The main treatment for obesity consists of dieting and physical exercise. Diet programs may produce weight loss over the short term but maintaining this weight loss is frequently difficult and often requires making exercise and a lower calorie diet a permanent part of a person's lifestyle. Success rates of long-term weight loss maintenance with lifestyle changes are low ranging from 2 to 20%. Dietary and lifestyle changes are effective in limiting excessive weight gain in pregnancy and improve outcomes for both the mother and the child.

One medication, orlistat (Xenixal), is current widely available and approved for long term use. Weight loss however is modest with an average of 2.9 kg (6.4 lb) at 1 to 4 years and there is little information on how these drugs affect longer-term complications of obesity. Its use is associated with high rates of gastrointestinal side effects.

The most effective treatment for obesity is bariatric surgery. Surgery for severe obesity is associated with long-term weight loss and decreased overall mortality. One study found a weight loss of between 14% and 25% (depending on the type of procedure performed) at 10 years, and a 29% reduction in all cause mortality when compared to standard weight loss measures. However, due to its cost and the risk of complications, researchers are searching for other effective yet less invasive treatments.

Studies have found significant benefits in mortality in certain populations from weight loss. In a prospective study of obese women with weight related diseases, intentional weight loss of any amount was associated with a 20% reduction in mortality. In obese women without obesity related illnesses a weight loss of greater than 9 kg (20 lb) was associated with a 25% reduction in mortality. A 2007 review concluded that certain subgroups such as those with type 2 diabetes and women show long term benefits in all cause mortality, while outcomes for men do not seem to be improved with weight loss. A subsequent study has found benefits in mortality from intentional weight loss in those who have severe obesity.