

# Obesity protocol



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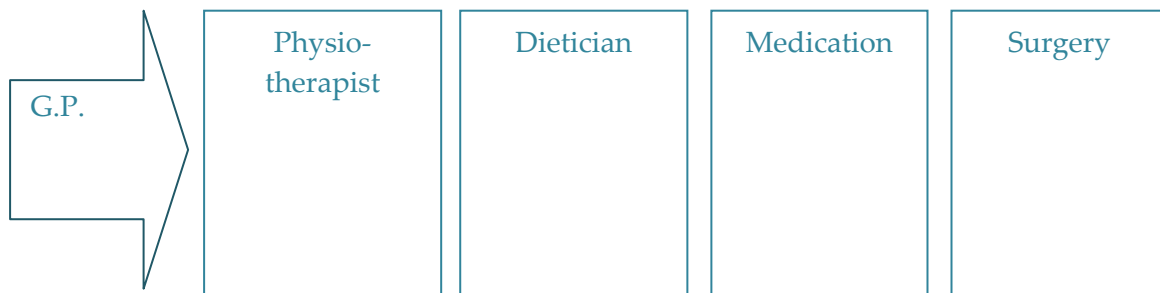
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## BMI and abdominal circumference

### Diagnostics

- Causes of obesity
- Risk factors and co-morbidity
- Eating behaviour (cave: binge eating disorder) and general feeding habits
- Lifestyle and physical exercise
- Family history
- Will and motivation (locus of control)
- Earlier attempts to lose weight
- Psychological problems
- Medication use

### Treatment



### Weight management

### Follow-up

## BMI and addominal circumference

◆ Use the body mass index (BMI) to classify overweight or obesity.

<18,5	underweight
18,5 – 24,9	normal weight
25 – 29,9	overweight
30 – 34,9	obesity level I (high risk of co-morbidity)
35 – 39,9	obesity level II (very high risk of co-morbidity)
≤ 40	obesity level III (extremely high risk of co-morbidity)

◆ In addition to the BMI the abdominal circumference should be measured as this is an extra indication of an increased risk of co-morbidities related to obesity.

Women: 80cm or more

Men: 94cm (Asian men 90cm) or more

◆ Prevention of obesity in high risk patients: they should be stimulated to eat healthy, exercise more and avoid 'sedentary behaviour' (including watching TV). Advise the patient to weigh himself regularly. The intake of fast food and the consumption of alcohol should be avoided as much as possible. Replace high energy products (including high-fat products, sports drinks and soft drinks) with low energy products, e.g. fiber products, vegetables, fruit and salads.

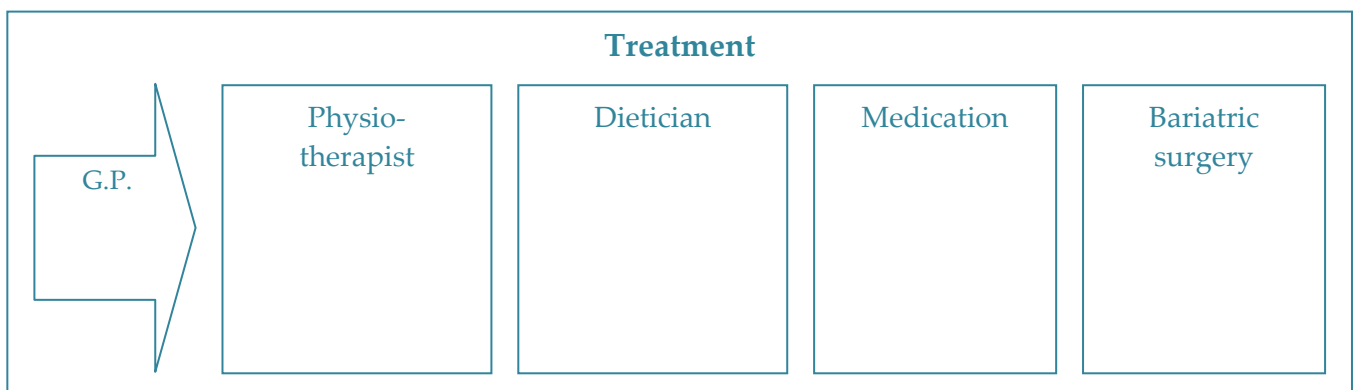
Patients that try to stop smoking and/ or medication that has been prescribed in relation to weight gain (atypical anti-psychotics, beta blockers, insulin, lithium, tricyclic antidepressants, sodium valproate, thiazolidinediones and sulphonylureas) are also at a high risk and should be offered interventions for weight control.

## Diagnosics, see overview page

Regarding the choice and intensity of the treatments, especially the following factors are of importance:

- Co-morbidity
- Risk category (BMI and abdominal circumference)
- Psychosocial context
- Personal preference of the patient
- Experience of treatments in the past / inhibiting factors

The intended therapy should be aimed at weight loss and weight maintenance as well as health benefits. If the patient is not prepared to change his lifestyle on the short and long term, or does not consider himself able to achieve weight loss, consider not setting up a treatment programme for this patient.



### Physiotherapist

Specific training of the aerobic system which in terms of energy loss equals 1800 – 2500 kcal / week gives the best results in weight reduction. This corresponds with approximately 225 – 300 min / week exercise at 70 – 85% of the maximum heart rate. This activity increases the breathing frequency and body temperature, but in such a way that comfortable conversation is still possible. For obese persons, this can be achieved through a brisk walk.

Functional muscle training targets the increase of the basic metabolism and fat-free tissue (muscular tissue).

The patient should aim for 5 times a week for 45 – 60 minutes, but the physical exercise can also be split up and spread across the day, if each session does not last shorter than 10 minutes. Furthermore, the patient may train at a higher intensity so that the required loss in calories is achieved sooner. Patients with an inactive lifestyle should work towards the target in several weeks, preferably under supervision of a

physiotherapist.

Physiotherapy is adapted for obese patients that have an exercise restriction as a result of (chronic) illness. In this case, expert guidance and supervision are essential. Cave: cardiac, diffusion and / or ventilatory restriction, locus of control, body composition.

### **Dietician**

It is important that the nutrition during the period of weight loss contains 600 kcal (2,5 MJ) less than the daily energy use to realize a weight loss of 300 – 500 gram per week. Reduce the intake of high energy products and replace these with low energy and protein rich products. Avoid the consumption of alcohol, sugar-rich drinks, products rich in fats and fast food. The type of diet can be developed on a personal level and according to the patient's personal preferences.

You should aim for a weight reduction of 5 – 15% for BMI 25 – 30 to achieve a cardiovascular and metabolic risk reduction. If BMI > 35, usually co-morbidities are present, and the goal of the treatment is to influence these positively. Weight loss of 15 – 20% is the minimum necessary. Cave: diabetes mellitus, obstipation, loss of muscular tissue, oedema, ethnicity.

### **Psychotherapist**

It can be considered to add cognitive behavior therapy to the treatment programme of obese persons with BMI > 30 kg/m<sup>2</sup>, and to teach new skills actively. Cognitive behavior therapy should encompass the following interventions: self-monitoring of food intake, stimulus control (learning to avoid tempting unhealthy food), changing feeding habits and cognitive restructuring (aimed at replacing negative thinking by positive thinking). Furthermore, set goals together, such as strategies to prevent a fall back.

Problem solving is a good addition to cognitive behavior therapy to achieve weight stabilization.

It is recommended to involve partners and / or family members in the treatment because support of the environment can lead to better results.

### **Medication**

When serious lifestyle interventions only lead to limited weight loss (< 5% in a year), medical therapy can be considered. Only in cases where physiotherapy, change in diet and lifestyle have already been applied. Medical alternatives are: orlistat or sibutramine. Literature on the effects of pharmacological intervention with the available drugs show relatively limited effects on body weight, as well as risk factors such as diabetes mellitus and cardio-vascular disease. Furthermore, the safety of some products is questioned. A reserved position for these medications is therefore recommended

## **Bariatric surgery**

Consider this as part of the general clinical plan. It can be considered for patients in which the following three factors are present, and when the benefits of the surgery outweigh the disadvantages.

- ◆ BMI >35
- ◆ One or more severe co-morbidities (mobility problems, diabetic complications and arthritis) that are clinically expected to improve significantly after weight reduction
- ◆ No significant result was achieved for present co-morbidities by a structured weight loss programme (physiotherapy, diet, psychological intervention and pharmacotherapy)

After the decision to engage in bariatric surgery, a specialistic psychological or psychiatric advice is necessary to determine which patients will benefit from extensive information and follow-up. An extensive history of dysfunctional eating habits or interventions related to this, BED (binge eating disorder), psychological problems and / or depression do not need to be seen as absolute contra-indications for bariatric surgery.

Revision surgery (when the original operation has failed) is only conducted in specialized centres by surgeons with a high level of experience due to the high risk of complications and mortality.

## **Weight management**

Several phases in this process can be distinguished:

- ◆ Primary prevention of excessive weight gain
- ◆ Weight loss (approximately 3 to 6 months)
- ◆ Prevention of fall-back to former weight (approx. 3 to 6 months after weight loss phase)
- ◆ Optimising health and decreasing risk of disease, irrespective of achieving weight loss or not

Inform the patient about the health benefit that even a small weight reduction can bring. These are:

- ◆ Improvement of lipid profile and blood sugar
- ◆ Reduction of blood pressure
- ◆ Decrease in risk of diabetes
- ◆ Lower mortality in case of cancer and diabetes (among others)
- ◆ Less limitations related to osteo-arthritis
- ◆ Improved lung function in asthma patients

## **Follow-up**