1.9 DRUGS AFFECTING INTESTINAL SECRETIONS

1.9.1 DRUGS AFFECTING BILIARY COMPOSITION AND FLOW

- Ursodeoxycholic acid
  - 150mg tablets
  - 250mg capsules
  - 250mg/5mL suspension

1.9.2 BILE ACID SEQUESTRANTS

- Colestyramine
  - 4g sachet

Prescribing Note: Colestyramine

- **Timing of other medication in relation to colestyramine:** Other drugs should be taken at least one hour before or 4-6 after colestyramine to reduce possible interference with absorption.
- **Interference with absorption of fat soluble vitamins:** supplements of vitamins A, D and K may be required when treatment with colestyramine is prolonged.
- Colestyramine may also be used for the management of diarrhoea associated with Crohn’s disease and ileal resection.
- Colestyramine is used in the management of pruritus associated with biliary obstruction and cirrhosis (see below)

Management of jaundice associated pruritus in liver disease

- Colestyramine 4-8 g daily
- Menthol 1% in Aqueous cream
- Chlorphenamine 4mg every 4-6 hours

1.9.4 PANCREATIN

- **Creon 10,000** capsules (contains 10,000 units of lipase)
- **Creon 25,000** capsules (contains 25,000 units of lipase)
- **Creon 40,000** capsules (contains 40,000 units of lipase)
1.1 DYSPEPSIA AND GASTRO-OESOPHAGEAL REFLUX DISEASE

For symptomatic relief of hyperacidity, peptic ulcers, oesophagitis and acid reflux, liquids usually act faster than tablets. Doses are best taken between meals and at bedtime.

Review Medication that may Cause Dyspepsia
In all cases review medication that may cause dyspepsia (e.g. calcium-channel blockers, nitrates, corticosteroids, bisphosphonates, NSAIDs).

Lifestyle Advice
Offer lifestyle advice on weight reduction, smoking cessation and healthy eating where necessary.

For NICE guideline on Management of dyspepsia in adults in primary care click here

1.1.1 ANTACIDS

- Magnesium Trisilicate mixture

1.1.2 ALGINATE ANTACID PREPARATIONS

for symptomatic relief of oesophageal reflux only.

- Gaviscon Advance suspension
  (potassium bicarbonate + sodium alginate)

There are many proprietary preparations for dyspepsia available in the community. Choice is usually based on cost and palatability. The above are the preparations available at COCH.

1.2 ANTISPASMODICS AND OTHER DRUGS ALTERING GUT MOTILITY

Antispasmodics
- Hyoscine butylbromide
  10mg tablets
  20mg/mL injection

Prescribing note:

Hyoscine butylbromide is poorly absorbed from the GI tract and therefore considered less effective when given via the oral route.
• **Mebeverine hydrochloride** 135mg tablets

• **Peppermint water** Hospital only For relief of abdominal colic and distension

**Motility stimulants**

• **Metoclopramide** 10mg tablets 5mg/5mL oral solution 10mg/2mL injection

• **Domperidone** 10mg tablets 5mg/5mL SF suspension 30mg suppositories

• **Erythromycin** Unlicensed indication 125mg/5mL SF suspension 250mg/5mL SF suspension 1g vial for IV infusion (ITU) only

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**Prescribing Note:**
- Metoclopramide can induce acute dystonic reactions. It is best avoided if possible in patients under 20 years old (especially young women) and in the very old.
- Metoclopramide may worsen parkinsonian symptoms and must be avoided in patients with Parkinson’s disease.

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### 1.3 ULCER-HEALING DRUGS

**Helicobacter pylori infection**

Eradication of *H. pylori* infected ulcers should be undertaken with the following regimen.

**First line:**
- lansoprazole 30mg bd for 7 days
  - plus clarithromycin 500mg bd for 7 days
  - plus amoxicillin 1g bd for 7 days

**Second line:**
- lansoprazole 30mg bd for 14 days
**Third line:**
lansoprazole  
30mg bd  
for 14 days

**plus**
De-Noltab  
2 tablets bd  
for 14 days
(tripotassium dicitratobismuthate)

**plus**
tetracycline  
500mg qds  
For 14 days

**plus**
metronidazole  
400mg tds  
for 14 days

**For patients allergic to penicillin**

**First line:**
lansoprazole  
30mg bd  
for 7 days

**plus**
clarithromycin  
500mg bd  
for 7 days

**plus**
metronidazole  
400mg bd  
for 7 days

**Second line:**
lansoprazole  
30mg bd  
for 14 days

**plus**
De-Noltab  
2 tablets bd  
for 14 days
(tripotassium dicitratobismuthate)

**plus**
tetracycline  
500mg qds  
For 14 days

**plus**
metronidazole  
400mg tds  
for 14 days

Taken from: HPA Helicobacter Working Group, Update on Helicobacter Pylori. November 2007
1.3.1 H$_2$-RECEPTOR ANTAGONISTS

- **Ranitidine**
  - 150mg tablets
  - 150mg effervescent tablets (may contain varying levels of Na$^+$, depending on brand used)
  - 75mg/5mL syrup
  - 50mg/2mL injection

Intravenous H$_2$-antagonists should only be used in patients who are nil by mouth or cannot swallow.

There is no conclusive evidence that H$_2$-antagonists are of benefit in the management of acute upper gastrointestinal haemorrhage and therefore should not be used unless discussed with a Gastroenterologist.

1.3.3 CHELATES AND COMPLEXES

- **Sucralfate**
  - 1g tablets (crushed tablets may be dispersed in water)
  - 1g/5mL suspension

1.3.4 PROTON PUMP INHIBITORS

- **Lansoprazole**
  - 15mg, 30mg capsules
  - 15mg, 30mg orodispersible tablets
  (restricted use – see below)

- **Omeprazole**
  - 10mg, 20mg capsules
  - 10mg, 20mg dispersible tablets (MUPS)(restricted use—see below)
  - 40mg intravenous infusion

- **Esomeprazole**
  - For initiation by Consultant Gastroenterologist / GI Surgeon only
  - For use in patient with severe oesophagitis / symptoms of reflux unresponsive to standard treatment.

**Proton Pump Inhibitor of Choice**
The Countess of Chester Hospital and Western Cheshire PCT advocate either **lansoprazole** or **omeprazole capsules** as first line choices of Proton Pump Inhibitor (PPI) for all newly initiated patients receiving treatment for dyspepsia. Lansoprazole FasTabs$^\text{TM}$ will only be available for patients unable to swallow or those with a nasogastric or PEG tube. Omeprazole tablets, which are also dispersible, are only available for use in paediatrics.
Review and Follow Up Procedures

- It is imperative that when a patient is initiated on a PPI that a review date is specified (either 4 or 8 weeks depending on the clinical circumstances). Course lengths and/or review dates should be clearly documented on discharge and outpatient communications.
- Clinicians reviewing the patient after the specified review period are encouraged to consider ‘stepping down’ or ceasing therapy if clinically appropriate. Whenever possible the patient should be maintained on the lowest dose of PPI that controls symptoms and a limited number of repeat prescriptions issued before a further review.
- However, it should be recognised that in many instances where the patient is undergoing chronic management of a gastroenterological condition, full dose or even high dose continuous PPI therapy is often warranted. For example, patients who have had dilatation of an oesophageal stricture or Barrett’s oesophagus should remain on life-long full dose PPI therapy.
- PPIs are the treatment of choice for gastro-oesophageal reflux.

NSAID Prophylaxis

In those at risk of ulceration, the use of a proton pump inhibitor should be considered. Lansoprazole 15 - 30mg daily or omeprazole 20mg daily are the recommended choices. Before starting a long term NSAID, test and treat for *H. pylori* if a patient has dyspepsia or a history of Peptic Ulcer Disease.

References

1. Scottish Intercollegiate Guideline Network dyspepsia guideline 2003 ([www.sign.ac.uk](http://www.sign.ac.uk))

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1.4 ACUTE DIARRHOEA

Oral Rehydration Therapy

- Dioralyte oral powder

1.4.2 ANTIMOTILITY DRUGS

- Loperamide
  - 2mg capsules/tablets
  - 2mg/10mL elixir
- Codeine phosphate
  - 15mg, 30mg tablets
  - 15mg/5mL linctus
1.5 CHRONIC BOWEL DISORDERS

1.5.1 Aminosalicilates

- **Mesalazine**

The release characteristics of mesalazine e/c preparations may vary. These preparations should not be considered interchangeable and should be prescribed by brand name. Stable patients should be maintained on their usual brand of product wherever possible.

Mesren M/R e/c 400mg tablets (this should be considered as first line for new patients)  
Mezavant XL 1.2g e/c tablets (Once daily preparation when compliance may be an issue)  
Asacol M/R e/c 400mg tablets (for continuation of treatment only)  
Pentasa M/R e/c 500mg tablets (for continuation of treatment only)  
Asacol 1g foam enema  
Salofalk 2g/59ml enema  
Pentasa 1g/100mL retention enema  
Pentasa 1g suppositories

**Note: Blood disorders**

Patients receiving aminosalicylates should be advised to report any unexplained bleeding, bruising, purpura, sore throat, fever or malaise that occurs during treatment. A blood count should be performed and the drug stopped immediately if there is suspicion of a blood dyscrasia.

1.5.2 Corticosteroids

- **Prednisolone**

1mg, 5mg tablets  
(not enteric coated)  
5mg dispersible tablets  
20mg foam enema (Predfoam)  
20mg retention enema (Predsol)  
5mg suppositories

1.5.3 Drugs affecting the immune response

- **Azathioprine**  

25mg, 50mg tablets (unlicensed indication)
• **Mercaptopurine** 50mg tablets (unlicensed indication)

• **Ciclosporin (Neoral)** 10mg, 25mg, 50mg, 100mg capsules
  50mg/ml 1ml and 5ml ampoules (unlicensed indication)

• **Methotrexate** 2.5mg tablets (unlicensed indication)
  s/c injection

**Cytokine modulators**

Initiation by Gastroenterology Consultant only.

• **Infliximab**
• **Adalimumab**

See **NICE guidance TA 163** Ulcerative colitis (acute exacerbations) infliximab

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### 1.6 LAXATIVES

#### 1.6.1 BULK- FORMING LAXATIVES

• **Ispaghula husk** 3.5g sachets
  Recommended laxative for long-term use

#### 1.6.2 STIMULANT LAXATIVES

• **Glycerol (glycerine)** 1g, 2g, 4g suppositories

• **Senna**
  7.5mg tablets
  7.5mg/5mL syrup

Avoid prolonged use.
Stimulant and softening agents

- **Docusate sodium**
  - 100mg capsules
  - 50mg/5mL liquid SF

- **Co-danthramer**
  - 25mg dantron, 200mg poloxamer capsules
  - 25mg dantron, 200mg poloxamer in 5mL suspension

Dantron containing products are only licensed for the treatment of constipation in terminal illness. **Patients who are not terminally ill should receive other laxatives.**

### 1.6.4 OSMOTIC LAXATIVES

- **Sodium citrate microenema**
  - Brands include Micolette®, Microlax®, Relaxit®

- **Phosphate enema**
  - Fletcher’s®, Fleet®

- **Lactulose solution**

- **Macrogols**
  - (Movicol®) sachets

To be reserved for when other agents have failed.
MANAGEMENT OF CONSTIPATION

Identify cause of constipation
Considering disease/condition, immobility, diet, drugs (for example, opiates & opioid analgesics, calcium or aluminium antacids, anticholinergics, antidepressants, antiparkinsonian drugs, calcium supplements, diuretics, calcium channel blockers and iron preparations)

Provide patients with education and lifestyle advice
Increase dietary fibre (to minimum 18g up to 30g / day); ensure adequate fluid and exercise. Referral to dietitian may be beneficial

If no improvement seen in constipation

Acute constipation
1st line
Senna 7.5mg tablets
2-4 tablets at night
OR
Senna 7.5mg/5ml liquid
10-20ml at night
2nd line
If senna unsuccessful
Glycerin suppositories* (4g)
One to be inserted daily

1st line
Glycerin suppositories * (4g)
One to be inserted daily
OR
Micro-enema
Insert one enema when required
2nd line
If stool is hard
Phosphate enema
Use one when required
If stool is soft
Bisacodyl 10mg suppositories
Insert one suppository into the rectum when required
3rd line
†Movicol sachets
8 sachets daily dissolved in 1 litre of water, kept in the fridge and taken within 6 hours of reconstitution. To be continued for up to 3 days
If unsuccessful: manual evacuation.

Impaction
1st line
Ispagula Husk sachets
Take the contents of one sachet (mixed in a glass of water) twice a day, preferably after meals.
If unsuccessful add senna short term.
2nd line
Docusate sodium liquid 50mg/5ml
OR
Docusate sodium 100mg capsules
100mg TDS up to a maximum of 500mg in 24 hours
3rd line
†Lactulose
Initially 15ml BD adjusted according to needs
OR
†Movicol sachets
1-3 sachets daily (dissolved in half a glass of water)

Chronic constipation
1st line

For opioid induced constipation in palliative care patients, please see palliative care section of the formulary

If believed to be drug induced
Consider withdrawing the offending drug

* Moisten suppository with water before use and advise to hold in for at least 15 minutes.
† Needs prescribing regularly and taken for at least two days in order to have an effect.
Prescribing notes

- Rectal preparations should not be used if haemorrhoids or anal fissures are present.
- Prolonged use of stimulant laxatives, such as senna, can lead to a significant fluid and electrolyte imbalance.
- Do not use stimulant laxatives if suspected, or actual bowel obstruction.
- Ensure patients maintain adequate fluid intake during treatment with ispaghula husk preparations.
- Dantron containing products are only licensed for the treatment of constipation in terminal illness.
- Oral docusate and osmotic laxatives should be avoided in patients with intestinal obstruction.
- Movicol should not be used in patients with severe inflammatory conditions of the intestinal tract e.g. Crohn’s disease, ulcerative colitis or toxic megacolon. Patients with cardiovascular disease should not take more than 2 sachets in any 1 hour.
- Lactulose should be reserved for management of chronic constipation, and for paediatrics, in pregnancy, patients with hepatic encephalopathy and following anorectal surgery. For effect it must be administered regularly for at least 48 hours, therefore is not recommended for management of acute constipation or on a “PRN” basis.

1.6.5 BOWEL CLEANSING SOLUTIONS

- Klean-Prep® sachets
- Movicol® sachets
- Sodium picosulphate sachets
- Phosphate enema

NB Bowel cleansing preparations should be used with caution in patients with fluid and electrolyte disturbances.
Renal function should be monitored before starting treatment in patients at risk of fluid and electrolyte disturbances.
Adequate hydration should be maintained during treatment.
For further guidance see the NPSA alert - Reducing risk of harm from oral bowel cleansing solutions.

1.6.7 5HT4 – RECEPTOR AGONISTS

- Prucalopride 1mg, 2mg tablets

Prucalopride is recommended for the treatment of chronic constipation in women in line with NICE TA211

Prucalopride may be initiated by GPs following recommendation by a Consultant Gastroenterologist or Consultant Colorectal Surgeon only and treatment should continue according to the local pathway

1.7 LOCAL PREPARATIONS FOR ANAL AND RECTAL DISORDERS

- Anusol rectal cream suppositories

- Anusol HC ointment suppositories

- Xyloproct ointment

- Oily Phenol 5% Injection

- Glyceryl Trinitrate 0.4% ointment (Rectogan®) – licensed
  0.2% ointment (Unlicensed)
  May be difficult to obtain in Primary Care

- Diltiazem 2% cream (Unlicensed)