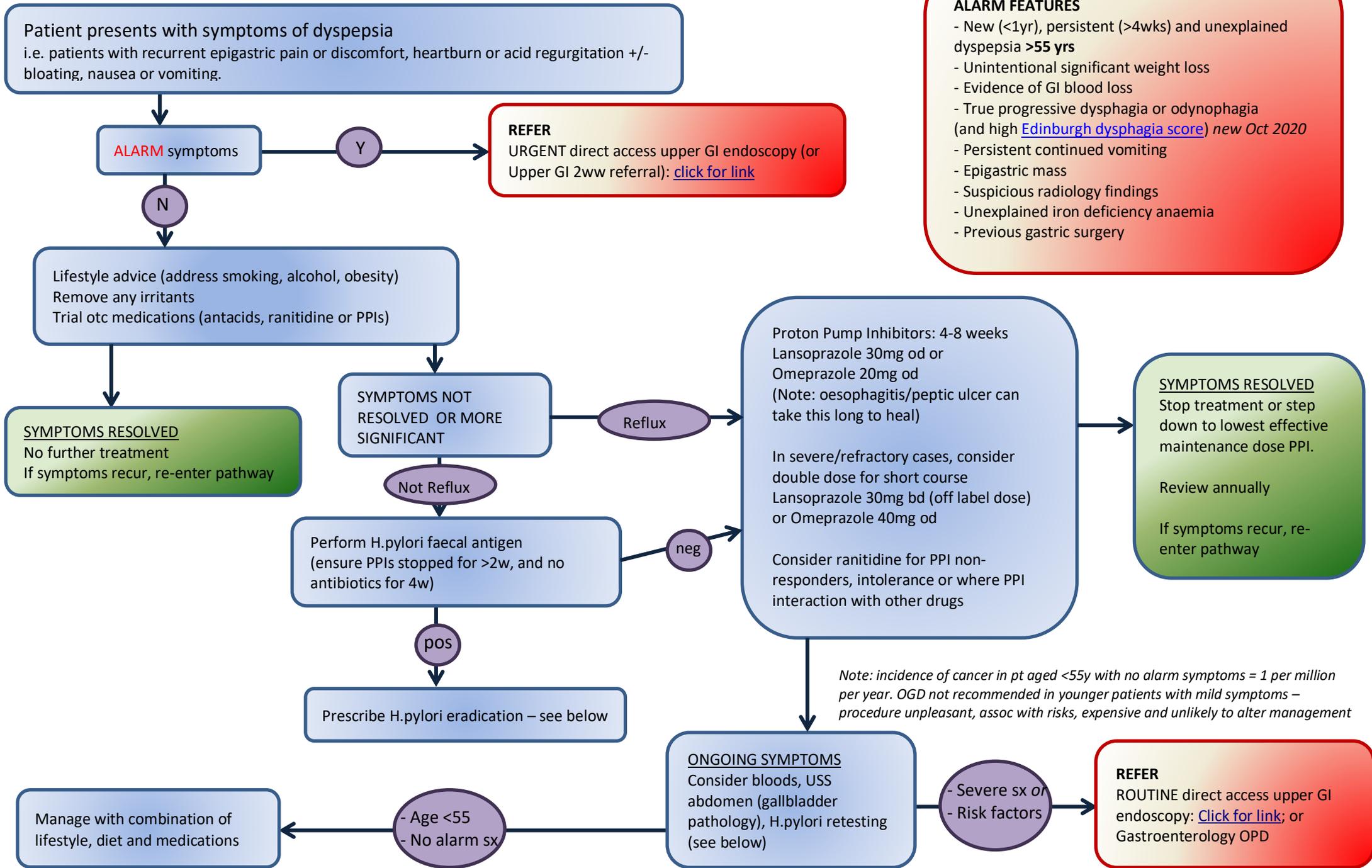


## City & Hackney Dyspepsia Pathway



### ALARM FEATURES

- New (<1yr), persistent (>4wks) and unexplained dyspepsia >55 yrs
- Unintentional significant weight loss
- Evidence of GI blood loss
- True progressive dysphagia or odynophagia (and high [Edinburgh dysphagia score](#)) new Oct 2020
- Persistent continued vomiting
- Epigastric mass
- Suspicious radiology findings
- Unexplained iron deficiency anaemia
- Previous gastric surgery

*Note: incidence of cancer in pt aged <55y with no alarm symptoms = 1 per million per year. OGD not recommended in younger patients with mild symptoms – procedure unpleasant, assoc with risks, expensive and unlikely to alter management*

## Dyspepsia

**Routine endoscopy is not indicated for dyspepsia without alarm symptoms or risk factors for cancer (see below)**

- The incidence of upper GI cancer in those under 55yrs without alarm features is 1 per million population per year [2]
- The majority of cases of dyspepsia can be managed without endoscopy in primary care

The group that do require endoscopy are:

- Patients with alarm symptoms – any age
- Age >55yrs with new symptoms
- Patients with specific risk factors (see box)

Link to [Upper GI algorithm](#)

<p><b>ALARM FEATURES</b></p> <ul style="list-style-type: none"> <li>- New (&lt;1yr), persistent (&gt;4wks) and unexplained dyspepsia &gt;55 yrs</li> <li>- Unintentional weight loss &gt;3kg</li> <li>- Evidence of GI blood loss</li> <li>- Dysphagia (with high <a href="#">Edinburgh dysphagia score</a>) or odynophagia</li> <li>- Persistent continued vomiting</li> <li>- Epigastric mass</li> <li>- Suspicious radiology findings</li> <li>- Unexplained iron deficiency anaemia</li> </ul>
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<p><b>Risk factors for cancer:</b></p> <p>have a lower threshold for referral in those with:</p> <ul style="list-style-type: none"> <li>- Barrett's oesophagus</li> <li>- Pernicious anaemia / atrophic gastritis</li> <li>- Known gastric intestinal metaplasia</li> <li>- Previous peptic ulcer surgery</li> <li>- Family history of upper GI cancer</li> </ul>
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**Primary care treatment**

**Initial measures:**

Need to discuss that this can be a difficult symptom to manage, with multiple causative factors

- Review if any medications contributing to symptoms could be stopped:
  - NSAIDs
  - Corticosteroids
  - Theophylline
  - Aspirin
  - Calcium antagonists
  - Bisphosphonates - *stop immediately*
  - SSRIs
  - Nitrates
- Lifestyle advice:
  - Weight optimisation
  - Minimise alcohol
  - Exercise
  - Smoking cessation
- Dietary measures: minimise the following:
  - Coffee & tea
  - Mint
  - Peppers
  - Alcohol
  - Tomatoes
  - Cucumber
  - Spicy foods
  - Onions
  - Processed meats (eg salami, bacon)
  - Fizzy drinks
  - Garlic
  - Fatty food
  - Chocolate
  - Citrus fruits
- Patient education and reassurance – information leaflet for dyspepsia: [here](#); for non-ulcer dyspepsia: [here](#)

**Pharmacotherapy<sup>8</sup>**

1. Offer empirical full-dose PPI therapy (see table below) for 4 weeks to people with dyspepsia; choice of drug based on interactions and costs.
2. If symptoms improve, step down PPI therapy to the lowest dose needed to control symptoms. Discuss using the treatment on an 'as-needed' basis with people to manage their own symptoms.
3. Due to differences in response rates, for non-responders, most gastroenterologists would recommend a therapeutic trial of double dose PPI followed by rapid de-escalation, especially for atypical symptoms.
4. Offer H<sub>2</sub> receptor antagonist (H<sub>2</sub>RA) therapy if there is an inadequate response to a PPI.

**NICE guidelines CG17 2004 (update CG184, 2014)**

PPI	Full/standard dose	Low dose (prn dose)	Double dose	Cost
Lansoprazole	30 mg once a day	15 mg once a day	30 mg <sup>2</sup> twice a day	£0.98 for 28 (30mg)
Omeprazole	20 mg once a day	10 mg <sup>2</sup> once a day	40 mg once a day	£0.75 for 28 (20mg)
Esomeprazole	20 mg <sup>1</sup> once a day	Not available	40 mg <sup>3</sup> once a day	£2.29 for 28 (20mg)

Pantoprazole	40 mg once a day	20 mg once a day	40 mg <sup>2</sup> twice a day	£0.93 for 28 (40mg)
Rabeprazole	20 mg once a day	10 mg once a day	20 mg <sup>2</sup> twice a day	£1.24 for 28 (20mg)

<sup>1</sup> Lower than the licensed starting dose for esomeprazole in GORD, which is 40 mg, but considered to be dose-equivalent to other PPIs. When undertaking meta-analysis of dose-related effects, NICE classed esomeprazole 20 mg as a full-dose equivalent to omeprazole 20 mg.

<sup>2</sup> Off-label dose for GORD.

<sup>3</sup> 40 mg is recommended as a double dose of esomeprazole because the 20-mg dose is considered equivalent to omeprazole 20 mg.

**PPI doses for severe oesophagitis (proven on OGD) – NICE guidelines (CG184, 2014)**

PPI	Full/standard dose	Low dose (on-demand dose)	High/double dose
Esomeprazole	40 mg <sup>1</sup> once a day	20 mg <sup>1</sup> once a day	40 mg <sup>1</sup> twice a day
Lansoprazole	30 mg once a day	15 mg once a day	30 mg <sup>2</sup> twice a day
Omeprazole	40 mg <sup>1</sup> once a day	20 mg <sup>1</sup> once a day	40 mg <sup>1</sup> twice a day
Pantoprazole	40 mg once a day	20 mg once a day	40 mg <sup>2</sup> twice a day
Rabeprazole	20 mg once a day	10 mg once a day	20 mg <sup>2</sup> twice a day

<sup>1</sup> Change from the 2004 dose, specifically for severe oesophagitis, agreed by the GDG during the update of CG17.

<sup>2</sup> Off-label dose for GORD.

**Possible risks of long-term PPI use:**

- Epidemiological evidence of modest increase in fracture predominantly in the elderly (consider other risks for osteoporosis and treat accordingly)
- Controversial observational evidence of increased risk of *c-difficile* diarrhoea and pneumonia

**Helicobacter Pylori**

- 50% of the world’s population is infected with this organism (40% of people in the UK)
- In nearly nine out of 10 people who have H. pylori, it does not cause any problems, but it is known to increase the risks of disorders in the upper gastrointestinal tract (gastritis, peptic ulcer disease, gastric cancer, mucosa associated lymphoid tissue lymphoma) and sometimes beyond (idiopathic thrombocytopenic purpura, idiopathic iron deficient anaemia)
- Eradicating H.pylori is of proven benefit when treating peptic ulcer disease. When there is no ulcer, treating H.pylori will benefit less than 1 in 10 patient. Clearly many patients won’t go for endoscopy, and therefore not known if they have an ulcer, but in those with a history consistent with PUD, reasonable to test and treat.
- Excellent BSG H.pylori patient leaflet (especially for patients anxious about it): click [here](#)

**When to test for H.pylori**

- Patients with uncomplicated dyspepsia without alarm symptoms, unresponsive to lifestyle change and antacids, following a single one month course of proton pump inhibitor.
- Patients with a history of gastric ulcer or duodenal ulcer who have not previously been tested.
- Patients before starting or taking NSAIDs, if they have a prior history of gastro-duodenal ulcers.

**When NOT to test for H.pylori**

- History suggestive of reflux symptoms (or proven oesophagitis on endoscopy) – H.pylori irrelevant
- Clear functional dyspepsia – eradication only effective in 8% of patients, and can cause more anxiety, especially if resistant to antibiotic treatment

**Testing for H.pylori**

- Use H.pylori faecal antigen

- Need to stop PPIs for 2 weeks prior to H.pylori testing

#### Eradication therapy: (from BSG/Public Health England guidelines)

No penicillin allergy		Penicillin allergy	
1 <sup>st</sup> line	2 <sup>nd</sup> line	1 <sup>st</sup> line	2 <sup>nd</sup> line
<b>7 days</b> PPI twice daily + amoxicillin 1g bd + clarithromycin 500mg bd/metronidazole 400mg bd – depending if any exposure to either antibiotic in the past 1yr	<b>7 days</b> PPI twice daily + amoxicillin 1g bd + clarithromycin 500mg bd/metronidazole 400mg bd – whichever not used in first line	<b>No previous exposure to clarithromycin:</b> <b>7 days</b> PPI twice daily + clarithromycin 500mg bd + metronidazole 400mg bd	<b>If no previous quinolone exposure:</b> <b>10 days</b> PPI twice daily + metronidazole 400mg bd + levofloxacin 250mg bd
	<b>If exposure to both metronidazole and clarithromycin, use:</b> <b>10 days</b> PPI twice daily + amoxicillin 1g bd + levofloxacin 250mg bd or tetracycline 500mg qds	<b>If previous exposure to clarithromycin in last 1y:</b> <b>7 days</b> PPI twice daily + bismuth subsalicylate 525mg qds <small>(262.5mg chewable tabs i.e. 2 tabs qds)</small> + metronidazole 400mg bd + tetracycline 500mg qds	<b>Previous known quinolone exposure:</b> <b>7 days</b> PPI twice daily + bismuth subsalicylate 525mg qds + metronidazole 400mg bd + tetracycline 500mg qds
<b>3<sup>rd</sup> line: If ongoing symptoms (not suggestive of functional dyspepsia) and remains HP positive – discuss with microbiology or refer to Gastro</b>			

- Do not use clarithromycin or metronidazole if used in the past year for any infection.
- Amoxicillin and tetracyclines rarely result in H.pylori resistance
- PPI doses during eradication: lansoprazole 30mg BD, omeprazole 20mg BD, pantoprazole 40mg BD, esomeprazole 20mg BD, rabeprazole 20mg BD
- Stress the importance of medication adherence

#### When should I retest?

- Triple therapy attains >85% eradication
- As 64% of patients with functional dyspepsia will have persistent recurrent symptoms, **do not routinely offer re-testing after eradication.**
- If retesting after eradication, stool antigen test is satisfactory. This test should not be performed within 4 weeks of treatment with an antibacterial or within 2 weeks of treatment with a PPI.

#### What should I do in eradication failure?

- Reassess need for eradication. In patients with GORD or non-ulcer dyspepsia, with no family history of cancer or peptic ulcer disease, a maintenance PPI may be appropriate.
- Repeat endoscopy with culture and sensitivity testing can be arranged:
  - Patients in whom the choice of antibiotic is reduced due to hypersensitivity, known local high resistance rates, or previous use of clarithromycin, metronidazole, and a quinolone.
  - Patients who have received two courses of antibiotic treatment, and remain HP positive.
  - For any advice, speak to your local microbiologist, or the [Helicobacter Reference Laboratory](#)

#### If symptoms persist, especially if significant anxiety/bloating symptoms, or if normal OGD...

Treat as functional dyspepsia

#### Functional Dyspepsia

In summary:

- patient education that the condition is poorly understood
  - some treatments help some people – use a trial and error approach
  - the aetiology is multifactorial and a complex interaction between upper GI motility and the brain-gut nervous system including gut hypersensitivity, hyperacidity and CNS processing dysfunction

- it is often not curable and runs a fluctuating course which may be worse under times of stress
- excellent patient information leaflet available [here](#)
- dietary manipulation: try excluding the following and keep a food diary of symptoms:
  - spicy and acidic foods
  - citrus fruits
  - dairy products
  - wheat containing foodstuffs
- antacid medication - step up / step down approach
  - **Step 0** - lifestyle advice as described above +/- over the counter treatments (alginates / ranitidine)
  - **Step 1** - maintenance PPI using lowest dose which controls symptoms or use when required
  - **Step 2** - maximise PPI dose or try different PPI
  - **Step 3** - add ranitidine (max 300mg per day) +/- alginates
- antispasmodics e.g. mebeverine, buscopan, colpermin
- TCAs/SSRIs (see IBS pathway)
- Domperidone. Note safety warning from the MHRA (April 2014) – the only indication now is for relief of nausea and vomiting and for a week maximum and at a dose not exceeding 30mg per day. This is because of concerns of cardiac side effects. It is contraindicated in those with a cardiac history.
- Perform 6-12 month medication reviews and aim to step down treatment
- CBT is a recognised treatment option
- A secondary care opinion in challenging cases because it is predominantly a neuromuscular disorder (note that endoscopy rarely alters management)

If symptoms atypical or not responding to treatment:

- Consider USS if history suggests possible pancreatic or biliary abnormality
- Consider whether symptoms might be cardiac ischaemia

### When should patients have an OGD?

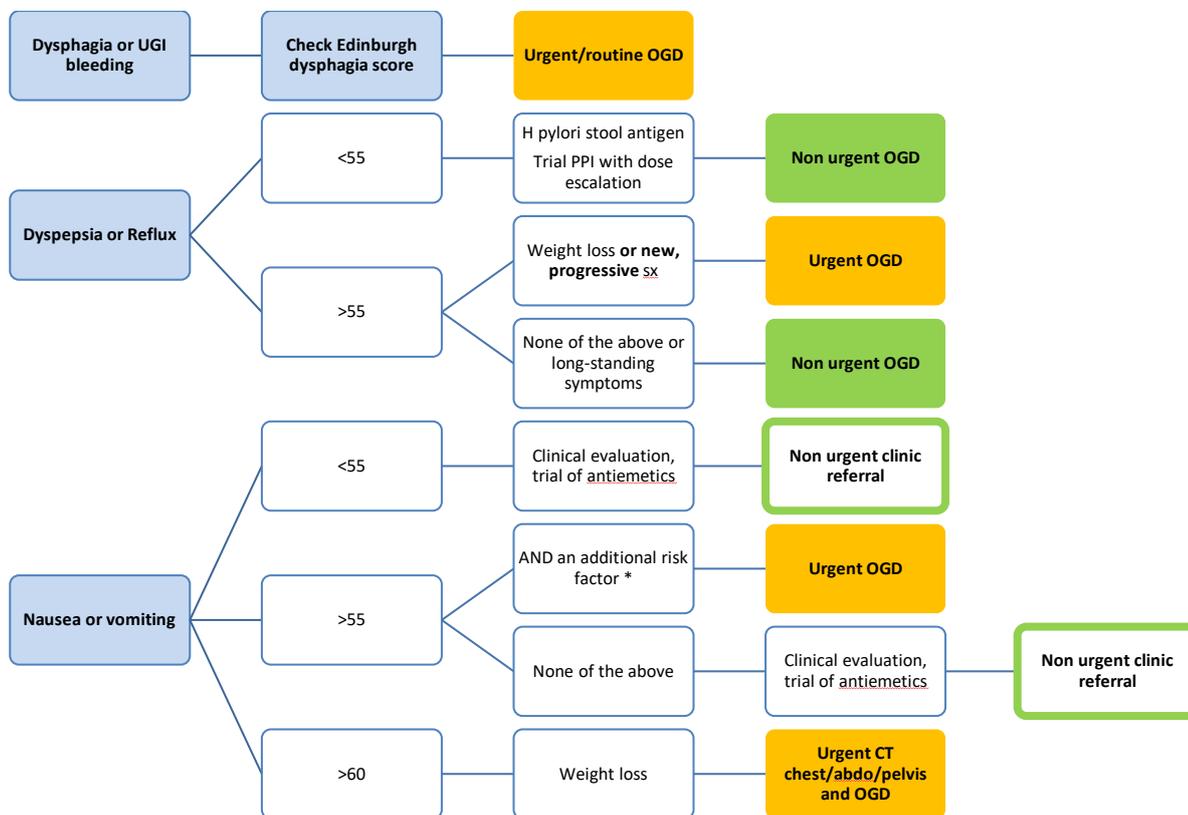
**URGENT:** if alarm symptoms

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>- New (&lt;1yr), persistent (&gt;4wks) and unexplained dyspepsia &gt;55 yrs</li> <li>- Unintentional weight loss &gt;3kg</li> <li>- Evidence of GI blood loss</li> <li>- True progressive dysphagia or odynophagia</li> </ul> | <ul style="list-style-type: none"> <li>- Persistent continued vomiting</li> <li>- Epigastric mass</li> <li>- Suspicious radiology findings</li> <li>- Unexplained iron deficiency anaemia</li> <li>- Previous gastric surgery</li> </ul> |
|--|--|

**NON-URGENT:**

- |   |  |
|---|--|
| <p>Dyspepsia or reflux symptoms AND one of:</p> | <ul style="list-style-type: none"> <li>- age &gt;55y</li> <li>- severe symptoms</li> <li>- risk factors for upper GI malignancy</li> </ul> |
|---|--|

Patients aged <55yrs with no alarm symptoms should be managed with combination of lifestyle factors and medications (incidence of malignancy in this group = approx 1 per million per year)



## GASTRO-OESOPHAGEAL REFLUX DISEASE (GORD)

- Offer people with gastro-oesophageal reflux disease a full-dose [PPI](#) (see table) for 4 or 8 weeks.
- Following this, aim to stop PPIs, but patients may require further courses if/when symptoms recur.
- Lifestyle measures:
  - weight loss
  - alcohol/smoking
  - dietary measures (spicy, acidic foods)
  - medications
  - do not eat too late in the evenings; smaller meals in the evenings
- Do not routinely check for H.pylori in reflux symptoms
- People with severe oesophagitis on OGD may require high/double dose PPIs for initial 4-8 weeks.
- Patients with severe oesophagitis or those who have had dilatation of an oesophageal stricture should remain on long-term full-dose PPI therapy (see table).

### PPI doses for severe oesophagitis (NICE CG 184, 2014)

Proton pump inhibitor	Full/standard dose	Low dose (on-demand dose)	Double dose
Esomeprazole	40 mg <sup>1</sup> once a day	20mg <sup>1</sup> once a day	40 mg <sup>1</sup> twice a day
Lansoprazole	30 mg once a day	15 mg once a day	30 mg twice a day
Omeprazole	40 mg <sup>1</sup> once a day	20 mg <sup>1</sup> once a day	40 mg <sup>1</sup> twice a day
Pantoprazole	40 mg once a day	20 mg once a day	40 mg <sup>2</sup> twice a day
Rabeprazole	20 mg once a day	10 mg once a day	20 mg <sup>2</sup> twice a day

<sup>1</sup> Change from the 2004 dose, specifically for severe oesophagitis, agreed by the GDG during the update of CG17.

<sup>2</sup> Off-label dose for GORD

### **Which patients with GORD need a Gastroscopy?**

Indicated for alarm symptoms, age >55y or symptoms suggesting complicated disease (atypical, persistent, or relapsing symptoms).

This may identify oesophagitis (erosions, ulceration, strictures) or Barrett's oesophagus (which might require OGD surveillance)

Pathway written by Dr Rob Palmer – GPwSI Gastroenterology

Gastroenterology Consultant leads: Dr Jun Liong Chin, Consultant Gastroenterologist

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Review date: June 2022

### **References**

[1] NICE clinical guideline 184 (September 2014) [here](#)

[2] BMJ 10 minute consultation - Dyspepsia - 2011;343:d6234 available [here](#)

[3] MHRA Drug Safety Update April 2012, vol 5 issue 9: A2 [here](#)

[4] Gastroenterology consultant working group, Royal Cornwall Hospital

[5] Camden CCG Dyspepsia pathway

[6] BSG H.pylori guidelines

[7] Mid Notts Dyspepsia Care Pathway 2015

[8] NICE guideline on PPIs: <https://www.nice.org.uk/guidance/cg184/chapter/appendix-a-dosage-information-on-proton-pump-inhibitors>

[9] BMJ Best Practice: Gastro-oesophageal reflux disease