on quality of life. (C)

4. MEDICAL TOOLS

Obesity treatment consists in a combination of therapeutic measures.

4.1 Physical activity
• Regular practice of physical activity is recommended, not only for long-term weight control, but to improve metabolic conditions too. (A)
• The primary recommendation is to increase the level of physical activity in daily life (rapid walking rather than using car, staircases rather than elevators, etc...) and during leisure. A program activity (2-3 times a week) may be added to these actions. (B)
• Absence of regular physical activity is a factor of poor weight prognosis. (A)

4.2 Dietary counselling
• In most cases, the aim is to correct excessive energy intake and to help the individual to find his own dietary balance rather than to prescribe a so-called “hypocaloric” diet. In this respect, it is recommended to assist individuals:
− to assess their dietary intakes, informing them on the energy content of food.
− to analyse the amount of food intake between meals and the situations which cause snacking: dietary record is a useful tool to evaluate them. (C)
• Management of eating disorders is essential, and very often, a necessary prerequisite in any obesity treatment programme as:
− binge eating and snacking may be important factors for hyperphagia, and their control may be sufficient to reduce excess weight. (B)
− diet prescription may aggravate eating disorders. (B)
• Diet prescription to reduce calorie intake should take into account the individual food habits and not to consist in severe dietary restrictions:
− individualized modest energy deficit diets yield better long-term results and induce less secondary effects than severe dietary restrictions (B). They permit to maintain food diversity and some social interactions.
• In practice, this dietary approach consists:
− to recommend a 15 to 30% calorie deficit based on initial diet estimated by dietary questionnaire: e.g. 1,400 to 1,700 Kcal/day if initial intake was 2,100 Kcal/day and 2,000 to 2,500 if initial calorie intake was 3,000 Kcal/day.
− or, this is generally equivalent, to recommend a food intake corresponding to 2/3 of the daily energy expenditure, calculated according to age, sex and weight and adjusted for estimated physical activity.
• Low and very-low calorie diets should not be a routine prescription. (A)

4.3 Cognitive-behavioural approaches
Cognitive-behavioural approaches have to be considered when conventional management (diet and physical activity) is difficult to observe, and when eating disorders exist. (C)

4.4 Psychological support, psychotherapy
• Psychological support is an integral part of the management in this chronic situation, the treatment of which implicates behavioural changes and constraints. (B)
• Psychotherapy is indicated when depression or dissatisfaction with self-image exists, and when eating disorders are due to psychological difficulties or prolonged conflict situations. (B)

4.5 Medical management
• Dietary or physical activity counselling are medical prescriptions, which necessitate a long-term supervision and support. (C)
BMI greater than 30kg/m², or for those with a BMI 
ttempts have been unsuccessful, for patients with a 
weight relapse. (B)

4.6 Pharmacological treatment

- Pharmacological treatment of obesity:
  - should be considered only when previous at-
tempts have been unsuccessful, for patients with a BMI 
greater than 25kg/m² having substantial comorbidities 
or at high risk for these comorbidities. (C)
  - has for primary objective the long-term mainte-
nance of weight loss: only drugs with efficacy and 
safety clinically documented for at least one year may 
be considered. (B), drug treatment beyond three 
months should be considered only for “responders” 
during the initial 3-month therapeutic period. (C).
- Pharmacological treatment of co-morbidities: 
  Obesity should not prevent to treat co-morbidities, but 
on the contrary, should reinforce the need for pharma-
cological treatment of diabetes, dyslipidaemias and 
hypertension, when metabolic abnormalities and el-
evated blood pressure persist despite dietary advices 
and physical activity practice.

5. SURGERY

5.1 Surgery aiming to facilitate weight loss

- Surgical treatment of obesity:
  - should be viewed as an exceptional method, indi-
cated only by a specialist. (C)
  - should be considered only after a well-
conducted, specialised medical management, for at 
least one year, including integrated approaches (diet, 
physical activity, management of eating disorders and 
potential psychological difficulties, treatment of co-
morbidities and obesity complications).
  - should be considered only in obesity where con-
tentional treatments failed and with a risk of severe 
complications uncontrolled by medical treatment. 
BMI should be greater than 40kg/m², or greater than 
35kg/m² when associated complications or co-
morbidities engage the life-threatening or func-
tional prognosis.
  - should be undertaken only by an experienced 
trained surgeon, with the support of a multi-
disciplinary team, familiar with anaesthesia and peri-
operative medical monitoring of patients with severe 
obesity. (C)
- Pre-operative examinations should:
  - be carried out by a multi-disciplinary team, com-
prising a specialist in nutrition, a psychiatrist, the 
surgeon and the anaesthetist, working together with 
the primary care physician. (C)

- take account of all physical, psychological and 
social functioning components.
- explore possible contra-indications (particularly 
psychological, behavioural, anaesthetic, stomatologic 
and digestive).
- evaluate the surgical risks (notably respiratory 
and cardiovascular) and should plan the appropriate 
preventive actions.
- take account of patient’s motivation, which 
might be a prognosis factor. (C)
- Comprehensible and precise information should 
be given to the patient on advantages, draw backs, 
surgical risks and postoperative complications. (C)
- A medical follow-up, prolonged for several years 
is mandatory to track the untoward effects of this 
surgical procedure (especially disorders of nutritional 
balance and psychological consequences). (C)
- It is recommended to set up reference centres and 
a national registry to evaluate this surgical procedure. 
(C)

5.2 Plastic and reconstructive surgery

- Reconstructive surgery may be justified after 
weight loss to remove excessive skin and subcutane-
ous fat tissue, which can cause physical impairments 
and important psychological consequences.
- Surgical option should be part of the medical 
obesity management and considered during weight 
stabilisation only.

6. STRATEGIES

Management of obesity should begin early: before 
development of overweight in normal weight sub-
jects or before the progression of overweight obste-
ry. (C)

In patients with a BMI between 25 and 29.9 kg/m²:
• when there are no comorbidities, the goal may 
be to prevent an additional weight gain. Dietary advices, 
physical activity, behavioural modifications are 
the only recommended approaches.
• weight loss should be considered in case of 
abdominal (central) obesity, associated cardiovascular 
risks factors or obesity related health problems, and 
when weight excess is poorly tolerated. (C)

In patients with a BMI ≥ 30 kg/m²:
• the goal is weight loss, and then to maintain 
weight over the long-term, and to prevent or to treat 
associated complications.
• uncomplicated obesity justifies dietary advices 
associated with an increased physical activity. A be-
havioural approach may be proposed when it appears 
difficult to implement these measures.
When obesity complications are serious and uncontrolled by appropriate actions, a pharmacological treatment may be considered. (C)

Morbid or very severe obesity (BMI \( \geq 40 \text{ kg/m}^2 \)) requires specialist management in cooperation with the primary care physician. (C)

7. CHILDHOOD OBESITY

It is recommended:

- to consider weight and BMI values taking account of age (A) and to refer to the age related reference curves for weight and BMI printed in the healthbook (1998 edition). (C)
- to take account of early adiposity rebound before 6 years, as well as the rapid change on the percentile curve (e.g. from the 60th to the 90th percentile), which are indicators of risk to develop obesity claiming for medical actions. (B)
- not to treat weight excess before 3 years except if parents are obese or if weight excess is severe. (C)
- to target the behavioural pattern leading to sedentary life-style and nibbling (television watching, unstructured dietary pattern). (B)
- to moderately reduce energy intake to ensure normal growth and development, and to avoid untoward effects of dietary restrictions, particularly behavioural ones. (C)
- to cope with the trend to ostracize obese children. (B)
- to involve the family in the management programme to ensure a positive influence. (B)
- to refer severe obese children to paediatrician with expertise in obesity management. (C)

The increasing prevalence of childhood obesity justifies developing further clinical and epidemiological research in this field.

8. HEALTH CARE SERVICES

To improve health care access, it is recommended:

- to cope with the negative attitudes of general public and health care professionals towards obese individuals. (C)
- to consider obesity as a public health issue due to the importance of its complications, particularly the metabolic and cardiovascular ones, and due to its high prevalence (more than 7% of the French adult population). (A)
- to develop outpatient settings to prevent and to treat obesity, particularly for those individuals with socio-economic difficulties. (C)
- to inscribe severe multilocomplicated obesity within the list of chronic diseases 100% reimbursed. (C)

To improve the obesity management, it is recommended:

- the general practitioner and the paediatrician (and more generally any primary care physicians) have a prominent part in the diagnosis of obesity and its complications, in establishing goals and in setting up the initial therapeutic actions.
- the medical specialist has for primary ability the management of severe and/or multilocomplicated obesity, severe eating disorders and obesity resisting to first-intention measures.

The reference centres are involved in:

- the management of cases that require a health care team approach, especially very severe obesity.
- the diagnosis and treatment of complications that require appropriate technical facilities (to diagnose obstructive sleep apnea syndrome, cardiovascular complications, to evaluate energy intake and expenditure, to promote nutritional education).
- the evaluation of diagnostic and therapeutic tools.
- the training of physicians and health care personnel in field of nutritional diseases. (C)
- to ensure all respective actions of the various parties aimed to a well-defined coordinated programme, well explained to the patient. (C)

To develop prevention, it is recommended:

- to involve general practitioners, paediatricians, school-doctors, occupational medicine doctors, in identifying individuals and circumstances at-risk of developing obesity, as well as in nutritional prevention programmes. (C)
- to improve training in nutrition during medical and paramedical school years, and within the continuing education program. (C)

To better evaluate the importance of obesity within public health problems in France, it is recommended to improve its identification through medical information systems. (C)