HAUTE AUTORITÉ DE SANTÉ

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RECOMMENDING BEST PRACTICES

SUMMARY

Care pathway guide: overweight and obesity in adults

Validated by the HAS Board on 11 January 2023

Updated in Feb 2024

Obesity is a complex chronic condition with an impact on a person's overall health. The causes of overweight and obesity are multiple: environmental, psychological, social and genetic factors.

Life-long prevention is essential to prevent overweight and stop it progressing to obesity, and to prevent the exacerbation of obesity and the development of complications.

Only a multi-component and often multidisciplinary assessment can provide the keys to understand the situation, and to personalise care and support, and improve quality of life.

The treatment of overweight and obesity is not simply a matter of achieving a target weight. The aim is to promote good health through lifestyle changes, to treat the impacts on physical health, to improve quality of life and to provide support in terms of alleviating the person's psychological distress.

The continuity of the care pathway is ensured by regular and long-term monitoring of overall health, strategies for maintaining lifestyle habits and weight goals over time, and the support of expert patients and user associations throughout the care pathway to help avoid interruptions in patients' care.

The working group had to choose between several options for naming people presenting overweight and, especially, obesity: "obese person", "person in a situation of obesity", "person living with obesity" or "person with obesity". The option chosen was to use the terms "person with overweight" and "person with obesity". The aim was highlight the central role of the person, along with the reason for the care pathway, i.e. overweight and obesity.

Identifying overweight and obesity and supporting lifestyle changes if necessary

Identify at any opportunity. If the time is not right, arrange a dedicated consultation with the person

- Any medical visit can be an opportunity to identify overweight or obesity and to address a weight-related concern if the person agrees.
- Free preventive health check-ups offered to all at the age of 25, 45 and 65 can also contribute to the identification of overweight and obesity[1], as can preventive health check-ups for young people (16 to 25 years old) who are vulnerable, or have a disability or handicap and have no regular medical follow-up.
- This screening can also be carried out in health and medico-social services and facilities, and within the child welfare system (young adults).
- Any healthcare professional, gynaecologist, other specialist physician, midwife, nurse, school health or occupational health physician or nurse or pharmacist can also identify a situation of overweight or obesity, discuss it with the person if they wish and advise them to talk to their general practitioner.

[1] Mon bilan. Prévention pour les professionnels de santé

STRATÉGIE DE TRANSFORMATION DU SYSTÈME DE SANTÉ

STSS
Construction du parcours

How to identify overweight or obesity?

- Calculate the body mass index (BMI) and monitor the evolution of its curve at least once a year, and more frequently in the event of a family or personal history, long-term medication inducing weight gain (corticosteroids, psychotropic drugs, etc.) or a chronic disease exacerbated or potentially exacerbated by overweight or obesity.
- Measure the waist circumference and monitor its evolution to assess the cardiovascular risk:
  - measure height and weight (use weighing scales appropriate to body weight), at the place of care: reported measurements generally underestimate weight and overestimate height;
  - measure waist circumference: midway between the lower edge of the last palpable rib and the top of the iliac crest, using a tape-measure placed horizontally, at the end of a normal exhalation, arms at the sides;
  - assess the dynamics of the curve, watch out for warning signs: constantly rising weight curve, rapid weight gain or loss (risk of rebound weight gain with an increase in BMI), changes in the life context or employment, with an impact on lifestyle habits, repeated dieting, stopping smoking without support.
- Systematically record these measurements in the online health space ("*Mon espace santé*").[2]

Open a discussion on habits and life context, and feelings, with the agreement of the person

- **If weight is stable**: promote behaviours conducive to good health and encourage people to move towards the current benchmarks: physical activity, reduction of sedentary behaviour, diet, sleep.
- **If the weight curve is rising**: investigate for any trigger factors and engage the person in a gradual change of lifestyle, starting with the habits they find easiest to change in the short term. Schedule an assessment.
- **If the situation does not improve**, continue with a multi-component assessment of the situation and, if necessary, investigations and tests. Assess the need for patient education and implement it locally.
- **In a situation of overweight or obesity**: confirm the diagnosis, explain it, supplement it with a multi-component overall assessment, with the support of other local professionals, if necessary, in order to jointly put together a personalised care and support plan.

Stigmatisation: prevent, recognise, identify and support

- **People with overweight or obesity have to deal with different forms of stigmatisation**, which all professionals involved in their care pathway must watch out for.
  - Social stigmatisation refers to people's reactions to individuals with overweight or obesity, whether in everyday life or in the care setting.
  - In addition to this social stigmatisation, there may be self-stigmatisation ("internalised" stigmatisation), which is a reaction of the individual belonging to the stigmatised group against him or herself. This can have both physical and psychological consequences, such as loss of self-esteem, self-confidence, depression, suicidal thoughts, withdrawal from social life, avoidance of care, loss of motivation.

[2] *Mon espace santé* https://www.monespacesante.fr/

- Structural stigmatisation refers to limitation of people's full participation in society. This stigmatisation leads to unequal treatment in the media, in employment, at work and in terms of representation.

➔ **The professionals involved in the care pathway should:**

- have a reflective approach aimed at recognising and analysing stigmatising practices in their activity and/or work environment;
- undergo training and implement a collective caring approach to patient welfare.

➔ **All professionals can prevent stigmatisation thanks to:**

- ensuring sufficient consultation or care time for in-depth listening and discussion, clinical examination or care that may be more difficult or take longer;
- the quality of their listening and communication, paying close attention during their interactions to the messages given and received and the portrayals conveyed by both professionals and the individuals being cared for;
- an environment, care and examination equipment (scanner, MRI), and medical transport that are adapted and comfortable, and a specialised care centre to cater and care for all people, regardless of their weight.

➔ **Support in the event of experienced or perceived stigmatisation involves:**

- asking the individual being cared for to “tell their story” in order to actively take onboard their perceptions and experience and to identify, in particular, any signs suggestive of self-stigmatisation and its emotional, psychological, behavioural, physiological, social and family, financial and economic impacts;
- offering the option of support from a psychologist or psychiatrist, and, if necessary a social worker, an occupational health physician, a school or university physician, when neither the individual nor the physician treating them have the necessary resources to cope with the situation alone;
- referring the individual to expert patients or user association representatives, to enable them to share their experiences and obtain support and information.

Explaining the diagnosis and the next steps in the care pathway

Inform the person about their health status, propose that you explore the situation

➔ **Explain the diagnosis:** the dynamics of weight gain, the impact of overweight or obesity on health, the presence of potential complications and engage the individual in a care plan.

- Facilitate dialogue by using good communication practices, choosing words carefully to avoid hurting, making people feel guilty or stigmatising, and building a shared language. Use a health mediator or interpreter when there is a language barrier associated with migrant populations. Take into account the perceptions of overweight in other cultures.
- Listen to the person with empathy, show consideration, take onboard the meaning and value they attribute to their situation, take into account their perceptions and beliefs, understand what is important to them, their difficulties, expectations and priorities.

➔ **Propose a multi-component assessment** to understand the individual factors causing the overweight or obesity and provide information to the person about the investigations to be performed or referrals to other healthcare professionals in order to jointly put together a personalised care plan.

Assess the person's overall health, investigate for impacts or complications

- Propose a dedicated consultation, either lengthy or conducted in several stages.
- Perform a complete clinical assessment (Annex).
- Explore complaints, discomfort in carrying out everyday activities, situations of functional disability. During the interview, discuss the person's concerns about their weight and waistline, the psychological, social, professional and family impacts, as well as the effects on their emotional and sex life and on their quality of life, and any self-stigmatisation.
- In all individuals, regardless of their BMI, prescribe a routine laboratory workup (fasting glucose, lipid profile).
- Prescribe a laboratory workup and additional targeted investigations based on clinical signs and in the event of a BMI ≥ 30 kg/m^2 (Annex).
- In the absence of bariatric surgery, massive weight loss or suggestive symptoms, routine assay of vitamin and mineral levels in people with obesity (vitamin C, folic acid, vitamins B1, B12, ADEK, iron, zinc, etc.)[3] is not indicated.

Assess habits and life context

- Assess the level of physical activity and sedentary behaviours,[4-5] methods of transport, sleep (quantity and quality) and regularity of lifestyle.
- Assess variety and balance of diet, consumption of filling foods at each meal, portion size, environment and context of meals, perception of internal cues: hunger, satiety, satisfaction, use of diet products, fasting practices, use of non-prescribed nutritional supplements; alcohol consumption.
- Tactfully explore family, cultural and dietary habits and their link to individual or family overweight or obesity.
- Along with the occupational health physician, assess the possible link between work and overweight or obesity: sedentary work, shift work, night work, work stress, stigmatisation, bullying.
- If necessary, refer to one or more local professionals for further assessment or additional investigations (see toolkit guides on the "Roles of professionals in the care pathway").

Identify any signs of dietary problems or eating disorders and make a referral

- Watch out for signs of dietary problems: overeating at meals, eating too quickly, eating in response to an emotional feeling and/or outside of meals, compulsive eating, without loss of control.
- Watch out for signs of eating disorders: recurrent episodes of binge eating associated with loss of control, with or without vomiting; cognitive restraint defined as controlled eating to deliberately restrict the amount of food eaten, sometimes alternating with periods of overeating, resulting in weight gain.
- Depending on the clinical situation, refer to a dietician, a doctor specialising in obesity, a psychologist or a psychiatrist specialising in eating disorders, for further assessment, support or treatment as a priority or in conjunction with improvement of diet.

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[3] *Haute Autorité de Santé, Fédération française de nutrition. Obésité de l'adulte : prise en charge de 2e et 3e niveaux. Partie I : prise en charge médicale.* [Obesity in adults: Second and third-level management. Part I: medical management.] Good practice guideline. Saint-Denis La Plaine: HAS; 2022. https://www.has-sante.fr/jcms/p_3346001/fr/obesite-de-l-adulte-prise-en-charge-de-2e-et-3e-niveaux-partie-i-prise-en-charge-medicale

[4] GPAQ questionnaire (Global Physical Activity Questionnaire), French version https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/physical-activity-surveillance

[5] ONAPS questionnaire https://onaps.fr/wp-content/uploads/2020/10/Questionnaire-Onaps.pdf

Systematically identify, assess and provide early support for psychological difficulties or psychiatric disorders and at-risk situations

- Detect any of the following situations: difficulties coping with weight gain, signs of physical, psychological or sexual maltreatment (abuse, incest), stigmatisation, rapid evolution in BMI curve concomitant to a traumatic event.
- If necessary, propose the intervention of a psychologist[6] when neither the individual nor the physician treating them has the necessary resources to deal with the situation: the psychologist identifies the person's relationship with their body and helps them express the painful experience of weight gain, and explores situations of maltreatment, stigmatisation and bullying. In particular, the support of a psychiatrist is sought in the event of anxiety, signs of depression, suicidal thoughts or suicide attempts, which are emergencies.
- Assess addictive behaviours: psychoactive substances (alcohol, smoking, medication, illegal drugs), as well as behavioural addictions without psychoactive substances (gambling, compulsive shopping): refer individuals wishing to seek treatment or reduce their risky behaviours to specialised resources and adapt the personalised care and support plan.

Systematically identify, assess and provide early support for any form of social, family or professional vulnerability

- Assess a deteriorating social, family and professional situation and any de-socialisation, as these play an aggravating role in situations of overweight or obesity.
- Seek solutions with the support of the social worker on the basis of a social diagnosis and the implementation of a support plan with, if necessary, entitlement to benefits, access to sufficient and balanced food, access to adapted physical activity, financial aid for care or transport to a place of care, home adaptations, travel assistance, facilitation of access to housing and employment, and recognition of a situation of disability, if necessary.
- Help people to remain in employment and prevent professional exclusion: the occupational health physician draws on a network of players to support the employee and the employer in the implementation of workplace adaptations. Encourage the continuation of training and help stop people dropping out of education with the support of school health services.

Be aware of the need to diagnose undernutrition, particularly in the elderly

- A BMI ≥ 30 kg/m² does not exclude the possibility of undernutrition. A person of any age with overweight or obesity can present undernutrition in accordance with the criteria of the HAS and the *Fédération française de nutrition*.[7] [French Nutrition Federation].
- Sarcopenia is confirmed if the undernutrition is associated with a reduction in strength and muscle mass with a functional impact, particularly in a person over 70 years of age. In fact, ageing is accompanied by a change in body composition with a decrease in lean mass and an increase in fat mass.[8]
- Nutritional management must be adapted based on the severity of the undernutrition.

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[6] Mechanism for access to reimbursed psychologist consultations monpsy.sante.gouv.fr

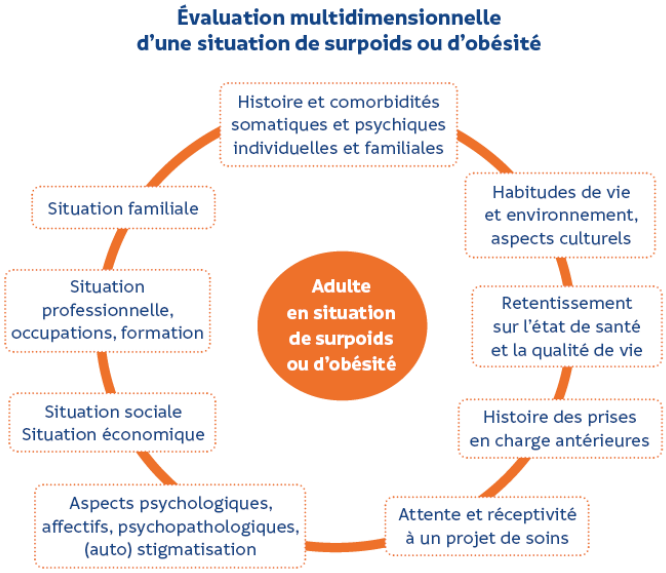
[7] *Haute Autorité de Santé, Fédération française de nutrition.* Diagnosing undernutrition in children and adults. Good practice guideline. Saint-Denis La Plaine: HAS; 2019. https://www.has-sante.fr/jcms/p_3118872/fr/diagnostic-de-la-denutrition-de-l-enfant-et-de-l-adulte

[8] *Haute Autorité de Santé, Fédération française de nutrition.* Diagnosing undernutrition in people over 70 years of age. Good practice guideline. Saint-Denis La Plaine: HAS; 2021. https://www.has-sante.fr/jcms/p_3165944/fr/diagnostic-de-la-denutrition-chez-la-personne-de-70-ans-et-plus

Seek specialist advice if obesity with a rare cause is suspected

When faced with an adult presenting severe obesity, associated with eating problems/disorders:[9] use the Obsgen[10] online tool to aid diagnosis of syndrome-related obesities and seek specialist advice from a PRADORT[11] rare diseases reference centre (CRMR), or the DéfiScience[12] national health network, in accordance with the French national diagnostic and care protocol for "Obesities with a rare cause" (2021).[13]

Conducting a multi-component assessment to personalise and scale the care plan



- **Explore dimensions related to a situation of overweight or obesity**: identify the problems, requirements, expectations of the person. Identify any components that need to be examined more closely. Seek appropriate, tailored responses.
- **Depending on the needs of the situation, seek support from one or more local professionals** (health, social, medico-social, occupational health fields) **or a specialist obesity physician or team** to extend or supplement the assessment, get advice on the diagnostic or care approach to be implemented, and/or get assistance to find the most appropriate local professionals or care team.
- **Define the complexity of the situation to put together a tailored care and support package jointly** with the person (and/or their relatives and/or the medico-social facility team, if applicable) as part of a shared decision-making process.
  - Three situations of increasing complexity have been proposed (box).

[9] The elements for diagnosis, referral, medical follow-up, coordination, link with relatives are specified in a summary document specific to the general practitioner https://www.has-sante.fr/upload/docs/application/pdf/2021-07/synthese_mg_generique_obesites_de_causes_rares.pdf

[10] https://redc.integromics.fr/surveys/index.php?s=3HJPWN49 ER

[11] PRADORT (Prader-Willi syndrome and other rare obesities with eating disorders) http://www.chu-toulouse.fr/-prader-willi

[12] DéfiScience: https://www.defiscience.fr. List of specialised obesity centres: https://solidarites-sante.gouv.fr/soins-et-maladies/prises-en-chargespecialisees/obesite/article/les-centres-specialises-d-obesite. ERHR website: https://www.gnchr.fr/reseau-acteurs-nationaux-regionaux-locaux/les-equipes-relaishandicaps-rares

[13] PRADORT rare diseases reference centre, DéfiScience, *Haute Autorité de Santé*. Obesities with rare causes. French national diagnostic and care protocol (PNDS). Saint-Denis La Plaine: HAS; 2021. https://www.has-sante.fr/jcms/p_3280217/fr/generique-obesites-de-causes-rares

- To go further in the assessment or request for the expertise of professionals or facilities specialised in obesity, it is advisable to use the clinical phenotyping parameters proposed in the HAS and FFN Good Practice Guideline on “Obesity in adults: second and third-level management”. [14]

A situation of overweight (BMI between 25 kg/m^2 and 29.9 kg/m^2) **or obesity** (BMI < 35 kg/m^2, class 1) **is considered to be non-complex** in the absence of associated physical complications and/or mental illnesses, OR treated, stabilised and monitored locally, AND without the accumulation of factors promoting overweight or obesity (for example, a related social or psychological problem) for which accessible local solutions can be found.

A situation of obesity is considered to be complex due to the severity of the obesity (BMI ≥ 35 kg/m^2, class 2) OR the accumulation of associated factors: physical or psychiatric complications or comorbidities, functional impact; significant impact on daily life and quality of life, eating disorders associated with mental illnesses, social problems, history of failed obesity treatment.

A situation of obesity is considered to be highly complex if the obesity is exacerbated by a chronic physical and/or psychiatric condition exposing the patient to a major health risk; OR in the event of class 3 obesity (BMI ≥ 40 kg/m^2) and the accumulation of associated factors: situation of functional handicap or limited walking distance, impact on professional, social and family life, non-attainment of weight loss goals; OR contraindication to bariatric surgery; OR failure of bariatric surgery.

NB: the conventional definition of obesity (BMI > 30 kg/m^2) should be lowered in people of South Asian origin in order to detect equivalent levels of cardiovascular risk, based on blood glucose, blood pressure and lipid profiles. Asian people should be placed in the overweight class on the basis a BMI of between 23 and 27 kg/m^2 and in the obesity class from a BMI of 28 kg/m^2 [15].

Scaling and adapting care and support based on the complexity of the individual situation

> Scaling and adapting care and support means addressing the individual's needs according to the complexity of their specific situation by mobilising the right professional expertise in the right sequence and at the right time.
>
> The intensity of the interventions, and the number and profile of the professionals involved may vary over time depending on the favourable or unfavourable evolution of the individual situation.

➔ **Mobilise and coordinate the different professional skills and resources required** to address individual needs, taking into account three situations:

- **1. overweight or obesity without complications, or “non-complex” obesity.**
- **2. “complex” obesity.**
- **3. “highly complex” obesity.**

➔ **Propose care and ongoing support from the time of diagnosis of overweight or obesity in order to address individual needs.**

- The care and support offered to a person with overweight or obesity have common points and specificities that depend on the complexity of the individual situation. These are presented in table form on the following pages.

➔ **Organise time for coordination** of interventions and **consultation** of players: use tools for the coordination of all professionals (health, social and medico-social). Ensure the consistency of messages and avoid the juxtaposition of interventions.

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[14] *Haute Autorité de Santé, Fédération française de nutrition. Obésité de l’adulte : prise en charge de 2e et 3e niveaux. Partie I : prise en charge médicale.* [Obesity in adults: Second and third-level management. Part I: medical management.] Good practice guideline. Saint-Denis La Plaine: HAS; 2022. https://www.has-sante.fr/jcms/p_3346001/fr/obesite-de-l-adulte-prise-en-charge-de-2e-et-3e-niveaux-partie-i-prise-en-charge-medicale

[15] Wu Y. Overweight and obesity in China [editorial]. BMJ 2006;333(7564):362-3. http://dx.doi.org/10.1136/bmj.333.7564.362; Chen CM. Overview of obesity in Mainland China. Obes Rev 2008;9(Suppl 1):14-21. http://dx.doi.org/10.1111/j.1467-789X.2007.00433.x

- If the situation is complex or highly complex, an analysis or multidisciplinary team (MDT) meeting and a coordination tool common to all the professionals (health, social and medico-social), for example a personalised health coordination plan, are preferable (complex obesity) or necessary (highly complex obesity).
- Appointing a local coordinator addresses the need for coordination in addition to that of the person's own physician, to liaise with and between the professionals involved in the care pathway and to support the person's engagement.

➔ **Then scale care and support based on the evolution of the individual and attainment of goals**: reassess needs, based on data from the multi-component assessment in order to continue, adapt and/or supplement care and support, increase or decrease their intensity, expand or limit the multidisciplinary team according to needs, continue investigations and/or tests if necessary, access the expertise of a specialist obesity physician or the team of a specialised obesity facility.

➔ **Prepare the transition to adulthood and the switch from paediatric care to adult care** to ensure continuity and avoid disruption of the care pathway, encourage young adults to continue to make the goals of their care plan a priority.

The role of the local coordinator in situations of complex or highly complex obesity is to organise and monitor the implementation of care and support, with the assistance of a coordination tool shared* by all health, social and medico-social professionals. This person manages priorities and, if necessary, triggers reassessment of the situation before the scheduled date.

This person serves as an intermediary for the individual being treated. This person supports their engagement, identifies their difficulties and ensures the consistency of interventions, liaising with the individual's own physician. The use of a coordination tool can be useful. This person takes the initiative to contact people who have stopped attending consultations.

The coordinator is appointed by the physician who ensures coordination of care in consultation with the professionals involved in the care pathway. This person must be clearly identified by all professionals involved in their care. If possible, the coordinator should be chosen from among the local professionals.

* *Haute Autorité de Santé.* Personalised health coordination plan template. Saint-Denis La Plaine: HAS; 2019. https://www.has-sante.fr/jcms/p_3083915/fr/plan-personnalise-de-coordination-en-sante

Scaling care and support based on the complexity of the situation. General principles, irrespective of BMI

Share decision-making to jointly put together a care and support plan

- Exchange information with each other to agree on a care option based on the potential presentation of different possible options.
- Take into account the person's expectations and preferences, current priorities, plans, difficulties expressed, and personal and social resources.
- Formulate the objectives chosen together in the form of success criteria: precise, attainable and progressive, easy to implement, accepted and reviewable. Encourage and help each person to set one goal at a time, focusing on the activity itself rather than the outcome, looking for ways to keep motivated, monitoring progress, seeking support.
- Work together to ensure the feasibility of the care plan, especially if it includes patient education sessions and adapted physical activity sessions, and/or dietician/nutritionist sessions, and/or consultations with a psychologist or psychiatrist.
- Agree on the possibility of reviewing the decision taken at a given time and adapting care and support, in particular in response to a potential wish for respite or additional support. If the person is not ready to commit to the care plan, it can be postponed and reformulated.
- Offer the person a care pathway support document to record their goals, trials and experiences and to facilitate the sharing and analysis of their experience.

Support progressive lifestyle changes through patient education

All professionals should base their action on an educational approach and empathetic listening, going beyond simply providing information or advice and supporting the development of skills and motivation and:

- propose a personalised format for patient education sessions (frequency, methods, duration, educational follow-up between face-to-face or telecare sessions) to encourage acceptability, regular attendance and respect for the person's capabilities, particularly if several professionals are involved in the care pathway;
- help the person to monitor their own progress in terms of physical activity or diet through self-monitoring devices. The relevance of their use and the interpretation of data in order to adjust behaviour must be supported.

Promote health and well-being, maintain good physical fitness, and support the stabilisation of weight

- creation of an environment that is conducive to and consistent with lifestyle changes, in liaison with the relatives or professionals caring for the person.
- initiation or resumption of regular physical activity with, if necessary, adjustment of the frequency and intensity on the basis of the person’s physical capacities. Assess the need for a prescription for adapted physical activity and prescribe it following a minimum medical assessment or an adapted physical activity medical consultation;[16]
- reduction of the amount of time spent sitting or lying down each day and of screen time, reducing sedentary behaviour by introducing even small amounts of physical activity;[17]
- improve diet, ensuring a balanced and varied diet and reducing portion size; preservation of sleep quality and life rhythms.

[16] *Haute Autorité de Santé*. Physical activity consultation and medical prescription on health grounds in adults. Guide. Saint-Denis La Plaine: HAS; 2022. https://www.has-sante.fr/jcms/c_2876862/fr/promotion-consultation-et-prescription-medicale-d-activite-physique-et-sportive-pour-la-sante
[17] French National Nutrition and Health Plan (PNNS) https://www.mangerbouger.fr/

Objectives

Priority objectives

- Provide support for psychological difficulties, self-stigmatisation.
- Provide support for any form of social vulnerability, physical, psychological or sexual maltreatment (abuse, incest), any difficulties in the work or educational/training environment, or any experienced or perceived stigmatisation.
- Provide support with respect to the person's relationship with their body and their ability to cope with their weight gain, their body image and self-esteem, impacts on their emotional and sex life.
- Treat dietary problems, eating disorders and sleep problems.
- In the case of known psychiatric disorders, discuss how to support weight loss with a psychiatrist. In the event of the prescription of medicinal products: perform a regular assessment of their effect on weight gain.
- Propose solutions to relieve symptoms, provide support for functional impacts, facilitate participation in activities of daily living.
- Identify warning signs: depression, anxiety disorders, stigmatisation, substance misuse, chronic pain: offer specific support.
- Help people to remain in employment, to continue in education/training, in liaison with the occupational health or school/university health services.
- In the event of significant weight loss, be vigilant with respect to psychological destabilisation and body changes, offer physical and psychological support, and even support for relatives, in order to help the person adapt to the changes and to a new relationship with their body.

Specific objectives depending on the complexity of the situation

Overweight or "non-complex" obesity ***(BMI between 25 kg/m2 and 29.9 kg/m2) (BMI < 35 kg/m2, class 1) in the absence of complications***	**"Complex" obesity** ***Obesity severity (BMI ≥ 35 kg/m2, class 2) OR accumulation of associated factors***	**"Highly complex" obesity** ***Exacerbation of obesity by a chronic physical and/or psychiatric condition exposing the patient to a major health risk, OR class 3 obesity (BMI ≥ 40 kg/m2) and accumulation of associated factors***
Losing weight is not a priority goal. *As a first step,* agree with the person on the need to: **stabilise weight**. *The second step* is to lose weight very gradually in order to **achieve a healthy weight** (a weight at which the person feels well both physically and psychologically) and a waist circumference	**Personalise the weight loss goal** according to its impact on health and associated conditions, mobility and quality of life, taking into account the person's ability to lose weight, their age, their investment capacity and their expectations: explain to the person the expected health benefits of losing weight;[18]	**Break the vicious circle of reciprocal exacerbation of obesity and associated disease(s).** **Prioritise treatment goals**, taking into account vital health priorities and those of the individual.

[18] *Haute Autorité de Santé, Fédération française de nutrition. Obésité de l'adulte : prise en charge de 2e et 3e niveaux.* [Obesity in adults: Second and third-level management.] Good practice guideline. Saint-Denis. La Plaine: HAS; 2022. https://www.has-sante.fr/jcms/p_3346001/fr/obesite-de-l-adulte-prise-en-charge-de-2e-et-3e-niveaux-partie-i-prise-en-charge-medicale: a sustained weight reduction (as a percentage of initial weight) of 3 to 5% improves triglyceride and blood glucose levels, and reduces the risk of developing type 2 diabetes; a 5 to 10% reduction improves blood pressure and LDL and HDL cholesterol, and decreases the need for treatments to control blood pressure, blood glucose and lipids.

Overweight or "non-complex" obesity *(BMI between 25 kg/m2 and 29.9 kg/m2) (BMI < 35 kg/m2, class 1) in the absence of complications*	"Complex" obesity *Obesity severity (BMI ≥ 35 kg/m2, class 2) OR accumulation of associated factors*	"Highly complex" obesity *Exacerbation of obesity by a chronic physical and/or psychiatric condition exposing the patient to a major health risk, OR class 3 obesity (BMI ≥ 40 kg/m2) and accumulation of associated factors*
of ≤ 88 cm for women and 102 cm for men. *The third phase involves* **maintaining this healthy weight**, along with good physical fitness and satisfactory muscle mass.	define the methods of supporting weight loss: progressiveness, absence of rebound weight gain, anticipation of difficulties, regular follow-up.	**Optimise non-medicinal and medicinal treatments**, define reviewable priorities taking into account the expectations and priorities of the person: to maintain independence, to take part in everyday, social or professional activities, to play an active role in their family.
Develop a strategy to avoid progression to more severe obesity and/or complications: – avoid weight fluctuations; – help the person to maintain their lifestyle changes over the long term; continue monitoring of BMI and waist circumference annually, or more frequently if there are warning signs.	**Treat symptoms** (pain, shortness of breath, etc.) **or complications** of obesity to improve health, enable participation in everyday activities, adapt physical activity, prevent loss of autonomy or its exacerbation. **Develop a strategy aimed at preventing weight regain** and avoiding weight fluctuations, and maintaining lifestyle changes in the long term.	**Personalise the weight loss goal**: very gradual and with support in terms of diet, psychology and physical reconditioning: avoid too great a loss of lean body mass and rebound weight gain. **Develop a strategy aimed at preventing weight regain** and avoiding weight fluctuations, and maintaining lifestyle changes in the long term.

Coordination and consultation

Common points

- Organise time for coordination of interventions and consultation between the professionals involved in the person's care pathway, as well as information-sharing in accordance with jointly defined arrangements.
- Seek the opinion of the person being cared for on the care strategy, the prioritisation of objectives, the priority areas to be addressed in patient education sessions, and, where appropriate, also consult the person's relatives or the professionals caring for them.
- Seek support from a specialist obesity physician, or a specialised obesity facility depending on the severity of the obesity and the accumulation of factors causing or resulting from the obesity, to get advice on the diagnostic or care approach to be implemented, and/or to benefit from a technical platform, and/or take part in a multidisciplinary team (MDT) meeting, and/or get assistance to find the most appropriate local professionals or care team to meet the person's requirements.
- The use of teleconsultation and tele-expertise[19] facilitates access to specialist physicians, and the use of telecare services facilitates access to nurses, dieticians, psychologists, physiotherapists, occupational therapists or psychomotor therapists.
- Organise and monitor the implementation of care and support through a local coordinator if the situation is complex or highly complex.

[19] *Haute Autorité de Santé*. Teleconsultation and tele-expertise. Implementation. Memo sheet. Saint-Denis La Plaine: HAS; 2019. https://www.has-sante.fr/jcms/c_2971632/fr/teleconsultation-et-teleexpertise-guide-de-bonnes-pratiques

Specificities depending on the complexity of the situation

Overweight or "non-complex" obesity ***(BMI between 25 kg/m2 and 29.9 kg/m2) (BMI < 35 kg/m2, class 1) in the absence of complications***	**"Complex" obesity** ***Obesity severity (BMI ≥ 35 kg/m2, class 2) OR accumulation of associated factors***	**"Highly complex" obesity**: ***Exacerbation of obesity by a chronic physical and/or psychiatric condition exposing the patient to a major health risk, OR class 3 obesity (BMI ≥ 40 kg/m2) and accumulation of associated factors***
The general practitioner coordinates care and support. **This task may be shared with or delegated to a nurse** in the context of a coordinated practice.	**The coordination** of care and support is handled **by the general practitioner or a specialist obesity physician,** or a physician in a specialised obesity facility. **Coordination can be shared with a nurse** (coordinated practice or advanced practice), who may be the **local coordinator**, if one has been appointed. The **organisation and running of an MDT meeting** (multidisciplinary team meeting or meeting to analyse a complex situation) and development of a **personalised care coordination plan** involving all the professionals having participated in the assessment of the situation are preferable. Establish a clear agreement on the distribution of the roles of each professional involved, the frequency of interventions, the methods for regular assessment of attainment of goals.	**The coordination** of care and support **by a physician at a specialised obesity facility or a rare diseases reference centre, if applicable,** in liaison with a specialist physician (depending on the chronic condition exacerbated by the obesity), the general practitioner and the advanced practice nurse, and the **local coordinator**. **The organisation and running of an MDT meeting and** the development of **a personalised care coordination plan** involving all the professionals having participated in the assessment of the situation **are necessary** in order to prioritise treatment goals and decide on interventions and follow-up. Establish a clear agreement on the distribution of the roles of each professional involved, the frequency of interventions, the methods for regular assessment of attainment of goals.

Care and support

Common points

- Enable the person to gradually make lifestyle changes thanks to patient education sessions.
- Reinforce the person's motivation and sense of personal self-efficacy, regardless of the evolution of their weight, by continuing the patient education sessions thanks to a strategy of maintaining lifestyle changes and the weight goal if weight loss is indicated.
- Work with the person to identify situations that require anticipation and preparation of written action plans, defining personalised alternative solutions to cope with difficulties sticking to the goals of the care plan, maintaining their engagement, loss of motivation, for example "If I am confronted with... then...".
- Provide support in the event of deviations from the plan or difficulties sticking to the goals defined in the care plan and stop people dropping out of the care pathway:
  - put things into perspective, maintain a relationship of trust;
  - combat the rigid rules that some people impose on themselves or that are imposed upon them (unrealistic objectives, difficult to incorporate into their lifestyle and context) and that can lead to frustration, a sense of failure or guilt;
  - look for ways to mitigate behavioural fatigue or boredom related to monotonous routines: vary physical activity, diet.
- Continue regular patient education sessions and physical activity, on a regular face-to-face basis or remotely via teleconsultation or telecare, provided that the cared-for person has the capacity to communicate remotely or to use the technological tools required. Face-to-face and telecare sessions can be combined, particularly over the long term.

Specificities depending on the complexity of the situation

Overweight or "non-complex" obesity (BMI between 25 kg/m2 and 29.9 kg/m2) (BMI < 35 kg/m2, class 1) in the absence of complications	"Complex" obesity Obesity severity (BMI ≥ 35 kg/m2, class 2) OR accumulation of associated factors	"Highly complex" obesity Exacerbation of obesity by a chronic physical and/or psychiatric condition exposing the patient to a major health risk, OR class 3 obesity (BMI ≥ 40 kg/m2) and accumulation of associated factors
Based on an assessment of educational needs, offer dedicated patient education sessions, if possible monthly, for a period of 6 to 12 months, delivered by one or more health professionals in a variety of ways: individually, as group sessions or on a rotational basis: – select the content and the professionals involved based on an assessment of educational needs – if necessary, offer educational follow-up between sessions (face-to-face or telecare) in order to: support motivation, cope with a deviation from goals or achievements without feeling guilty and re-engage, maintain the link in case of absence from sessions; – facilitate adherence and regular attendance of sessions, taking into account professional interventions required to address needs (dietician and/or adapted physical education trainer and/or psychologist, etc.) and the person's preferences and capabilities; – continue patient education sessions for more than 6 months following an overall assessment of the state of health and attainment of the goals set with the cared-for person and consultation between the physician and the professionals involved in the care pathway.	**Implement or continue personalised patient education sessions**: assess needs and difficulties (lifestyle changes and creation of a conducive environment, self-esteem, body image, self-confidence), development of new skills. Offer a dedicated patient education session, **ideally monthly, for a period of 6 months, with educational follow-up** systematically offered between sessions (face-to-face or telecare). **Treat physical or psychiatric complications** of obesity after seeking specialist medical advice. **Seek adaptations that can be made to relieve symptoms and make the actions and routines of daily life easier**, moving around, basic hygiene, getting dressed, preventing falls: physiotherapist, occupational therapist, psychomotor therapist, podiatrist (insoles for arch collapse, improved stability, advice on footwear). **If necessary, supplement with short and repeated stays in a follow-on care and rehabilitation unit** (future medical and rehabilitation care services) specialising in the gastrointestinal system, endocrinology, diabetes, nutrition: – weigh up the benefits and drawbacks of such a stay, its arrangements (full hospitalisation, repeated short stays, outpatient attendance), if possible at an MDT meeting organised by the specialised obesity facility in liaison with the general practitioner and with the participation of all the professionals involved in the care pathway; – continue acute care with appropriate equipment, and address any need for locomotor rehabilitation (loss of autonomy), or social or environmental conditions that do not permit multidisciplinary care support locally or at home, and/or that	**Treat any associated chronic conditions** following the optimisation of treatments. **Treat any eating disorders** if these are present. **Seek ways to improve or maintain functional capacities**, the performance of activities of daily living, basic hygiene, getting dressed. **Prioritise educational goals in order to continue or initiate patient education sessions** taking into account the treatment of chronic diseases associated with obesity: – beforehand, assess educational needs, seek the right balance between the person's priorities, those required by their state of health and the maintenance of quality of life; – provide a flexible format adapted to the individual's state of health, their capacities to motivate themselves and their preferences: sessions at home and/or telecare sessions, face-to-face sessions to reduce isolation. **Improve quality of life by seeking adaptations** aimed at alleviating symptoms, facilitating mobility, preventing falls and helping the person get up. **Supplement with a stay, usually long, in a follow-on care and rehabilitation unit**, specialising in the gastrointestinal system, endocrinology, diabetes, nutrition, or other fields (orthopaedics, cardiac): – weigh up the benefits and drawbacks of such a stay at an MDT meeting organised by the specialised obesity facility in liaison with the general practitioner and with the participation of all the professionals involved in the care pathway. **With the occupational health physician, make workplace**

Overweight or “non-complex” obesity	“Complex” obesity	“Highly complex” obesity
	require temporary distance from the usual living environment; – involve the cared-for person in the decision and agree on the conditions of the stay; – prepare the stay, as well as the return home, to ensure medical, family, social and/or professional continuity and thus ensure the effectiveness of the required stay; – discuss repetition or extension of the stay in the same way. **Implement adaptations in the workplace** to enable the person to continue working in favourable conditions.	**adaptations**: facilitate mobility, adapt the person’s job, improve working conditions, prevent any stigmatisation, bullying. **Anticipate funding applications** to make home adaptations, facilitate activities of daily life, facilitate applications for **recognition of a situation of disability** by the *Maison départementale des personnes handicapées* (MDPH - regional disability centre) and funding of disability compensation (PCH).

Regular health follow-up over several years

Common points

– Involve the cared-for person in the evaluation of attainment of their personalised goals and of their care pathway.
– Reassess needs based on the data from the multi-component assessment in order to adjust the care and support plan while taking into account the assessments of the professionals involved in the care pathway and the person's own perceptions.
– Give them the opportunity to make choices when reformulating new goals. Be open to a need for respite on the part of the cared-for person if applicable, arranging to maintain a link with healthcare professionals.
– In the year following the effective implementation of the lifestyle changes and other goals of the care plan, watch out for any weight regain after weight loss, weight stagnation above the negotiated goal and difficulties in continuing the weight loss:
  • Be alert to signs of discouragement, psychological distress, a recurrence of dietary problems or eating disorders or addictive behaviours.
  • Complete the treatment and continue multidisciplinary patient education sessions and physical activity on a regular basis, adapting the educational goals.
  • Ensure that the goals of the care plan remain a priority for young adults in the context of the continued transition and move from paediatric to adult care.
  • Reassess the whole situation and seek advice from an obesity specialist in order to understand resistance to continuation of weight loss.
    - help the person to understand the physiological changes, the decrease in energy expenditure, the hormonal changes linked to weight loss, resistance to continuing to lose weight and to maintaining weight loss in the long term;
    - explain that stabilising weight is already a success in itself;
    - seek strategies with them to maintain an appropriate energy balance and alternative solutions to the desire to eat triggered in certain situations (stress, boredom, etc.) or to cope with an increase in appetite and a decrease in the feeling of satiety; continue multidisciplinary patient education sessions and physical activity, on a regular basis;
    - propose a psychotherapeutic approach respecting the plurality of approaches following a psychological or psychiatric assessment.

Specificities depending on the complexity of the situation

<table>
<tr><th>Overweight or “non-complex” obesity

(BMI between 25 kg/m2 and 29.9 kg/m2) (BMI < 35 kg/m2, class 1) in the absence of complications</th><th>“Complex” obesity

Obesity severity (BMI ≥ 35 kg/m2, class 2) OR accumulation of associated factors</th><th>“Highly complex” obesity

Exacerbation of obesity by a chronic physical and/or psychiatric condition exposing the patient to a major health risk, OR class 3 obesity (BMI ≥ 40 kg/m2) and accumulation of associated factors</th></tr>
<tr><td>Follow-up medical consultations should be monthly for a six-month period. The frequency is then adapted to the situation.

This follow-up performed by the general practitioner can be alternated with follow-up by a nurse in a coordinated practice context.

In the event of partial or complete attainment of treatment goals after 6 to 12 months: propose more flexible arrangements, restrict the number of professionals involved if necessary.

In the event of difficulties or non-attainment of goals after 6 to 12 months, reassess the overall situation: if necessary, continue investigations and/or tests, supplement or adapt the intensity of care and support. Seek the advice of a specialist obesity physician.</td><td>The medical follow-up consultation is at least monthly for a period of two years. The frequency then depends on how the situation evolves and the person’s wishes.

This follow-up performed by the general practitioner can be alternated with follow-up by a specialist obesity physician or a physician at a specialised obesity facility. This follow-up can be shared with a nurse (coordinated practice or advanced practice) who may be the local coordinator, if one has been appointed.

In the event of partial or complete attainment of treatment goals after 6 to 12 months, adjust the care and support on the basis of the evolution of the individual situation: adapt the intensity of the care and support, propose more flexible arrangements, restrict the number of professionals involved if necessary.</td><td>Medical follow-up consultations are at least monthly and continued for life. The frequency of follow-up can then be reduced depending on how the situation evolves and the person’s wishes.

This follow-up is performed by a physician at a specialised obesity facility or a rare diseases reference centre, if applicable, in liaison with the general practitioner and the advanced practice nurse, as the local coordinator.

The organisation of an MDT meeting (multidisciplinary team meeting or meeting to analyse a complex situation) and readjustment of the personalised care coordination plan involve all the professionals involved.

Follow-up is reinforced during periods when there is a risk of care pathway disruption, particularly following hospitalisation, or a stay in a follow-on care and rehabilitation facility:
– prevent exacerbation of loss of autonomy, mobilise home aids;
– continue care and support at home, mobilise relatives.</td></tr>
<tr><td></td><td colspan="2">“Complex” & “Highly complex” obesity

In the event of difficulties or non-attainment of treatment goals after 6 to 12 months:
– reassess the overall situation, seek the advice of a specialist obesity physician and/or psychiatrist or a specialised obesity facility: assess factors involved in resistance to weight loss, continue investigations and/or tests, supplement or adapt the intensity of care and support;</td></tr>
</table>

– **consider prescribing medicinal treatment** with a GLP1 analogue with a marketing authorisation in obesity under certain conditions:[20-21]
  - a second-line treatment only in adults with an initial BMI ≥ 35 kg/ m2 associated with comorbidities and age ≤ 65 years; or considered from the outset in the event of obesity compromising autonomy or leading to severe impairment of organ function and for which lifestyle changes are limited;
  - systematically combined with weight loss and physical activity and the maintenance of lifestyle changes over time to avoid weight regain;
  - prescribed initially and following the advice of a specialist obesity physician, a specialised obesity facility or a teaching healthcare facility;
  - systematic reassessment of the effects of treatment after 12 weeks.
– **consider bariatric surgery** depending on the indications:[22]
  - a last-line treatment, intended to be performed in continuity with the implementation of a coordinated care plan;
  - systematically supported by the organisation and implementation of personalised preparation for surgery and multidisciplinary follow-up after surgery tailored to the needs of the person operated on and adjusted over time on the basis of regular assessment of overall health.

[20] *Haute Autorité de Santé, Fédération française de nutrition. Obésité de l'adulte : prise en charge de 2e et 3e niveaux.* [Obesity in adults: Second and third-level management.] *Partie I : prise en charge médicale.* [Obesity in adults: Second and third-level management. Part I: medical management.] Good practice guideline. Saint-Denis La Plaine: HAS; 2022. https://www.has-sante.fr/jcms/p_3346001/fr/obesite-de-l-adulte-prise-en-charge-de-2e-et-3e-niveaux-partie-i-prise-en-charge-medicale

[21] *Haute Autorité de Santé*. WEGOVY 0.25 – 0.5 – 1.0 – 1.7 – 2.4 mg solution for injection. First assessment. Saint-Denis La Plaine: HAS; 2022.https://www.has-sante.fr/jcms/p_3398698/fr/wegovy-semaglutide-obesite; Haute Autorité de Santé. Décision n° 2023.0358/DC/SEM du 27 septembre 2023 du collège de la Haute Autorité de santé portant retrait de l'autorisation d'accès précoce de la spécialité WEGOVY. Saint-Denis La Plaine: HAS; 2023. https://www.has-sante.fr/jcms/p_3465416/fr/wegovy-ap-retrait-decision-et-avisct-ap273

[22] *Haute Autorité de Santé, Fédération française de nutrition. Obésité de l'adulte : prise en charge de 2e et 3e niveaux.* [Obesity in adults: Second and third-level management.] *Partie II : chirurgie* bariatrique. [Part II: bariatric surgery] Good practice guideline. Saint-Denis La Plaine: HAS; 2024.

Organisation of bariatric surgery in defined scenarios [Updated Feb 2024]

Preventing interruptions in care before and after bariatric surgery

The percentage of people receiving regular post-bariatric surgery follow-up is under 50% at 2 years and declines substantially at 5, 10 and 15 years. A lack of medical and surgical follow-up can pose risks to health: recurrence of type 2 diabetes after a phase of remission related to the initial weight loss, gradual increase in blood pressure values, particularly in individuals having been in remission after surgery, increase in LDL-cholesterol levels, vitamin and mineral deficiencies, undernutrition, development or recurrence of psychiatric problems, weight regain, late complications of surgery.

In order to support the engagement of persons having undergone surgery in their care plan and prevent risks to their health, it is particularly advised to:

- Prepare surgery to optimise the person's physical and mental health, provide specific patient education for bariatric surgery, implement a shared decision-making process.
- Offer medico-surgical consultations, general practitioner follow-up and regular and frequent care sessions, particularly in the first two years, then regularly over the long term according to a schedule defined, understood and accepted by the person. Schedule contact if they miss an appointment.
- Ensure the benefits of surgery and detect any surgical, nutritional or digestive complications.
- Prevent self-stigmatisation through tailored communication, explain the need to analyse weight curve evolution at each consultation without making it a priority and central component of the consultation.
- Detect, as early as possible, any problems or disorders that may occur or recur and support or treat them without delay: mood disorders, interpersonal relationship difficulties (social, family, emotional, intimacy), signs of relapse of eating disorder (i.e. loss of control of eating), relapse of addictions (i.e. smoking, alcohol, etc.), weight regain, disappointment in surgery outcome.
- Ensure continuity of care: sharing of information and consultation before and after surgery and in the event of difficulties or complications.
- Provide a link to association resources to find support close-by.
- In the event of a change in the location of the person's residence or care setting: locate and ensure contact with a specialised obesity team and the future general practitioner.

Five steps to prepare for bariatric surgery over a period of at least 6 months after planning the procedure

Step 1. Propose initiation of a bariatric surgery preparation process

- The specialist obesity physician initiates a multidisciplinary consultation.
- They coordinate surgery preparation and continue post-surgery coordination.
- They provide information on the objectives, content and expected duration of surgery preparation and initiate a shared decision-making process relating to bariatric surgery.

Step 2. Optimise the person's physical and mental health and concurrently start specific patient education sessions for bariatric surgery

- In conjunction with the general practitioner and other specialist physicians, the specialist obesity physician plans and schedules the patient's investigations, tests, consultation with a psychologist and specialised medical consultations, using teleconsultation and/or tele-expertise if required.
- They treat nutritional and vitamin deficiencies, and any undernutrition, make sure that treatments of obesity-related diseases are adjusted, that support for psychological problems is provided, and that any psychiatric disorders and/or disorders linked with psychoactive substance use are treated and stabilised.
- They take part in the implementation of patient education with a multidisciplinary team to develop or mobilise the specific knowledge and skills in respect of self-care, safety and psychological, social, cognitive and emotional adaptation for bariatric surgery.

Step 3. Deliver multicomponent and multidisciplinary patient education with the participation of trained expert patient

- Enable the person to develop the specific knowledge and skills in respect of self-care, safety and psychological, social, cognitive, emotional adaptation for bariatric surgery through monthly group and/or individual patient education sessions: understanding bariatric surgery, its principles, the challenges of the care plan, adapting their diet, introducing physical activity and limiting sedentary behaviour, developing self-confidence, reappropriating their own body and body image, reconciling the care plan with the life plan, components of lifelong health monitoring, identification of warning signs and what to do, taking medication regularly, especially vitamins and minerals.
- Support the shared decision-making process relative to bariatric surgery.

Step 4. Take the final decision to operate at a multidisciplinary team (MDT) meeting

- The specialist obesity physician summarises the data to prepare the multidisciplinary team (MDT) meeting, taking into account the assessment of each professional involved in surgery preparation and the person's decision to undergo surgery. They make sure that the person still wants the surgery and feels ready.
- They present the advice and treatment proposal to the person, obtain their opinion and jointly draw up an updated care plan, whatever the option chosen: agreement to surgery, postponement of procedure with longer preparation time for surgery.
- If surgery is not an option selected at the MDT meeting, an alternative care plan is provided.

Step 5. Organise the implementation of surgery

- Plan the date and place of surgery, the preoperative anaesthesia consultation, medico-surgical consultations and post-bariatric surgery care sessions.
- Anticipate the hospital stay, discharge and return home.

During the postoperative stay: monitor the patient's health and prepare for their discharge and return home

- Prevent, detect and treat early surgical, gastrointestinal or thromboembolic complications.
- Prevent and treat pain, nausea and vomiting.
- Start re-feeding in stages and prevent dehydration.
- Adapt medication for general medical conditions and psychiatric disorders related to obesity.
- Prescribe vitamins and minerals and the first laboratory workup.
- Record in the person's follow-up record the dates of their first medical consultations, education sessions, any psychiatric/psychological consultations or support following surgery and an emergency contact.
- Make sure that the person, their family and the healthcare professionals taking care of the person, if applicable, have properly understood the information; reformulate if necessary.

After bariatric surgery: 4 periods to assess the person's overall health, readjust the care plan and prevent any interruption in this care plan

Period 1. Frequent assessment of the person's health in the first year

- **Specialised consultations after 1 month** with the surgeon and, if necessary, the specialist obesity physician.
- Consultations with the general practitioner as soon as possible after surgery and at regular intervals between medico-surgical consultations, for monitoring and adjustment of treatment of obesity-related diseases, renewal of prescription of treatments and vitamin and mineral supplements, the identification of surgical and gastrointestinal complications, contraceptive methods:
- In the event of acute gastrointestinal symptoms or a deterioration in general health (severe abdominal pain, uncontrollable vomiting, cessation of bowel movements and gas): refer to the surgeon as a matter of urgency;
- In the event of early or persistent gastrointestinal symptoms (abdominal pain, vomiting, dysphagia, etc.): refer to a specialist obesity physician or to a surgeon for a diagnostic process.
- **Specialised medico-surgical consultations after 3, 6 and 12 months**, laboratory tests after 3, 6 and 12 months: specialist obesity physician and/or surgeon or advanced practice nurse or nurse with extended skills[23].
- **Consultations with a psychologist/psychiatrist and/or addiction specialist**:
- continue the support begun during preparation for surgery;
- respond to the requests of the person having undergone surgery;
- offer a session with a psychologist/psychiatrist to any person having undergone surgery one year after the surgery, even if no problems were identified during the surgery preparation period: identify any problems that may have gone undetected or have recurred or developed, development of mood disorders and interpersonal relationship difficulties, relapse of eating disorder (i.e. loss of control of eating), relapse of addictions (i.e. smoking, alcohol, etc.), look for signs of self-

[23] Protocole de coopération n°024 du 10 avril 2013 « Consultation infirmière de suivi de patients bénéficiant d'une chirurgie de l'obésité, avec prescriptions de médicaments en lieu et place du médecin ». Protocole autorisé au niveau national par l'arrêté du 14 mars 2022. Journal Officiel;17 mars 2022. https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000045366076

stigmatisation, reduced self-esteem, poor self-image, risk of suicide.

- **If pregnancy is planned or the person is pregnant:** referral to an obstetrician and a specialist obesity physician with expertise in bariatric surgery, with contact with a local bariatric surgeon possible. Schedule a place of birth appropriate to the level of risk (maternal and foetal) and provide personalised support in vulnerable situations during pregnancy and for the mother and baby after their discharge from the maternity unit[24].
- **Sessions with the healthcare team after 1 month, 3 months, 6 months and 12 months:** updating of educational needs to improve self-care skills and adapt and develop new skills, readjustment of session frequency and/or the professionals involved if necessary:
  - **Dietician:** during the first weeks after surgery: organisation of sessions at the request of the person operated on based on their needs, either face-to-face or as remote sessions. If refeeding proceeds without any difficulties: offering of an individual session after 1 month, then a group or individual session after 3, 6 and 12 months. Group sessions may be led jointly with a psychologist.
  - **Adapted physical activity professional:** after healing and on the surgeon's prescription, assess the level of physical activity and organise a local contact for the practice of physical activity, adapted in terms of frequency and intensity, and limit sedentary behaviour. Depending on the person's tolerance and capacities, propose 2 to 3 sessions per week, of 45 to 60 minutes each, combining aerobic endurance exercises and muscle-strengthening exercises over a period of 3 months, potentially renewable[25]: after 3 months, verify diversification of physical activities. After 6 months, reassess the intensity and volume of physical activity, any obstacles to exercise, and look for a relay for long-term physical activity within the framework of sport and health. After 12 months, make sure that physical activity is maintained: diversify it, step it up and reinforce physical capacities, including muscle strength.
  - **Physiotherapy:** if necessary, support postural development and strengthen back muscles in the event of low back pain, joint pain (spine, hip, knee, ankle) based on a physiotherapy diagnostic assessment and a proposal for physiotherapy/rehabilitation objectives.
  - Identification of new needs, in particular support in reappropriating body image and enhancing self-esteem: referral to a **psychologist, an occupational therapist, a psychomotor therapist, a socio-aesthetic therapist** in a healthcare facility.
- **Dental surgeon:** continuation of treatments already started, periodontal maintenance visit after 6 months and thereafter at a frequency appropriate to the person's oral and dental health, control of chewing effectiveness if necessary.
- **Pharmacist:** support the regular use of prescribed treatments and nutritional supplements, be attentive to any symptoms, raise awareness of the risks associated with self-medication and weight-loss products, identify people who have irregular follow-up or no follow-up at all, and advise them to contact their own doctor.
- **Social worker:** continue with the processes already under way, support the person's requests if

[24] *Haute Autorité de Santé. Accompagnement médico-psycho-social des femmes, des parents et de leur enfant, en situation de vulnérabilité, pendant la grossesse et en post natal* [support in vulnerable situations during pregnancy and for the mother and baby after their discharge from the maternity unit]. Saint-Denis La Plaine: HAS; 2024 Haute Autorité de Santé - Accompagnement médico-psycho-social des femmes, des parents et de leur enfant, en situation de vulnérabilité, pendant la grossesse et en postnatal (has-sante.fr)

[25] Haute Autorité de Santé. Physical activity consultation and medical prescription on health grounds in adults. Guide. Saint-Denis La Plaine: HAS; 2022. https://www.has-sante.fr/jcms/c_2876862/fr/promotion-consultation-et-prescription-medicale-d-activite-physique-et-sportive-pour-la-sante

they have new needs.

– **Occupational health and prevention service physician:** pre-return to work visit, adaptations, workplace adaptations linked to the constraints of the job.

Period 2. Towards stabilisation of health in the second year: follow-up alternating between the specialised team and the general practitioner or advanced practice nurse with a recommended course of action

After 18 months depending on the situation of the person having been operated on:

- ➔ If their health has stabilised: dedicated consultation with the general practitioner or the advanced practice nurse in the context of a coordinated practice.
- ➔ If their health has not stabilised or in the event of complications: continuation of medico-surgical follow-up.

– Investigation for mood disorders and interpersonal relationship difficulties, signs of relapse of eating disorder (i.e. loss of control of eating), relapse of addictions (i.e. smoking, alcohol, etc.) and referral if necessary.

– Continuation of patient education sessions targeting one or more objectives, adapting their frequency and the professionals involved in line with the assessment of educational needs.

After 24 months: specialised consultation (specialist obesity physician and/or surgeon) and continuation of patient education sessions targeting one or more objectives following an assessment of educational needs. Encourage and support the person's engagement.

Period 3. Consolidation of health from the third year: specialised follow-up after 3 years and 5 years, with bariatric surgery-specific follow-up every 6 months by the general practitioner or advanced practice nurse

– Specialised medico-surgical consultations after 3 years and 5 years, as a minimum, with resumption of more frequent specialised follow-up in the event of surgical, gastrointestinal and/or nutritional and/or psychiatric complications and/or addictions: specialist obesity physician and/or surgeon, referral to a psychiatrist/addiction specialist if necessary.

– Supplemented by consultations every 6 months with the general practitioner or the advanced practice nurse in the context of a coordinated practice: monitoring and adjustment of treatment of obesity-related diseases, vitamin and mineral supplements, detection of surgical or nutritional complications and/or psychological or psychiatric disorders and/or addiction problems.

– Resumption of patient education sessions at the person's request and/or on the basis of needs assessed by the specialist obesity physician and/or surgeon, the general practitioner or the advanced practice nurse: consolidate the skills developed (self-care and adaptation) and, if necessary, acquire new skills to continue lifestyle changes (diet, physical activity, sedentary behaviours, sleep and pace of life), adapt to life events or environmental changes, resolve problems and cope with difficulties, provide support in the event of any weight regain.

Period 4. After the fifth year, life-long regular bariatric surgery-specific and health follow-up

– Annual consultation with a general practitioner or advanced practice nurse, or more frequently for follow-up of obesity-related diseases and adjustment of treatments.

- Specialised consultation: specialist obesity physician and/or surgeon approximately every 3 to 5 years and more frequently in the event of surgical and gastrointestinal and/or nutritional complications, with scheduling of additional tests specific to surgical follow-up (Table 3 of care pathway guide[26]).
- Assess annually throughout the person's lifetime the need to consolidate or pick up or develop new skills in respect of self-care and psychological, social, cognitive, emotional adaptation and resume patient education sessions if necessary.
- In the presence of a change of mood, interpersonal relationship difficulties, the development of anxiety, suicidal thoughts, the suspected recurrence or development of an eating disorder or a loss of control of eating, or any form of addiction: refer to the psychologist, psychiatrist and/or addiction specialist.
- In the event of a change in the location of the person's residence: locate and ensure contact with a specialised obesity team and the future general practitioner.

Content of the assessment of overall health at each follow-up period

➔ Promote successful surgery outcomes, prevent complications, prevent interruptions in care.

➔ Continue investigations and/or additional tests, if necessary.

➔ Reformulate care plan goals, adjust care and support if necessary.

Experience and adaptation after surgery, quality of life

- Expression of experience and perceived quality of life.
- Reconciling care plan and life plan, resuming professional, occupational, social and family activities, any difficulties in adapting.
- Contraception and any pregnancy plans.
- Quality of interpersonal relationships and of support of family and friends.
- Expression of concerns, difficulties, worries of family and friends.
- Reappropriation of body image, boosting of self-esteem and any difficulties.
- Recurrence or development of psychological and/or psychiatric difficulties or disorders (i.e. mood disorders, anxiety, suicide risk), signs of relapse of eating disorder (i.e. loss of control of eating), substance use or addictions (i.e. smoking, alcohol, other psychoactive substances, or behavioural: online gambling, compulsive shopping, etc.): assess the need for psychologist, psychiatrist or addiction specialist follow-up.

Successful transition to an appropriate diet

- Adequate nutritional intake, particularly of proteins, maintenance of good hydration.
- Progression of food texture (blended to small pieces and then normal food) and digestive tolerance of the food.
- Continuation of dental and gum care, dental appliances if necessary, check-ups every 6 to 12

[26] Haute Autorité de santé. Care pathway guide:overweight and obesity in adults. Saint-Denis La Plaine: HAS;2024. Haute Autorité de Santé - Care pathway guide: overweight and obesity in adults (has-sante.fr)

months depending on the situation.

– Compliance with and continued implementation of surgery-related adaptations in the context of everyday life. Assessment of the need to consolidate or pick up or develop new skills in respect of self-care and adaptation.

Success of resumption or maintenance of physical activity, reduction in sedentary behaviours.

– After 1 month, assess maintenance of daily physical activity and limitation of sedentary behaviour, organise a local relay for the practice of adapted physical activity, in accordance with the surgeon's advice and prescription.

– After 3 months, verify diversification of physical activities.

– After 6 months, reassess the intensity and volume of physical activity, any obstacles to exercise, and look for a relay for long-term physical activity within the framework of sport and health.

– After 12 months, make sure that physical activity is maintained and, after the first year: diversify it, step it up and reinforce physical capacities, including muscle strength.

– At each stage, assess ways in which patient education can be continued to consolidate the skills developed, first reassessing educational needs.

Health benefits of surgery and promotion of its effects for the person

Assess the effects of the surgery on complications and conditions that existed before surgery and adaptation of their treatments

– Promote the effects of surgery on health: adaptation of the person to the consequences of surgery, improvement of obesity-related diseases, weight loss dynamics.

– Monitor the evolution of obesity-related diseases and adapt treatments (diabetes, hypertension, dyslipidaemia, tolerance of equipment in the event of obstructive sleep apnoea syndrome).

– Adapt the dosage(s) of treatments: the metabolism of medicinal products in the body changes during the initial weight loss phase, and after bariatric surgery depending on the type of operation, particularly analgesics, oral anticoagulants, antibiotics, psychotropic drugs, levothyroxine, immunosuppressants, antiretroviral anti-HIV drugs, etc. (see Pharmacokinetics of medicinal products following weight loss surgery in the CPG[27]).

– Optimise medicinal products that can have a negative impact on weight.

Assess weight loss and its kinetics at each consultation without making it a priority and central component of the consultation

➔ The reference criterion in terms of weight loss efficacy is the percentage of total weight lost, calculated using the following formula: % regain of total weight lost (compared with initial weight documented just before surgery) = (current weight - nadir weight) / (initial weight - nadir weight).

– Prevent self-stigmatisation and/or feeling of failure:

• Explain to the person that weight regain of around 10% of the weight lost after the weight nadir is reached (at between 2 and 5 years) is physiological and is an expected long-term effect af-

[27] *Haute Autorité de Santé, Fédération française de nutrition. Obésité de l'adulte : prise en charge de 2e et 3e niveaux. Partie II : pré et post chirurgie bariatrique* [Obesity in adults: Second and third-level management. Part II: bariatric surgery.] Good practice guideline. Saint-Denis La Plaine: HAS; 2024. https://www.has-sante.fr/jcms/p_3346001/fr/obesite-de-l-adulte-prise-en-charge-de-2e-et-3e-niveaux

ter surgery;

- Prevent long-term weight regain by encouraging and supporting the maintenance of lifestyle changes.

– Identify a weight regain > 20% of total weight loss: investigate for the recurrence of obesity complications, reassess the overall situation and adjust the care plan;

– Identify a total weight loss <10% (calculated using the following formula based on weight at the time of surgery: % total weight loss = (initial weight – postoperative weight) / initial weight) or a weight regain leading to total weight loss < 10% and/or a lack of improvement or severe exacerbation of a disease that prompted surgery: investigate the causes, reassess the overall situation and adjust the care plan.

– In the event of weight regain: reassess the overall situation, looking in particular for a recurrence of obesity-related comorbidities and a deterioration in quality of life, refer to a specialist obesity physician to investigate the causes, suggest additional investigations and a reformulation of the care plan: reinforcement of patient education, appropriateness of a stay in specialised digestive endocrinology, diabetology or nutrition medical and rehabilitative care unit, psychotherapeutic approach, etc.

Check that there are no surgical, nutritional and gastrointestinal complications

– In the event of persistent gastrointestinal symptoms (abdominal pain, vomiting, dysphagia, etc.): referral to a specialist obesity physician or to a surgeon for a diagnostic process.

– Schedule additional tests specific to surgical follow-up (Table 3 of care pathway guide[28]).

– Assess the person's functional progress: activities performed, areas of participation in daily life, difficulties, limitations, any joint pain (spine, hip, knee, ankles): consider an indication for physiotherapy sessions after a physiotherapy diagnostic assessment, assess the benefit of a stay in a medical and rehabilitative care unit.

Prevention of undernutrition and vitamin and micronutrient deficiencies

– **During the weight loss period** and regardless of the surgical procedure: regular intake of vitamin and mineral treatment.

– **Then, adaptation of vitamin and mineral dosages based on laboratory results** (3 times in the first year: after 3 months, 6 months, 12 months, then once to twice per year (see Table 4 of care pathway guide).

– **Warning signs of undernutrition:** excessively rapid weight loss (more than 10% in one month), fatigue, reduced muscle strength, eating difficulties, gastrointestinal disorders (e.g. diarrhoea, vomiting), oedema, fainting, protein intake of less than 60 g per day, irregular vitamin and mineral intake. Confirm the diagnosis[29], adapt the nutritional treatment based on the degree of severity of the undernutrition. Provide advice to ensure an adequate protein intake, refer to the dietician.

– **Other clinical signs of deficiencies:** changes in the skin, mucous membranes, hair and nails, muscle signs, neurological and visual signs, sexual problems (Annex 4 of the care pathway guide).

[28] Haute Autorité de santé. Care pathway guide:overweight and obesity in adults. Saint-Denis La Plaine: HAS;2024. Haute Autorité de Santé - Care pathway guide: overweight and obesity in adults (has-sante.fr)

[29] Haute Autorité de Santé, Fédération française de nutrition. Diagnosing undernutrition in children and adults. Good practice guideline. Saint-Denis La Plaine: HAS; 2019. https://www.has-sante.fr/jcms/p_3118872/fr/diagnostic-de-la-denutrition-de-l-enfant-et-de-l-adulte

Support a request for reconstructive and reparative surgery

- Faced with a poor self-image, difficulties with intimacy, discomfort, difficulties dressing or carrying out activities of daily living: consider access to reconstructive and reparative surgery in the absence of undernutrition and after weight stabilisation.
- The delay of 18 to 24 months following surgery may be shortened if the apron is especially disabling for daily life and intimacy.
- While waiting for surgery, consider prescribing an abdominal support belt to facilitate activities of daily living and physical exercise.

Continuity of care before and after bariatric surgery: share information and work together as a multidisciplinary team

Sharing and traceability of the information required at every stage in the care plan

➔ **Before surgery:**

- Date of initiation of a bariatric surgery preparation process.
- Handing out of a paper or digital personalised follow-up record to the surgery candidate.
- Assessment of the surgery preparation stage.
- Conclusions of the multidisciplinary team (MDT) meeting.

➔ **After surgery:**

- Document given to the person operated on at the time of discharge from hospital and sent to the healthcare professionals involved in their subsequent care.
- Summaries of specialised medico-surgical consultations.
- Summaries of consultations with the general practitioner or advanced practice nurse, if applicable: monitoring of health, treatment adjustments, adaptation of care plan.
- Summaries of educational sessions or series of sessions: assessment, evaluation of educational needs, objectives, continuation or reinforcement of patient education.
- Personalised follow-up record completed with at least: type of surgery and principle (restrictive and/or malabsorptive), prescriptions of vitamins and minerals, medicinal treatments for obesity-related diseases, results of laboratory tests and imaging exams, planning of medico-surgical follow-up consultations, consultations with the general practitioner and/or advanced practice nurse, care sessions with the professionals involved in the care plan, emergency contact.

Overweight and obesity in women: specificities

Preconception period

➔ **The general practitioner, the midwife and the gynaecologist ensure regular gynaecological check-ups for all women with overweight or obesity:**

- address their relationship with their body, the impact of overweight or obesity on their emotional and sex life, the wish for contraception, the required clinical examinations with a respectful and non-stigmatising attitude;
- carry out a breast examination, a gynaecological examination (with cervical smear from the age of 25) to screen for cancers or precancerous lesions, in the same was as in the general population. Gynaecological examinations can be facilitated in the event of significant obesity

by a lateral decubitus examination, provided that a suitable examination table is available or a specialised obesity centre is used;

- discuss with women the most appropriate contraceptive method for them or for the couple at a given time in their life, depending on their medical history, their current situation (overweight or obesity, cardiovascular risk factors) and their preferences.[30] Obesity is considered to be a cardiovascular risk factor, either alone or in combination with hypertension, severe hyperlipidaemia, diabetes or smoking;
- assisted reproductive technology (ART) or medically assisted reproduction (MAR) should not be delayed or made conditional on an unrealistic weight loss goal. The impact of weight loss on fertility has been discussed in studies.

➔ **A preconception consultation is systematically offered to all women with overweight or obesity planning a pregnancy in order to anticipate any difficulties or risks during pregnancy and in the postnatal period:**

- reassure women: most women with overweight or obesity have a straightforward pregnancy and delivery and healthy babies;
- screening for cardiovascular risk factors, diabetes, dyspnoea, before pregnancy, but also during pregnancy and in the postnatal period due to the risk of complications[31] associated with obesity;
- at as early a stage as possible, before 10 weeks' gestation, assess the risk level for the course of the pregnancy and delivery, propose follow-up based on the BMI and associated health problems:[32]
  - in a situation of overweight or class 1 obesity without complications: general practitioner, midwife, medical gynaecologist or obstetrician-gynaecologist, depending on the woman's choice;
  - in a situation of class 2 obesity (with comorbidities or risk factors) or class 3 obesity with a BMI ≥ 40 kg/m^2: obstetrician-gynaecologist, and a specialist obesity physician;
  - schedule a place of birth appropriate to the level of risk (maternal and foetal), chosen in relation to where the woman lives and the facilities available, and the preferences of the woman or couple.

Pregnancy: stabilise weight and prevent exacerbation of obesity

Pregnancy is a period when women are more receptive to discussions about their health and to prevention messages or a care and support plan, if necessary.

➔ **Medical or midwife consultations, as well as early prenatal consultations[33]**, are an opportunity to listen to women, to discuss and evaluate their situation and expectations with them, and if necessary, to envisage support if desired:

[30] *Haute Autorité de Santé*. Contraception in women with cardiovascular risk factors. Memo sheet. Updated July 2019. Saint-Denis La Plaine: HAS; 2013. https://www.has-sante.fr/jcms/c_1638478/fr/contraception-chez-la-femme-a-risque-cardiovasculaire

[31] Women with obesity are three times more likely than women with a normal BMI to have severe complications, primarily gestational diabetes (5 times), hypertension (8 times), caesarean section (1.8 times). Women with obesity account for one fifth of pre-eclampsia cases (based on Epifane 2012 data).

[32] *Haute Autorité de Santé*. Follow-up and referral of pregnant women on the basis of identified risk situations. Professional guidelines. Saint-Denis La Plaine: HAS; 2007. https://www.has-sante.fr/jcms/c_547976/fr/suivi-et-orientation-des-femmes-enceintes-en-fonction-des-situations-a-risque-identifiees

[33] Article L2122-1 du Code de la santé publique

- be particularly attentive to the psychological state of pregnant women, as stressful situations linked to the social, family and work environment can lead to eating problems responsible for significant weight gain during pregnancy.

➔ **More frequent weight curve monitoring is recommended throughout pregnancy:**

- offer women support (personalised patient education sessions, ideally on a monthly basis) in order to maintain a weight gain target based on their baseline BMI due to the benefits on obesity complications; [34]
- encourage women to start or continue physical activity and sport during pregnancy, regardless of their weight, with adaptations if necessary,[35] and to limit sedentary behaviours day to day, or to break them up regularly throughout the day;
- if necessary, refer them to a dietician or specialist obesity physician:
  - perform a more detailed assessment of the problem of improving and balancing the diet,
  - explore dietary problems or eating disorders, or difficulties in creating an environment conducive to lifestyle changes,
  - help women cope with an increase in appetite, cravings for foods high in sugar, fat or salt, cravings or nausea in early pregnancy, potential digestive problems in the third trimester of pregnancy, and to balance the calorie intake of meals if they are dividing up their food intake.

➔ **Offer birth and parenthood preparation sessions** in the same way as for all women, since these reinforce health-promoting behaviours at a time when women are most receptive to these messages.

Known eating disorders: support

Regular, close and personalised monitoring during the perinatal period should be systematically offered to women who suffer from eating disorders before pregnancy[36] or purging behaviours such as vomiting:

- watch out for a recurrence of the eating disorder in the event of significant weight gain during pregnancy;
- systematically watch out for signs of depression during pregnancy and the post-partum period since the risk of recurrence of eating disorders is increased;
- after delivery, propose physical, psychological, nutritional, social and family follow-up, in coordination with obstetric follow-up. Pay particular attention to the mother-child relationship (feeding and interactions);
- in agreement with the mother and her family, implement home follow-up, from the prenatal period and postnatally, by a midwife and a childcare worker from the mother and child welfare service.

[34] Institute of Medicine, National Research Council, Rasmussen KM, Yaktine AL. Weight gain during pregnancy: reexamining the guidelines. Washington: National Academies Press; 2009. https://www.sochob.cl/pdf/libros/Weight%20Gain%20During%20Pregnancy-%20Reexamining%20the%20Guidelines.pdf

[35] https://sports.gouv.fr/IMG/pdf/guide-apsetmaternite.pdf

[36] *Haute Autorité de Santé, Fédération française anorexie boulimie.* Bulimia nervosa and binge eating disorder. Detection and general management information. Good practice guideline. Saint-Denis La Plaine: HAS; 2019. https://www.has-sante.fr/jcms/c_2581436/fr/boulimie-et-hyperphagie-boulimique-reperage-et-elements-generaux-de-prise-en-charge

Postnatal period: support breastfeeding, weight concerns, return to a healthy weight

➔ **Mothers with overweight or obesity should be encouraged to breastfeed just like any other woman but with more support in order to:**

- accommodate a later onset of lactation, observed in women with obesity;
- assist breastfeeding by working with the mother to find the most effective and comfortable position for the infant to nurse;
- recommend a varied diet and advise against a low-calorie diet throughout the breastfeeding period. The impact of breastfeeding on weight loss is the subject of debate;
- advise the resumption or continuation of physical activity. It does not affect the quality or quantity of breast milk.

➔ **The early postnatal interview or preparation for discharge and return home, as well as the postnatal consultation 6 weeks following the birth**, enable professionals to be vigilant if the woman expresses concerns about her weight, or in the event of a recurrence of dietary problems or eating disorders: **these two sessions are not the ideal time to address an obesity situation.**

➔ **A medical consultation within 6 months to a year after the birth** is recommended to take stock of: the woman's health, her relationship with her body (postpartum adjustment, body image, sexuality), the evolution of overweight or obesity and the risk of developing a cardio-vascular disease.

- For women with overweight or obesity before pregnancy and who are in the same situation in the year following the birth: propose a care and support plan to help them return to a healthy weight, while continuing regular physical activity.
- For women who gained a lot of weight during their pregnancy or postpartum, without losing it one year after the birth: offer personalised support based on a multi-component assessment and a personalised care plan.

Pregnancy following bariatric surgery[37,38,39]

➔ **Women who have had bariatric surgery and are of childbearing potential should be systematically and repeatedly informed at their follow-up consultations after surgery:**

- that the recommended delay between surgery and pregnancy is at least 12 months, and that they should choose an effective contraceptive method during this period;
- about the need to inform the doctor monitoring their pregnancy of their bariatric surgery history, and the importance of verifying the absence of any complications of the surgery;
- about the need to prepare for their pregnancy from a nutritional point of view, to systematically correct any deficiencies as well as possible before pregnancy or as soon as it is confirmed.

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[37] Quilliot D, Coupaye M, Gaborit B, Ritz P, Sallé A, Castera V, *et al.* Grossesses après chirurgie bariatrique [Pregnancy following bariatric surgery] : recommandations pour la pratique clinique (groupe BARIA-MAT). Nutr Clin Métab 2019;33:254-64.

[38] Haute Autorité de Santé, Fédération française de nutrition. Obésité de l'adulte : prise en charge de 2e et 3e niveaux. [Obesity in adults: Second and third-level management.] Partie II : chirurgie. [Part II: bariatric surgery] Good practice guideline. Saint-Denis La Plaine: HAS; 2024. https://www.has-sante.fr/jcms/p_3346001/fr/obesite-de-l-adulte-prise-en-charge-de-2e-et-3e-niveaux

[39] Haute Autorité de Santé. Clinical utility of assay of vitamin B1. Saint-Denis La Plaine: HAS; 2021. https://www.has-sante.fr/jcms/p_3186171/fr/utilite-clinique-du-dosage-de-la-vitamine-b1

➔ **Irrespective of the type of bariatric surgery, the doctor supporting the planned pregnancy and monitoring the pregnancy must explain to the woman the need to:**

- improve their diet and its balance, by eating at least 60 g of protein per day and favouring complex carbohydrates;
- systematically continue micronutrient supplementation, not to stop it and to add folic acid supplementation as soon as they plan a pregnancy;
- adapt the correction of deficiencies individually based on laboratory results from the start of the pregnancy and throughout the pregnancy;
- consult a bariatric surgeon in the event of acute abdominal pain, vomiting or unusual food intolerance;
- systematically refer the woman to specialised multidisciplinary monitoring in terms of nutrition and obstetrics as soon as the pregnancy is planned or, failing that, as soon as the pregnancy is confirmed.

➔ **Specialised monitoring is necessary in addition to obstetric monitoring** to prevent the development of serious complications and to enable the pregnancy to proceed and the baby to be delivered in optimal safety conditions.

- **For any type of surgery**: preconception consultation (or failing that, from the beginning of the pregnancy) with a nutritionist doctor with expertise in bariatric surgery to assess nutritional status, detect and correct deficiencies, and anticipate the organisation of pregnancy monitoring and care for the mother and child in the postnatal period.
- **For malabsorptive surgeries** (biliopancreatic diversion and related procedures, Roux-en-Y gastric bypass (RYGB)): follow-up by a doctor with expertise in these surgeries: higher doses of vitamins and minerals are often necessary and should be personalised based on laboratory results.

➔ **Any woman having undergone bariatric surgery is at risk of diabetes** pre-existing prior to pregnancy and of gestational diabetes. Screening for diabetes is recommended at the start of pregnancy.

➔ **A personalised dietary assessment and support by a dietician or a specialist doctor are recommended** to evaluate and correct calorie and protein intakes, especially in the event of eating difficulties, weight loss or obviously insufficient calorie or protein intakes, or weight gain below the recommendations.

➔ **The strategy for pregnancy monitoring depends on the time between the bariatric surgery and the pregnancy, as well as the postoperative follow-up.**

- If the pregnancy is very soon (less than one year after surgery) with or without regular follow-up: reinforce nutritional and obstetric monitoring.
- If the pregnancy starts more than 12 months after surgery (recommended):
  - for followed-up women: laboratory workup every three months with personalised correction of deficiencies based on laboratory results;
  - for women not followed-up after their surgery in terms of nutrition in the year preceding the pregnancy: prescribe minimal and systematic supplementation as soon as the pregnancy is planned, step up monitoring with, in addition to three-monthly check-ups, a physical examination, weight monitoring and a laboratory protein assessment, a systematic nutritional consultation as soon as the pregnancy is diagnosed, to be repeated at a frequency that will depend on the nutritional status.

➔ **During the postpartum period, women should be supported** by the multidisciplinary team responsible for the usual long-term follow-up after surgery in order to:

- reach a weight goal defined jointly with the multidisciplinary team;
- continue regular nutritional and surgical monitoring, in liaison with the general practitioner.

Perimenopause and menopause periods: encourage physical activity and be vigilant in the event of high waist circumference

Weight gain in the perimenopausal and menopausal periods is common but not systematic.

It is necessary to be vigilant in the event of overweight combined with high waist circumference due to an increased risk of cardiovascular diseases.

➔ Regular exercise is a way to alleviate perimenopausal symptoms, maintain physical fitness, prevent loss of muscle mass and bone loss:

- propose an assessment of physical activity, sedentary behaviour, diet (variety, quality, portion size), sleep quality;
- encourage women to move towards the current recommendations for the general population and provide advice.

➔ Reassure women that hormone replacement therapy for menopausal symptoms will not cause weight gain, either when started or stopped, if the dose is minimal and the duration limited. [40]

➔ In the event of overweight or obesity in post-menopausal women: recommend a moderate reduction in calorie intake, combined with an adequate protein intake and regular physical activity.

Overweight and obesity in a situation of disability

Disability is a situation known to be associated with a risk of obesity, due to the cause of the disability itself, whether it is motor, sensorimotor, sensory (deafness, blindness or very impaired vision) and/or linked to an intellectual or psychological disability or its consequences, or secondary to long-term treatments leading to weight gain, such as corticosteroids and/or psychotropic drugs, or linked to obesity with a rare cause.

Eating and physical activity require many capacities that are often impaired in a situation of disability. Nevertheless, disability, and in particular intellectual disability, is not necessarily a barrier to the implementation of lifestyle changes. It is essential to:

➔ **promote access to prevention messages and patient education** in order to support lifelong lifestyle habits: accessibility and adaptation of teaching techniques and tools, creation or adjustment and maintenance over time of an environment that is conducive to and consistent with the implementation of lifestyle changes (home, social and medico-social facilities and services, where appropriate);

➔ **ensure the early prevention of overweight and its progression to obesity by proposing the same multi-component assessment** as is offered to any other person, but with

[40] *Haute Autorité de Santé.* Hormonal treatments for the menopause. Saint-Denis La Plaine: HAS; 2014. https://www.has-sante.fr/jcms/c_1754596/fr/traitements-hormonaux-de-la-menopause

additional vigilance and adjustment depending on the disability: involve the families and/or healthcare professionals that care for the person;

- ➔ **seek a specialist opinion in the event of very severe obesity associated with eating disorders or clinical signs suggestive of obesity with a rare cause**[41]**;**
- ➔ **continue an approach aimed at controlling eating behaviour and impulsive eating in adulthood**, particularly in the event of clinical situations with a high risk of obesity, such as Prader-Willi or Bardet-Biedl syndromes;
- ➔ **adapt the physical activity recommendations for the general population to the desires, needs and functional capacities of people with disabilities:**[42]
  - assess the need for a prescription for adapted physical activity and prescribe it, if applicable, following a minimum medical assessment or an adapted physical activity medical consultation;[43]
  - consult an adapted physical activity professional (adapted physical activity trainer, occupational therapist, psychomotor therapist, physiotherapist) to adjust the intensity, progressiveness and duration of the physical activity to functional capacities, scheduling longer recovery times;
  - seek strategies to continue and maintain physical fitness throughout life by mobilising human assistance or peer group support or the support of an adapted physical activity professional.
- ➔ **Access resources** aimed at professionals, families and patients[44] or initiatives put in place by associations for people with chronic diseases.[45]
- ➔ **If bariatric surgery is proposed,** it is necessary to ensure accessibility for surgery preparation sessions, and their adaptation, and encourage a loved one's presence if the person wishes.
  - If the person has a disability with impaired function and adaptive behaviours: assess the person's actual level of autonomy in day-to-day tasks, their organisational skills, their mental flexibility and the scope for effective post-surgery support and care, taking into account the person's expectations and preferences and those of their loved ones.
  - If the person has a physical disability: improve the person's function and autonomy in day-to-day tasks, their level of physical activity with assistance from a physical medicine and rehabilitation physician.

[41] PRADORT rare diseases reference centre, DéfiScience, *Haute Autorité de Santé*. Obesities with rare causes. French national diagnostic and care protocol (PNDS). Saint-Denis La Plaine: HAS; 2021. https://www.has-sante.fr/jcms/p_3280217/fr/generique-obesites-de-causes-rares

[42] World Health Organisation. WHO guidelines on physical activity and sedentary behaviour. Geneva: WHO; 2020. https://apps.who.int/iris/rest/bitstreams/1318320/retrieve

[43] *Haute Autorité de Santé*. Physical activity consultation and medical prescription on health grounds in adults. Guide. Saint-Denis La Plaine: HAS; 2022. https://www.has-sante.fr/jcms/c_2876862/fr/promotion-consultation-et-prescription-medicale-d-activite-physique-et-sportive-pour-la-sante

[44] Rare diseases platform bringing together several associations: *Alliance maladies rares*, *Institut des maladies rares*, *Maladies rares info services*, AFM, EURORDIS, Orphanet https://www.plateforme-maladiesrares.org/

[45] France Assos santé

Mobilise the experience of expert patients and user associations throughout the care pathway

Accessible information and peer support

The development of local centres, run by dedicated associations, makes it possible to provide information, facilitate understanding of the care plan, and help, encourage and support people in their care pathways, as well as their relatives and carers.

If the person wishes, the professionals involved in the pathway can offer to put them in contact with a local user association.

The experience of expert patients could be mobilised throughout the care pathway

Expert patients can share their experiences, assist the person, in particular to help them prepare for consultations, support them in their reflection process if they do not feel ready to commit to the care plan or if they express a potential wish to review their goals, a need for respite or additional support.

Wherever possible, patient education sessions designed and run jointly with a caregiver could be enriched by feedback from people who are or have been in a situation of overweight or obesity themselves. Expert patient interventions require training in patient education.

A joint reflection process is required beforehand to consider areas in which the expert patient could be asked to intervene and the arrangements for this intervention alongside caregivers.

Sharing experiences with peers and relatives can also be useful to improve strategies to support the transition from paediatric to adult care, strategies to prevent or cope with stigmatising situations or attitudes, and to assess them with caregivers.

Analysis from the perspective of the people receiving care may improve the care pathway

The tracer patient approach[46] could be particularly relevant in order to analyse and improve the care pathway for persons with complex obesity.

The use of *Patient Reported Outcome Measures* (PROMs) would help improve routine clinical practice.[47]

[46] *Haute Autorité de Santé*. The tracer patient: team analysis of the patient's care pathway. Methodological guide. Saint-Denis La Plaine: HAS; 2016. https://www.has-sante.fr/upload/docs/application/pdf/2016-03/2_guide_methodologique.pdf

[47] *Haute Autorité de Santé*. Aide à l'utilisation de questionnaires patients de mesure des résultats de soins (PROMs) pour améliorer la prise en charge clinique courante des personnes en obésité [Patient-Reported Outcome Measures (PROMs) to improve management practices for people living with obesity. Tool kit Guide]. Saint-Denis La Plaine: HAS; 2024. https://www.has-sante.fr/jcms/p_3325627/fr/aide-a-l-utilisation-des-proms-en-pratique-clinique-courante

Annexes Overweight and obesity: impact assessment

Clinical assessment and additional investigations[48-49]

For all patients, irrespective of body mass index (BMI)

Anthropometric measurements	Weight and recording on the chart, recording of height at the first consultation Calculation of BMI, recording and plotting of BMI curve Measurement of waist circumference
Screening for type 2 diabetes or pre-diabetes	Fasting glucose: if the result is normal, repeat screening every 3 years, at least, or sooner in the event of symptoms or weight gain, or annually in the event of prediabetes[28]
Screening for hypertension	Auscultation, measurement of resting heart rate (pulse) and blood pressure (using an adapted adult-size cuff: 20 x 42 cm for an arm circumference of 45 to 52 cm), and, if necessary, measurement on the forearm with the adult cuff)
Assessment of cardiovascular risk	Angina pectoris, venous insufficiency, lymphoedema, heart failure
Investigation for lipid abnormalities	Lipid profile: total cholesterol, LDL cholesterol, HDL cholesterol, triglycerides
Endocrine abnormalities	Signs of hypothyroidism, hypercortisolism (Cushing's disease) Palpation of thyroid gland
Motricity assessment	Flexibility, balance, coordination, dexterity
Painful and functional osteo-articular impacts	Joint pain (knees, hips, ankles, lower back) Genu valgum or recurvatum, static spinal disorder, flat feet, limp Clinical screening for arthritis and osteoarthritis of the knee and algo-functional impact assessment: self-assessment of pain using the WOMAC questionnaire[50] (if warning signs); assessment of functional impairment (Lequesne algo-functional index)[51]
Assessment of autonomy	Performance of activities of daily living: Activity Daily Living (ADL) and Instrumental Activity Daily Living (IADL)
Assessment of impact on quality of life	EuroQoL EQ-5D: generic quality of life questionnaire (mobility, self-care, pain and discomfort, usual activities, anxiety, depression rated according to a scale: no problems, slight, moderate, severe problems, problems such as “incapable of doing alone”),[52] SF-36 (Short Form-36) and its SF-12 short version

[48] *Haute Autorité de Santé, Fédération française de nutrition. Obésité de l'adulte : prise en charge de 2e et 3e niveaux.* [Obesity in adults: Second and third-level management.] *Partie I : prise en charge médicale.* [Obesity in adults: Second and third-level management. Part I: medical management.] Good practice guideline. Saint-Denis La Plaine: HAS; 2022. https://www.has-sante.fr/jcms/p_3346001/fr/obesite-de-l-adulte-prise-en-charge-de-2e-et-3e-niveaux-partie-i-prise-en-charge-medicale

[49] American Diabetes Association. 2. Classification and diagnosis of diabetes: standards of medical care in diabetes-2022. Diabetes Care 2022;45(Suppl 1):S17-S38. http://dx.doi.org/10.2337/dc22-S002

[50] Western Ontario and McMaster (WOMAC) *in* Obesity Canada, Rueda-Clausen CF, Poddar M, Lear SA, Poirier P, Sharma AM. Canadian adult obesity clinical practice guidelines: assessment of people living with obesity. Edmonton: Obesity Canada; 2020. http://obesitycanada.ca/wp-content/uploads/2020/08/6- Obesity-Assessment-v4-with-links.pdf.

[51] Annex 4 in *Haute Autorité de Santé, Fédération française de nutrition. Obésité de l'adulte : prise en charge de 2e et 3e niveaux. Partie I : prise en charge médicale.* [Obesity in adults: Second and third-level management. Part I: medical management.] Good practice guideline. Saint-Denis La Plaine: HAS; 2022. https://www.has-sante.fr/jcms/p_3346001/fr/obesite-de-l-adulte-prise-en-charge-de-2e-et-3e-niveaux-partie-i-prise-en-charge-medicale

[52] https ://euroqol.org/

	Quality of life and diet (physical impact, psychosocial impact, sex life, dietary well-being and perception of dietary treatment)[53]
Screening of sensory organs	Vision and hearing
Clinical assessment of oral and dental health	Annual clinical assessment: investigation for dental decay, more common in the event of eating between meals (snacking) or night-time eating, quality of chewing. If abnormalities, complete assessment and treatment
Polycystic ovarian syndrome (PCOS)	Irregular menstrual cycles, hirsutism, hyperandrogenism, alopecia, acanthosis nigricans: refer to an endocrinologist and/or a gynaecologist
Observation of skin	Stretch marks, maceration or irritation in skin folds, mycosis
Screening for cancers	Very rapid evolution of weight gain: investigate for an organic cause (brain tumour). Ensure screening for breast and cervical cancer (in women), and colon cancer (same as in the general population)
Psychological, psychiatric, social assessment	Psychological difficulties, psychiatric problems, ill-treatment, traumatic event. Any form of social, family or professionals vulnerability
Eating disorders	Main clinical warning signs of binge eating disorder and other disorders[54] Cognitive restraint Emotional eating

Additional investigations based on clinical signs and BMI

Screening for obesity with a rare cause	Use the Obsgen online tool to aid diagnosis of syndrome-related obesities https://redc.integromics.fr/surveys/index.php?s=3HJPWN49 ER Refer to the French national diagnostic and care protocol (PNDS)[55]
Detect undernutrition Detect sarcopenia	In any person, particularly the elderly, a BMI ≥ 30 kg/m² does not exclude the possibility of undernutrition in accordance with the HAS criteria[56] Confirmation of sarcopenia if the undernutrition is associated with a reduction in strength and muscle mass with a functional impact, particularly in a person over 70 years of age[57]
Sleep disorders and breathing problems	In the event of obesity, investigate for sleep disorders (sleep duration and quality, reparative sleep). Refer to a sleep specialist in the presence of suggestive signs Investigation for obstructive sleep apnoea syndrome (OSA): daytime drowsiness, daily severe snoring, feelings of suffocation during sleep, repeated wakening, daytime drowsiness, concentration difficulties, nycturia (> 1 urination/night) Effort dyspnoea, asthma Systematic screening for OSA (usually by polysomnography):

[53] Ziegler O, Filipecki J, Girod I, Guillemin F. Development and validation of a French obesity-specific quality of life questionnaire: Quality of Life, Obesity and Dietetics (QOLOD) rating scale. Diabetes Metab 2005;31(3 Pt 1):273-83. http://dx.doi.org/10.1016/s1262-3636(07)70194-5

[54] *Haute Autorité de Santé, Fédération française anorexie boulimie.* Bulimia nervosa and binge eating disorder. Detection and general management information. Good practice guideline. Saint-Denis La Plaine: HAS; 2019. https://www.has-sante.fr/jcms/c_2581436/fr/boulimie-et-hyperphagie-boulimique-reperage-et-elements-generaux-de-prise-en-charge

[55] PRADORT rare diseases reference centre, DéfiScience, *Haute Autorité de Santé*. Obesities with rare causes. French national diagnostic and care protocol (PNDS). Saint-Denis La Plaine: HAS; 2021. https://www.has-sante.fr/jcms/p_3280217/fr/generique-obesites-de-causes-rares

[56] *Haute Autorité de Santé, Fédération française de nutrition*. Diagnosing undernutrition in children and adults. Good practice guideline. Saint-Denis La Plaine: HAS; 2019. https://www.has-sante.fr/jcms/p_3118872/fr/diagnostic-de-la-denutrition-de-l-enfant-et-de-l-adulte

[57] *Haute Autorité de Santé, Fédération française de nutrition.* Diagnosing undernutrition in people over 70 years of age. Good practice guideline. Saint-Denis La Plaine: HAS; 2021. https://www.has-sante.fr/jcms/p_3165944/fr/diagnostic-de-la-denutrition-chez-la-personne-de-70-ans-et-plus

	– if BMI ≥ 30 kg/m² associated with suggestive clinical signs (including nocturnal or treatment-resistant hypertension) – if BMI ≥ 35 kg/m² even in the absence of clinical signs suggestive of sleep disorders Systematic screening for obesity hypoventilation syndrome: if BMI ≥ 35 kg/m²; if BMI ≥ 30 kg/m² and SaO2 < 94%; if BMI ≥ 30 kg/m² and presence of restrictive syndrome [total lung capacity (TLC) < 85%] PFT (with measurement of volumes and flows) if BMI ≥ 30 kg/m² and resting dyspnoea or on slight effort; if BMI ≥ 35 kg/m² and OSA; if BMI ≥ 40 kg/m²
Investigation for gastro-esophageal reflux	Burning, pain, acid or sour reflux, retrosternal pain or burning, pyrosis, unexplained cough, food regurgitation
Screening for non-alcoholic fatty liver disease	Systematic in the event of a BMI ≥ 30 kg/m²: abdominal ultrasound or fatty liver biomarkers (Fatty Liver Index: FLI) measured on the basis of BMI, waist circumference, gamma GT and triglycerides: if normal, control after 3 to 5 years If presence of non-alcoholic fatty liver disease on ultrasound, screen for hepatic fibrosis by measuring the NAFLD Fibrosis Score (https://www.mdcalc.com/nafld-non-alcoholicfatty-liver-disease-fibrosis-score) or the Fibrosis-4 index (FIB-4) score (https://www.hepatitisc.uw.edu/page/clinicalcalculators/fib-4) from a baseline assessment: AST, ALT, GGT, platelets, serum albumin: • fibrosis excluded if values below the thresholds of -1.455 for NAFLD Fibrosis Score and 1.30 for FIB-4 • if values above the thresholds of - 1.455 for NAFLD Fibrosis Score and 1.30 for FIB-4, quantify the fibrosis: elastometry or more complex blood tests depending on availability
Screening for kidney disease	Systematic in the event of BMI ≥ 30 kg/m²: estimation of glomerular filtration rate: serum creatinine using the CKD-EPI equation, coupled with serum albumin. If normal result: repeat screening at least every 3 years, otherwise repeat more frequently depending on the initial result and the renal risk
Estimation of resting energy expenditure	Energy expenditure can be estimated using the Harris and Benedict predictive equations

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