



## A summary of prescribing recommendations from NICE guidance

# GORD: children and young people

NICE NG1: 2015

This guideline covers the recognition, diagnosis and management of gastro-oesophageal reflux disease in infants, children and young people.

### Definition of terms

GOR	gastro-oesophageal reflux
GORD	gastro-oesophageal reflux disease
GI	gastrointestinal
PPI	proton pump inhibitor
H <sub>2</sub> RA	H <sub>2</sub> receptor antagonist

In clinical practice it is difficult to differentiate between GOR and GORD, and the terms are used interchangeably. There is no simple, reliable and accurate diagnostic test to confirm whether the condition is GOR or GORD and this affects clinical decisions.

**GOR** is the passage of gastric contents into the oesophagus. It can happen at all ages from infancy to old age and is often asymptomatic. It occurs more frequently after feeds/meals. In many infants, GOR is associated with a tendency to 'overt regurgitation' – the visible regurgitation of feeds.

**GORD** refers to GOR that causes symptoms e.g. pain or discomfort, severe enough to merit medical treatment, or to GOR-associated complications such as oesophagitis or pulmonary aspiration.

### Investigation and diagnosis

- ◆ Recognise regurgitation of feeds as a common and normal occurrence in infants that:
  - > is due to GOR,
  - > does not usually need any investigation or treatment,
  - > is managed by advising and reassuring parents/carers.
- ◆ In a small proportion of infants, GOR may be associated with signs of distress or lead to recognised complications that need clinical management i.e. GORD.
- ◆ Give advice about GOR and reassure parents/carers that in well infants, effortless regurgitation of feeds:
  - > is very common (it affects at least 40% of infants),
  - > usually begins before the infant is 8 weeks old,
  - > may be frequent (5% of those affected have 6 or more episodes each day),
  - > usually becomes less frequent with time (it resolves in 90% of affected infants before they are 1 year old),
  - > does not usually need further investigation or treatment.
- ◆ Reassure parents/carers and advise them to return for review if any of the following occur:
  - > the regurgitation becomes persistently projectile,
  - > there is bile-stained (green or yellow-green) vomiting or haematemesis (blood in vomit),
  - > there are new concerns, such as signs of marked distress, feeding difficulties or faltering growth,
  - > there is persistent, frequent regurgitation beyond the first year of life.
- ◆ In infants, children and young people with vomiting or regurgitation, look out for '[red flag symptoms and signs](#)', which may suggest disorders other than GOR. Investigate or refer using clinical judgement.

- ◆ **Do NOT** routinely investigate or treat for GOR if an infant or child without overt regurgitation presents with only 1 of the following:
  - > unexplained feeding difficulties (e.g. refusing to feed, gagging or choking),
  - > distressed behaviour,
  - > faltering growth,
  - > chronic cough,
  - > hoarseness,
  - > a single episode of pneumonia.
- ◆ Consider referring infants and children with persistent back arching or features of Sandifer's syndrome (episodic torticollis with neck extension and rotation) for specialist assessment.
- ◆ Recognise the following as possible complications of GOR in infants, children and young people:
  - > reflux oesophagitis,
  - > recurrent aspiration pneumonia,
  - > frequent otitis media e.g. >3 episodes in 6 months,
  - > dental erosion in a child or young person with a neurodisability, in particular cerebral palsy.
- ◆ Recognise the following as possible symptoms of GOR in children and young people:
  - > heartburn,
  - > retrosternal pain,
  - > epigastric pain.
- ◆ Be aware that GOR is more common in children and young people with asthma, but has not been shown to cause or worsen it.
- ◆ Be aware that some symptoms of a non-IgE-mediated cows' milk protein allergy can be similar to the symptoms of GORD, especially in infants with atopic symptoms, signs and/or a family history. If a non-IgE-mediated cows' milk protein allergy is suspected, see [NICE pathway: Food allergy in children and young people](#).
- ◆ When deciding whether to investigate or treat, take into account the following are associated with an increased prevalence of GORD:
  - > premature birth,
  - > parental history of heartburn or acid regurgitation,
  - > obesity,
  - > hiatus hernia,
  - > history of congenital diaphragmatic hernia (repaired),
  - > history of congenital oesophageal atresia (repaired),
  - > a neurodisability.
- ◆ GOR rarely causes episodes of apnoea or apparent life-threatening events. Consider referral for specialist investigations if it is suspected as a possible factor following a general paediatric assessment.
- ◆ Arrange an urgent specialist hospital assessment to take place on the same day for infants younger than 2 months with progressively worsening or forceful vomiting of feeds, to assess them for possible hypertrophic pyloric stenosis.
- ◆ GI contrast study – see [NICE pathway](#). **Do NOT** offer an upper GI contrast study to diagnose or assess the severity of GORD in infants, children and young people.

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- ◆ Arrange a specialist hospital assessment for infants, children and young people for a possible upper GI endoscopy with biopsies if there is:
  - > haematemesis not caused by swallowed blood.\*
  - > melaena (black, foul-smelling stool),\*
  - > dysphagia,\*
  - > no improvement in regurgitation after 1 year old,
  - > unexplained distress in children and young people with communication difficulties,
  - > persistent, faltering growth associated with overt regurgitation,
  - > retrosternal, epigastric or upper abdominal pain that needs ongoing medical therapy or is refractory to medical therapy,
  - > feeding aversion and a history of regurgitation,
  - > unexplained iron-deficiency anaemia,
  - > a suspected diagnosis of Sandifer's syndrome.
- ◆ Consider performing an oesophageal pH study (or combined oesophageal pH and impedance monitoring if available) in infants, children and young people with:
  - > suspected recurrent aspiration pneumonia,
  - > unexplained apnoeas,
  - > unexplained non-epileptic seizure-like events,
  - > unexplained upper airway inflammation,
  - > dental erosion associated with a neurodisability,
  - > frequent otitis media,
  - > a possible need for fundoplication,
  - > a suspected diagnosis of Sandifer's syndrome.
- ◆ Consider performing an oesophageal pH study without impedance monitoring in infants, children and young people if, using clinical judgement, it is thought necessary to ensure effective acid suppression.
- ◆ Investigate the possibility of a urinary tract infection in infants with regurgitation if there is:
  - > faltering growth,
  - > late onset (after the infant is 8 weeks old),
  - > frequent regurgitation and marked distress.

### Treatment and management

- ◆ **Do NOT** use positional management to treat GOR in sleeping infants. Infants should be placed on their back when sleeping.
- ◆ In **breast-fed infants** with frequent regurgitation associated with marked distress, ensure that a person with appropriate expertise and training carries out a breastfeeding assessment. If frequent regurgitation continues despite a breastfeeding assessment and advice, consider alginate therapy\*\* (*Gaviscon Infant*) for a trial period of 1 to 2 weeks.
- ◆ If alginate therapy\*\* is successful continue, but try stopping it at intervals to see if the infant has recovered.
- ◆ In **formula-fed infants** with frequent regurgitation associated with marked distress, use the following stepped-care approach:
  - > review feeding history, **then**
  - > reduce feed volumes only if excessive for the infant's weight, **then**
  - > offer a trial of smaller, more frequent feeds (while maintaining an appropriate total daily amount of milk) unless the feeds are already small and frequent, **then**
  - > offer a trial of thickened formula e.g. containing rice starch, cornstarch, locust bean gum or carob bean gum e.g. *Instant Carobel*.

- ◆ In **formula-fed infants**, if a stepped-care approach is unsuccessful, stop thickened formula and offer alginate therapy\*\* (*Gaviscon Infant*) for a trial period of 1 to 2 weeks. If the alginate therapy is successful continue, but try stopping it at intervals to see if the infant has recovered.

### Advice about weight loss

- ◆ For children and young people who are obese and have heartburn or acid regurgitation, advise them and their parents/carers (as appropriate) that losing weight may improve their symptoms. See the [NICE pathway: Obesity](#).

### Pharmacological treatment

- ◆ **Do NOT** offer acid-suppressing drugs, such as PPIs or H<sub>2</sub>RAs, to treat overt regurgitation in infants and children occurring as an isolated symptom.
- ◆ Consider a 4-week trial of a PPI e.g. omeprazole,\*\* lansoprazole,\*\* esomeprazole,\*\* or H<sub>2</sub>RA e.g. ranitidine,\*\* for infants and young children unable to tell you about their symptoms, and those with a neurodisability with expressive communication difficulties who have overt regurgitation with ≥1 of the following:
  - > unexplained feeding difficulties e.g. refusing feeds, gagging or choking,
  - > distressed behaviour,
  - > faltering growth.
- ◆ Consider a 4-week trial of a PPI or H<sub>2</sub>RA for children and young people with persistent heartburn, retrosternal or epigastric pain.
- ◆ Assess response to the 4-week trial of the PPI or H<sub>2</sub>RA, and consider referral to a specialist for possible endoscopy if the symptoms:
  - > do not resolve **OR**,
  - > recur after stopping treatment.
- ◆ When choosing between PPIs and H<sub>2</sub>RAs, take into account:
  - > the availability of age-appropriate preparations,\*\*
  - > the preference of the parent/carer/child or young person,
  - > local procurement costs.
- ◆ Offer PPI or H<sub>2</sub>RA treatment to infants, children or young people with endoscopy-proven reflux oesophagitis, and consider repeat endoscopic examinations as necessary to guide subsequent treatment.
- ◆ **Do NOT** offer metoclopramide, domperidone or erythromycin to treat GOR or GORD without seeking specialist advice.

**Enteral and jejunal tube feeding and surgery** – see [NICE pathway](#).

**Recommendations** – wording used such as 'offer' and 'consider' denote the [strength of the recommendation](#).

**Drug recommendations** – the guideline assumes that prescribers will use a drug's [Summary of Product Characteristics \(SPC\)](#) to inform treatment decisions.

\* Assessment to take place on the same day if clinically indicated; also see ['red flag' symptoms and signs](#)

\*\* See [BNFC](#) for dosage recommendations and UK licensed indications in infants and children.

See [NICE pathway: Dyspepsia and gastro-oesophageal reflux disease](#)