The general practitioner performs diagnosis of:

**Adults**
- who have themselves requested support for weight reduction;
- who have co-morbidity that makes weight reduction important;
- who have an increased cardiovascular risk (see NHG Guideline on CVRM).

**Children**
- who have themselves (or whose parents/carers have) requested support for weight reduction;
- who have been referred due to obesity by the child healthcare service or another primary care facility;
- who have been diagnosed with pathology/risk factors in which high body weight can play a role;
- who look obese, regardless of their reason for visiting the practice.

**History**

Ask about:
- symptoms of underlying causes: chronic disease(s) with limitation of movement, hypothyroidism, polycystic ovarian syndrome, neurological disorders/decreased visual acuity or visual field limitation (tumour hypothalamus);
- symptoms as a result of obesity: dyspnoea, pain in knee or hip, symptoms of sleep apnoea;
- psychological conditions: depression, eating disorders, social phobia.

*Extra in children:*
- psychosocial problems: abnormal behaviour, being bullied, parenting problems;
- occurrence of obesity, diabetes, cardiovascular risk factors or conditions in the parents;
- growth curve: small stature or deviation from the curve.

**Physical examination**

- Determine height, weight, waist circumference and BMI (weight (in kg)/height$^2$ (in m)).
- In children, also check for the presence of dysmorpia and acanthosis nigricans.

**Additional investigations**

- In **adults**: see NHG Guidelines on CVRM or Type 2 diabetes mellitus for indications for setting up a cardiovascular risk profile and screening for diabetes. Refer to the NHG Guideline on Thyroid Conditions in the case of suspected hypothyroidism.
- In **children**: determine a fasting glucose level in children > 10 years.

**Classification of BMI in adults**

<table>
<thead>
<tr>
<th>Classification</th>
<th>BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal weight</td>
<td>18.5 – 24.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>25 – 29.9</td>
</tr>
<tr>
<td>Obesity</td>
<td>30 – 39.9</td>
</tr>
<tr>
<td>Morbid obesity</td>
<td>≥ 40</td>
</tr>
</tbody>
</table>

Classification of BMI in children: use the BMI calculator at www.nhg.org/BMI. For children, determine the severity of obesity (grade 1, 2 or 3, see table 2 guideline text).
The general practitioner treats the following groups of patients:

**Adults**
- with overweight and a severely enlarged waist circumference, who ask for support;
- with overweight and overweight-related co-morbidity (diabetes type 2, cardiovascular disease, chronic joint problems or sleep apnoea);
- with overweight and an increased cardiovascular risk (according to NHG Guideline on CVRM);
- with obesity.

**Children**
- with grade 1 or 2 obesity, without elevated glucose level (< 5.6 mmol/L).

### THERAPEUTIC RECOMMENDATIONS

Create an *individual treatment* plan together with the patient (see guideline text).

#### Education

Inform the patient about:
- complications of obesity;
- realistic weight loss (5 to 10 %) and its effects;
- the importance of lifestyle adjustments and involving the environment of the patient.

#### Non-drug treatment

A combined lifestyle intervention of:
- healthy diet (Dutch Guidelines on Good Nutrition);
- at least 1 hour of moderately intense exercise per day;
- possible (cognitive) behavioural therapy and/or parenting support.

Duration: 1 year of guidance for weight reduction, 1 year of guidance for weight maintenance, followed by less intense follow-up.

#### Follow-up

*Every three months in the first two years:*
- discuss the treatment plan, evaluate the motivation and the extent to which the aim of the treatment has been achieved;
- determine weight and waist circumference and for children also height and glucose once a year.

Offer *half-yearly* follow-up thereafter. If the patient has diabetes and/or (an increased risk of) cardiovascular disease, perform the follow-up during consultations for these conditions.

#### Referral

Refer

**Adults:**
- with a suspected underlying cause that requires specialised examination;
- with suspected sleep apnoea syndrome;
- for bariatric surgery to a hospital with plenty of experience.

**Children:**
- if practice requirements are not adequate;
- with grade 3 obesity or grade 1 or 2 obesity with elevated glucose level;
- with symptoms of sleep apnoea syndrome;
- with acanthosis nigricans;
- with a suspected rare underlying condition;
- if weight loss after 6 months of treatment is < 10 % in children who are no longer growing and < 5 % in children still growing;
- in the case of (sexual) abuse and/or emotional neglect.