Obesity and overweight can be managed in Primary Care by a motivated well-informed multi-disciplinary team. The aim of treatment is to achieve and maintain weight loss by promoting sustainable changes in lifestyle.

**Patient selection:** Most patients attending diabetic or cardiovascular clinics will automatically be candidates for weight management. Other patients may be picked up by practice audit, opportunistic screening or self-referral. Posters and leaflets should be available in the surgery and community for the education of patients.

**Treatment groups:** Treatment or advice should be offered to:
- Patients with BMI > 30
- Patients with BMI ≥28 with co-morbidities, e.g. COAD, coronary heart disease and diabetes.
- Patients with any degree of overweight coinciding with diabetes, other severe risk factors or serious disease.
- Patients who self-refer, where appropriate.
- Parents of families with more than one obese or overweight member may need special consideration and more intensive support.
- Prevention advice should be offered to high risk individuals e.g. those with a family history of obesity, smokers, people with learning disabilities, low income groups.

**History:** including personal medical history, family history, social history, past history of dieting, readiness to change, barriers to change and current diet and levels of activity.

**Investigations:** to isolate any medical pathology,
- Act as a baseline for future measurements,
- Exclude any secondary conditions or co-morbidities,
- Reassure patients that there is no reason why they cannot lose weight.

Height, weight, BMI (≥25 overweight, ≥30 clinically obese), waist circumference (>102cm for men, >88cm for women lead to substantially increased health risk), blood pressure, urinalysis, microalbuminuria screen and blood tests if appropriate: consider U&Es TFTs, LFTs, fasting Blood Glucose, fasting lipids, hormone profile including sex hormones and cortisol. Other tests should be carried out as dictated by co-morbidities, e.g. CXR, ecg, glucose tolerance test, HbA1c, creatinine clearance.

**Bio Impedance Analysis:** is an indirect measure of fatness and can be unreliable in e.g. children and athletes. Bioelectrical Impedance Analysis can be used to measure body fat and lean tissue mass; it is reliable and accurate, and can be motivational in patients who become more active and improve their body composition. It is assessed with an, inexpensive stand-on body composition analyser.

**Primary Care Teamwork:** After initial assessment, management should involve as many members of the primary care team as possible, according to availability (including doctors, nurses, dietitian, counsellor etc) to provide support and advice about weight loss and its long-term maintenance. Information on local facilities for exercise and physical activity, relevant support groups and weight management groups should be made available. It is essential that each member of the team gives consistent advice, and has a positive approach.

**Treatment**
Parents and families; it is important to give special consideration to situations where parents and other family members are obese or overweight. Parents are important role models for their children, but the child may be the catalyst for change within the whole family. Successful interventions involve the whole family, and the children and/or adolescents, and family should be willing and motivated to make lifestyle changes. Weight maintenance should be addressed at the start of any weight management programme and support for any weight loss achieved should be offered on a long-term basis. Obesity is a chronic condition and its management should be lifelong.

**Goals:** Aim for 10% weight loss in 3 months to achieve significant health benefits. 5-10% has also been shown to produce measurable health outcomes. Any weight loss should be encouraged and for some weight maintenance, rather than weight gain may be a realistic goal.
**First line:** The aim is to achieve a 500Kcal deficit of energy requirements through changes in diet and physical activity.

- Support and encouragement e.g. weight management clinics either within primary care or commercially run. Targets, treatments and expectations should be agreed with patients, e.g. 0.5Kg per week, or 10% maintained weight loss rather than ‘ideal weight’. Advice about co-existing risk factors e.g. alcohol, smoking, hyperlipidaemias. Regular follow-up appointments with initially monthly, then 1-3 monthly for at least 1 year, to help maintain weight loss.
- Permanent sustainable lifestyle changes: some activity every day; less television, computer games and sedentary lifestyles; more exercise; 30-40 minutes sustained exercise; e.g. brisk walking, swimming or cycling, at least 5 days per week.
- More exercise during daily routine; use stairs instead of lifts; walk to work, or park the car further away from work place; take a walk during lunch break. Gardening, washing the car, and activities around the home should be encouraged.
- Encourage activity as a whole family; e.g. walks or trips to the park for relaxation.

**Dietary changes:**
- Establish regular meals, including breakfast & encourage healthy eating for long term weight management.
- Reduce dietary fat; avoid fried food; encourage grilled, boiled or baked. Buy lean cuts of meat; avoid crisps, pies, cakes, biscuits. Use semi-skimmed milk and low fat spreads.
- Encourage healthy snacks e.g. fruit as alternatives to sweets, chocolates or crisps.
- Provide advice to patients about food labelling.
- Encourage self-monitoring i.e. food diaries to enable patient to establish areas for change. Suggested changes need to be tailored to the individual. Giving standard diet sheets is rarely effective.
- Use locally approved advice sheets to ensure consistency of messages. Contact local dietetic departments for guidance.

**Other Dietary Options:**
- Meal Replacements provide a suitable option for some patients. These are structured diet plans normally involving the consumption of two meal replacement drinks per day, plus a self prepared evening meal, fruit and vegetables, totalling approximately 1200-1400kcal daily. They are purchased from supermarkets and pharmacies.
- VLCDs (diets containing less than 800 kcal/day) are an option for some overweight and obese patients, but should only be used under medical supervision if the patient is on medication or has a medical condition.

Success of first line treatment is gauged after 3-6 months by reduction of BMI, weight reduction (e.g. 5-10% or waist reduction 5-10cm), improvement of symptoms, or reduced markers of co-morbidity (e.g. exercise tolerance or blood sugar). If these criteria are not achieved, second line treatment should be considered:

**Drug treatment:**
- The pancreatic lipase inhibitor Orlistat may be used in conjunction with a low fat diet to achieve more rapid and greater weight loss. Patients must lose 2.5Kg prior to treatment and demonstrate a 5% reduction in weight in 3 months and 10% in 6 months to comply with licensing and NICE guidelines. It is not absorbed from the gut, and is therefore free from systemic side effects; however patients eating inappropriate high amounts of dietary fat may experience oily bowel motions, flatulence or leakage.
- Sibutramine inhibits reuptake of serotonin and noradrenaline, which control food intake. It has been shown to be an effective aid to weight reduction and maintenance. It helps patients feel satisfied with smaller portions of food, so that they eat less. It is contraindicated in patients with high or poorly controlled blood pressure (>145/90) or significant cardiovascular disease. BP must be checked initially at 2 weekly intervals for 3 months. Patients must show 2 Kg loss at 4 weeks and 5% at 3 months in order to continue treatment.
- According to their licences and the NICE guidelines, Sibutramine and Orlistat are indicated for the promotion of weight loss as an adjunctive therapy within a weight management programme for patients with nutritional obesity and a BMI of 30Kg/m\(^2\) or higher, or for patients with BMI of 28Kg/m\(^2\) or higher (27Kg/m\(^2\) for Sibutramine), if other obesity related risk factors are present.

**Other therapies:**
- Behavioural therapy. Alternative treatments; including acupuncture and hypnotherapy
- Referral to hospital obesity clinic when insufficient weight loss achieved, particularly when BMI >40, or >35 + co-morbidities, or in presence of uncontrolled complications
- Bariatric Surgery can be extremely successful, but is only indicated in the severely obese; someone who is >100% above their ideal weight, has a BMI >40 or is at immediate risk of serious medical complications. An increasingly common procedure is the laparoscopic gastric band. By this method the functional capacity of the stomach is permanently reduced by the partitioning off of a small segment of the body of the stomach, in order to reduce food intake. Older methods, including the ‘Roux-en-Y’ technique, surgically bypass the stomach, thereby combining malabsorption of food with restriction of the capacity of the stomach.