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

A. BASDEVANT, M. LAVILLE, O. ZIEGLER
for the expert group

The “Recommendations for the diagnosis, the prevention and the treatment of obesity” were worked on behalf of:
− The “Association Française d’Études et de Recherches sur l’Obésité (AFERO)"
− The “Association de Langue Française pour l’Étude du Diabète et des Maladies Métaboliques (ALFEDIAM)"
− The “Société de Nutrition et de Diététique de Langue Française (SNDLF)"

Coordination
Arnaud Basdevant, Martine Laville, Olivier Ziegler

Organizing Committee
Marie Aline-Charles, Chantal Simon, Maïté Tauber, Pierre Barbe, Charles Coutet, Patrice Gross, Michel Krempf, Paul Valensi, Bernard Viallettes

Working Group
France Bellisle, Jean-Michel Borys, Gérard Chabrier, Philippe Cornet, Jean-Michel Daninos, Françoise Fraioli, Marie-Laure Frelut, Jacques Fricker, Claude Le Pen, Jean-Michel Oppert, Marie-Françoise Rolland-Cachera, Monique Romon, Patrick Serog, Michel Vidailhet.

These “Guidelines for clinical practice” were prepared in agreement with the methodological rules recommended by the “Agence Nationale d’Accréditation et d’Évaluation en Santé (ANAES)” which has given its quality label to them.

The conclusions and recommendations contained in this document were written, fully independent, by the working group of the “Guidelines for clinical practice”. Their content do not bind the ANAES responsibility in no wise.
• 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”. (C)
• 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)
– favorise local interventions as obesity prevalence is greater in some regions, particularly in the north of France. (C)
• It is recommended:
  – to tackle misleading advertisements and nutritional claims in weight management. (C)
  – to establish together with food industry and national food chain-stores a code of good practice for nutritional advertisements, particularly those targeting for children and adolescents. (C)
  – to improve labelling of dietary products to ensure them legible and understandable by consumers. (C)

2.2 Prevention in individuals at-risk for obesity

• A selective prevention of obesity is justified:
  – in individuals at high-risk of weight gain: people with first degree relatives with obesity, children presenting with an early adiposity rebound before 6 years of age. (B)
  – in life circumstances favoring weight gain: smoking cessation, physical and sporting activity cessation; pharmacological treatments (various antidepressants, neuroleptics, some anticonvulsants, corticosteroids, oestrogens, progestatives); some endocrine diseases particularly hypothyroidism; changes in lifestyle habits; pregnancy, menopause; certain vulnerable period of life due to psychological or social functioning. (B)
  – in individuals experiencing a rapid weight gain, more than 5% of their usual weight. (C)
  – in individuals suffering of or predisposed to a disease susceptible to worsen with weight gain: e.g. diabetes mellitus. (C)
• It is recommended to improve the knowledge of individuals on factors, which, in their particular case, may lead to an excess weight gain and the measures (physical activity, diet) to address them.

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 attempts have been unsuccessful, for patients with a BMI greater than 25kg/m² having substantial comorbidities or at high risk for these comorbidities. (C)

4.6 Pharmacological treatment

- Pharmacological treatment of obesity:
  - should be considered only when previous attempts have been unsuccessful, for patients with a BMI greater than 30kg/m², or for those 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 maintenance 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 pharmacological treatment of diabetes, dyslipidaemias and hypertension, when metabolic abnormalities and elevated 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, indicated 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 conventional 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 functional 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, comprising 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 subcutaneous 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 the development of overweight in normal weight subjects or before the progression of overweight or obesity. (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 behavioural 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 $\geq 40$ 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 60$^{th}$ to the 90$^{th}$ 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 develop outpatient settings to prevent and to treat obesity, particularly for those individuals with socio-economic difficulties. (C)
- to inscribe severe multicompliated 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 multicompliated 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)