

and mature, with different growth patterns seen between boys and girls.

Public Health England advises that the British 1990 (UK90) growth reference charts should be used to determine the weight status of children. A child  $\geq$  the 91st centile is classified as overweight, and as obese if  $\geq$  the 98th centile. Waist circumference is not recommended as a routine measure, but should be used as an additional predictor for risk of developing other long-term health problems. Children who are overweight or obese and have significant comorbidities or complex needs should be considered for specialist referral.

### Aims of treatment

Children who are overweight or obese and are no longer growing taller will ultimately need to lose weight and maintain weight loss to improve their BMI. However, preventing further weight gain while making lifestyle changes, may be an appropriate short-term aim.

### Overview

**EvGr** The goals of management of obesity should be agreed together with the child and their parents or carers; parents or carers should be encouraged to take responsibility for lifestyle changes of their children. Referral to a specialist can be considered for children who are overweight or obese and have significant comorbidities or complex needs (e.g. learning disabilities). Children should be assessed for comorbidities such as hypertension, hyperinsulinaemia, dyslipidaemia, type 2 diabetes, psychosocial dysfunction, and exacerbation of conditions such as asthma.

An initial assessment should consider potential underlying causes (e.g. hypothyroidism) and a review of the appropriateness of current medications, which are known to cause weight gain, e.g. atypical antipsychotics, beta-adrenergic blocking drugs, insulin (when used in the treatment of type 2 diabetes), sodium valproate, and tricyclic antidepressants.  $\blacktriangle$

### Lifestyle changes

**EvGr** Obese children should be encouraged to engage in a sustainable weight management programme which includes strategies to change behaviour, increase physical activity and improve diet and eating behaviour. These changes should be encouraged within the whole family. Any dietary changes should be age appropriate and consistent with healthy eating recommendations. Surgical intervention is not generally recommended in children or adolescents.  $\blacktriangle$

### Drug treatment

**EvGr** Drug treatment is not generally recommended for children younger than 12 years, unless there are exceptional circumstances, such as if severe comorbidities are present. In children over 12 years, drug treatment is only recommended if physical comorbidities, such as orthopaedic problems or sleep apnoea, or severe psychological comorbidities are present. Drug treatment should **never** be used as the sole element of treatment and should be used as part of an overall weight management plan. Orlistat below [unlicensed use] is the only drug currently available in the UK that is recommended specifically for the treatment of obesity; it acts by reducing the absorption of dietary fat. Treatment should be started and monitored in a specialist paediatric setting by experienced multidisciplinary teams. An initial 6–12 month trial is recommended, with regular review to assess effectiveness, adverse effects and adherence.

Treatment may also be used to maintain weight loss rather than to continue to lose weight. A vitamin and mineral supplement may also be considered if there is concern about inadequate micronutrient intake, particularly for younger children who need vitamins and minerals for growth and development.  $\blacktriangle$

### Useful Resources

Obesity: identification, assessment and management. Clinical Guideline 189. National Institute for Health and Care Excellence. November 2014.  
[www.nice.org.uk/guidance/cg189](http://www.nice.org.uk/guidance/cg189)

Measuring and interpreting BMI in Children. Public Health England.  
[webarchive.nationalarchives.gov.uk/20170210161227/www.noo.org.uk/NOO\\_about\\_obesity/measurement/children](http://webarchive.nationalarchives.gov.uk/20170210161227/www.noo.org.uk/NOO_about_obesity/measurement/children)

## PERIPHERALLY ACTING ANTI-OBESITY PRODUCTS > LIPASE INHIBITORS

### Orlistat

- **DRUG ACTION** Orlistat, a lipase inhibitor, reduces the absorption of dietary fat.

#### ● INDICATIONS AND DOSE

##### Adjunct in obesity

- ▶ BY MOUTH
- ▶ Child 12–17 years (initiated by a specialist): 120 mg up to 3 times a day, dose to be taken immediately before, during, or up to 1 hour after each main meal, continue treatment beyond 12 weeks only under specialist supervision, if a meal is missed or contains no fat, the dose of orlistat should be omitted

- **UNLICENSED USE** Not licensed for use in children.
- **CONTRA-INDICATIONS** Cholestasis · chronic malabsorption syndrome
- **CAUTIONS** Chronic kidney disease · may impair absorption of fat-soluble vitamins · volume depletion  
**CAUTIONS, FURTHER INFORMATION** Vitamin supplementation (especially of vitamin D) may be considered if there is concern about deficiency of fat-soluble vitamins.
- **INTERACTIONS** → Appendix 1: orlistat
- **SIDE-EFFECTS**
- ▶ **Common or very common** Abdominal pain (may be minimised by reduced fat intake) · anxiety · diarrhoea · gastrointestinal disorders
- ▶ **Frequency not known** Anorectal haemorrhage · bullous dermatitis · cholelithiasis · diverticulitis · hepatitis · oxalate nephropathy · pancreatitis · renal failure
- **PREGNANCY** Use with caution.
- **BREAST FEEDING** Avoid—no information available.

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

#### Capsule

- ▶ **Orlistat (Non-proprietary)**  
**Orlistat 120 mg** Orlistat 120mg capsules | 84 capsule **[PoM]** £35.43 DT = £27.30
- ▶ **Alli** (GlaxoSmithKline Consumer Healthcare)  
**Orlistat 60 mg** Alli 60mg capsules | 84 capsule **[P]** £30.70 DT = £30.70
- ▶ **Beacita** (Actavis UK Ltd)  
**Orlistat 120 mg** Beacita 120mg capsules | 84 capsule **[PoM]** £21.95 DT = £27.30
- ▶ **Orlios** (Crescent Pharma Ltd)  
**Orlistat 60 mg** Orlios 60mg capsules | 84 capsule **[P]** £16.95 DT = £30.70
- ▶ **Xenical** (Cheplapharm Arzneimittel GmbH)  
**Orlistat 120 mg** Xenical 120mg capsules | 84 capsule **[PoM]** £31.63 DT = £27.30