



ProPharmace

Responding to Symptoms Guide

Part 1 of 3

Foundation Training Programme



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1. Introduction

This Responding to Symptoms Guide provides an up-to-date and detailed summary of all the symptoms and conditions that you may encounter in pharmacy practice as well as the relevant treatment options and their examples, cautions, side-effects and counselling points that you may need to consider as a pharmacist. The information enclosed will be important in not only preparing for the registration assessment but will be useful in everyday practice as a pharmacist.

The ProPharmace Team

2. Gastro-intestinal System

Constipation

Symptoms:

- ✓ Passage of hard, dry stools
- ✓ less frequently than the person's normal bowel movements or at least 3 times during the last week
- ✓ Abdominal discomfort, bloating, and nausea.
- ✓ Straining or in pain

Causes:

- ✓ Not enough fibre
- ✓ Not drinking enough fluids
- ✓ Lack of exercise
- ✓ **Medications:** opioids analgesics, hyoscine, iron, tricyclic antidepressants, aluminium antacids, verapamil, antispasmodics, SSRIs, diuretics, chlorpheniramine – refer if you suspect medicine-induced constipation

Treatment:

First-line

- Manage any underlying secondary cause (e.g. review any medications that may cause constipation or refer to GP)
- Increase fruit and fibre intake
- Keep hydrated (up to 2L per day)
- Perform regular exercise of 30-60 mins on 5 or more days a week
- Encourage useful toileting routines; do not hold it in and ensure complete defecation

Cautions and referral

- Refer if patient has been constipated for **more than 14 days** or more than **7 days for children**.
- **Continuous overuse** of stimulant laxatives can result in loss of muscular activity (damage to the nerve plexus) in the bowel wall so that bowel movement is restricted leading to a greater risk of constipation
- **Use of laxatives can be abused** by people who believe that they help to control weight e.g. by anorexic individuals – **may lead to hypokalaemia**
- Constipation accompanied by **weight and appetite loss** (may indicate carcinoma)
- **Tarry, red, black, or bloody stools** also indicate an underlying condition e.g. haemorrhoids, gastric ulcer, or gastric carcinoma
- Constipation with **weight gain, lethargy, coarse hair, or dry skin** (suggests hypothyroidism)

Tarry, red, black, or bloody stools, specifically in new onset constipation in over 50's with anaemia, abdominal pain, and weight loss - **immediate referral**

Second-line

Bulk-forming laxatives: ispaghula (Fybogel, methylcellulose)

- MOA: they **swell up in the gut** to increase faecal mass and so peristalsis is stimulated and encourage proliferation of colonic bacteria
- May take 2-3 days to reach full effect
- S/E: flatulence, abdominal pain
- P+BF: safe
- Fybogel can be used in children >6 years old

Must drink plenty of water when taking bulk-forming laxatives & advice patient to not take before bed due to a risk of oesophageal and intestinal obstruction

Third line

Osmotic laxatives: lactulose, macrogols (Movicol, Laxido, Cosmocol)

- Switch to or add an osmotic laxative when **stools are still hard**, or difficult to defecate
- MOA: **they retain fluids in the bowel by osmosis**, patients must drink plenty of water to avoid dehydration
- May take up to 2-3 days to work
- P+BF: safe
- S/E: flatulence abdominal pain, colic

Third-line treatment (Cont.):

Stimulant laxatives: Bisacodyl (Dulcolax), Senna (Senokot), glycerol suppositories, sodium picosulfate

- Can be added if stools are soft but difficult to pass
- MOA: **they increase motility by stimulating peristalsis**
- The effect can be achieved within 6-12 hours or within an hour if applied as a suppository (15-30 mins for glycerol)

Senna side effects: abdominal pain (take at night), hypokalaemia, lazy bowel, may turn urine brown.

Senna avoided in P+BF. Bisacodyl, glycerol and sodium picosulfate may be used under doctor supervision but are not preferred.

Fourth-line treatment:

Stool softeners: Liquid paraffin, docusate sodium (Diocetyl, Dulcoease), Glycerol suppositories

- Docusate and glycerol can have both stimulants and stool softening properties
- **Liquid paraffin:** the adverse effects of liquid paraffin means that it **should never be recommended** as other safer treatments are available.
- MOA: **decrease surface tension and increase penetration of intestinal fluids**
- Takes **up to an hour** to work when applied as a suppository
- Can be used in pregnancy but not preferred.

Counselling points:

- It is important to have a healthy, balanced diet – **plenty of whole grains, certain fruits, and vegetables, and to have a gradual increase in dietary fibre** (it may take a few weeks to benefit). Having insufficient amounts of these could also lead to constipation.
- Encourage patients to drink plenty of water as it helps to reduce constipation (up 2L/day)
- An estimated 1 in 3 pregnant women suffer from constipation. Raised progesterone levels during pregnancy mean that the gut muscles are more relaxed. Oral iron, often prescribed for pregnant women, may also contribute to the problem. **Avoid stimulant laxatives during pregnancy, especially in the first trimester.**
- **Bisacodyl should not be taken with antacids and milk at the same time** as the enteric coating can be broken down causing dyspepsia and gastric irritation.
- Stimulants are the quickest acting laxatives (usually 6-12 hours). Lactulose and bulk-forming laxatives may take 2-3 days. Stool softeners are the slowest (up to 3 days). Glycerol suppositories can be used if immediate relief is required (15-30 mins).

Diarrhoea

Symptoms:

- ✓ Increased frequency of bowel evacuation
- ✓ Abnormally soft or watery faeces
- ✓ Abdominal cramps
- ✓ Flatulence
- ✓ Nausea and weakness
- ✓ Usually lasts up to 5-7 days

Causes:

- ✓ Conditions such as Crohn's disease, IBS, lactose intolerance, ulcerative colitis, and coeliac disease
- ✓ Drugs that can cause diarrhoea: NSAIDs, magnesium, antibiotics, digoxin, diuretic, iron, laxatives, SSRIs.
- ✓ May be a bacterial or viral infection

Treatment:

First-line

Oral Rehydration Therapy (ORT): Dioralyte, Dioralyte relief)

- Suitable for all ages
- Safe in P+BF
- Formulated liquids containing sodium, glucose, and potassium to replace lost fluids and salts in order to prevent dehydration.
- Should be reconstituted in 200 mL of boiled and then cooled water and consumed within an hour of preparation or can be stored in the fridge for up to 24 hours.

Cautions and referral

- Refer if you suspect risk of dehydration:
 - In babies under 12 months
 - If a child stops breast or bottle feeding
 - If a child under 5 has signs of dehydration such as fewer wet nappies
 - If the child is >5 years old but still showing signs of dehydration after using oral rehydration sachets
 - Signs of dehydration: dry skin, sunken eyes, dry tongue, drowsiness, less urine output
- If diarrhoea persists for more than 7 days
- Bloody diarrhoea or mucus in the stools
- Patients who are unable to drink fluids
- Alternating constipation and diarrhoea in elderly patients (may indicate faecal impaction)
- Change in bowel habits in patients >50 years old with concurrent weight loss (Can indicate colorectal cancer)

Second-line

Loperamide 2 mg tablets: Imodium range

- Loperamide has a high affinity for opiate receptors in the gut wall, leading to reduced motility
- Recommended for >12 years of age only
- Dose: 2 tablets initially and then 1 tablet to be taken after each loose stool- up to a max of 16 mg/day (8 tablets)
- Not suitable for P+BF
- S/E: cramps, nausea, vomiting, tiredness, dry mouth, dizziness
- Should be avoided in bloody or suspected inflammatory diarrhoea

Alternative treatments:

1) Bismuth salicylate: Pepto-Bismol range

- Only available to >16 years old due to salicylate content and risk of Reye's syndrome – thus also avoided in P+BF
- Dose: 30mL or 2 tablets every 30-60 mins when needed, max 8 tabs/day
- S/E: black stools or tongue due to unabsorbed bismuth
- Interactions: Quinolone antibiotics (leave 2-hour gap)

2) Morphine + Kaolin mixture

- In theory Kaolin absorbs water as well as toxins and bacteria onto its surface and then removes them from the gut. Morphine slows the action of the GI tract.
- Well-tolerated at OTC doses, slows down the action of the GI tract
- Licensed for >12 years old
- 10 mL every 6 hours.

Counselling points:

- Avoid using fruit juice, fizzy, sugary drinks when reconstituting the rehydration powders
- Bismuth subsalicylate use can result in salicylate absorption. It should be avoided by individuals hypersensitive to aspirin
- Patients should be advised to drink plenty of fluids but avoid drinks high in sugar as these can prolong diarrhoea and avoid milky drinks as a temporary lactose intolerance occurs due to the damage to cells lining the intestine
- Babies should be fed more frequently alongside oral rehydration therapy and formula should be diluted and built back up to normal over 3 days
- To avoid contracting or spreading infective diarrhoea:
 - Always wash hands with soap and dry in air or with a clean towel before eating
 - Avoid shared drinking water, especially untreated water when abroad
 - Eat fresh foods, no uncooked meat
 - Avoid shellfish and fish unless fresh and from freshwater
 - Maintain good hygiene after using the toilet

Heartburn and Indigestion

Symptoms:

- ✓ Heartburn is **burning pain and discomfort** in the stomach all the way up to the oesophagus
- ✓ Indigestion refers more to pain from the chest to upper abdomen and lower abdominal symptoms.
- ✓ **Bloating, flatulence, nausea, and vomiting**
- ✓ Peptic ulcers: mid-epigastric pain, may be associated with weight loss and GI bleeds.

Treatment:

First-line

Antacids (Rennie, Pepto-Bismol)

- They neutralise excess acid when taken on the onset of symptoms
- Can affect absorption of certain medicines – advise to leave 1 hour gap between antacids and other medications
- Licensed for >12 years old
- Safe in P+BF
- Large amounts of magnesium or aluminium may cause diarrhoea or constipation respectively
- Avoid antacids in sodium restricted diets – this is important in heart failure, hypertension, and kidney failure.

Cautions and referral

- Anaemia, Loss of weight, Anorexia, Recent onset of progressive symptoms, Melaena (**ALARM**)
- When pain radiates to the back and arms check for any underlying conditions (heart attack)
- Difficulty swallowing (**dysphagia**) – may indicate obstruction of the oesophagus
- Drugs that can cause heartburn: **tricyclic antidepressants, calcium channel blockers, NSAIDs and caffeine**
- New or recently changed symptoms in a patient over 55 years of age
- Previous gastric ulcer or gastrointestinal surgery
- Patient has been taking symptomatic treatment of indigestion or **heartburn for 4 or more weeks**
- Patient has **jaundice or severe liver disease**
- **Children**

Second-line

Alginates (Gaviscon range, Pepto-Bismol)

- Alginates form a raft that sits on the surface of the stomach to prevent reflux
- Licensed for > 12 years old
- Gaviscon infant for > 6 years old children
- Safe in P+BF
- If taking antacids or alginates daily for more than 2-4 weeks refer for review

Third line

H2 antagonists (Ranitidine, Zantac)

- Can be recommended for short-term use of 14 days only
- They block histamine H2 receptors and thus decrease acid production giving the stomach lining time to heal
- Licensed for > 16 years old
- Can be used in P+ BF under doctor's advice
- S/E: abdominal pain, headache dizziness, diarrhoea, constipation, rash

Fourth line

Proton pump inhibitors: omeprazole, pantoprazole (Pantacol control), esomeprazole (Nexium)

- Can be recommended for short-term use of 14 days only
- Licensed for > 18 years old
- P+BF: manufacturer does not recommend OTC sale, but can be prescribed by GP
- PPIs can mask symptoms of gastric cancer. Particularly in those whose symptoms change and are over 55 years of age
- MHRA warning: very low risk of subacute cutaneous lupus erythematosus (SCLE) if patients treated with a PPI develop lesions advise them to avoid exposing the skin to sunlight and that symptoms resolve on withdrawal.
- S/E: abdominal pain, constipation, diarrhoea, GI disturbances, headache flatulence, nausea, vomiting
- PPIs may inhibit cytochrome P450 and so can interact with other medicines e.g. omeprazole can delay the elimination of warfarin, phenytoin and diazepam

Counselling points:

- Heartburn can be aggravated by bending, lying down, or slumping in a chair. Some patients find raising the head of the bed or using pillows to lift the upper body helps
- Tight clothing (waistbands and belts) can trigger symptoms
- Excess weight increases the risk
- Pregnant women, elderly, and hypertensive patients with heartburn – a sodium-free or low sodium antacid preparation containing an alginate is recommended
- Small meals eaten frequently are better than large meals as this reduces gastric distension.
- High fat meals take longer to digest and therefore delay gastric emptying which means longer acid exposure
- Smoking, alcohol, caffeine, and chocolate have a direct relaxing effect on the oesophageal

Irritable Bowel Syndrome (IBS)

Symptoms:

- ✓ Alternating symptoms of diarrhoea and constipation
- ✓ Abdominal pain/ spasms
- ✓ Bloating/ discomfort
- ✓ Diagnosis is based on symptoms presenting for 6 months or more
- ✓ Usually affects <45 years old.
- ✓ Relieved by defecation and passing of wind

Cautions and referral

- All children must be referred if IBS is suspected
- Adults >45 years old presenting with symptoms for the first time
- Loss of appetite
- Fever
- Nausea and vomiting
- Rectal bleeding: indicates inflammatory bowel disease, gastric ulcer, or carcinoma
- Weight loss or steatorrhoea (fat in the faeces) – could indicate malabsorption syndrome
- A hard lump or swelling in the gut area

Treatment:

Antispasmodics:

- 1) Hyoscine: Buscopan IBS relief, Buscopan cramps
 - Work by relaxing the smooth muscle in the gut, thereby reducing abdominal pain.
 - Dose: 1 tablet 3 times a day – this may differ according to brand and formulation, always read product information before supply.
 - S/E: constipation and dry mouth (antimuscarinic cautions apply)
 - Avoid in P+BF unless under medical supervision
 - Interactions: avoid with other anti-muscarinic drugs
- 2) Others: Mebeverine (Colofac IBS 18+), peppermint oil (Colpermin IBS relief 15+) – may cause heartburn. Alverine (spasmonal 12+)

Counselling points:

- Have small, regular meals and avoid missing meals
- Drink at least 8 cups of fluid a day (non-caffeinated)
- Reduce intake of alcohol, fizzy drinks, and resistant starch (processed food)
- Limit high-fibre foods and limit fruits to 3 per day
- Avoid meals high in fatty foods
- Minimise caffeine, alcohol, dairy, and artificial sweeteners
- Try to find ways to relax – stress can exacerbate IBS
- Try probiotics for at least 4 weeks

Orlistat (Alli 60mg capsules)

Indication:

- ✓ Orlistat is indicated for weight loss in adults (**18 or over**) who are overweight (**BMI >28 kg/m²**) and should be taken in conjunction with a lower-fat, mildly hypocaloric diet.

Mode of action:

- ✓ **Orlistat is a potent, specific, and long-acting inhibitor of gastrointestinal lipases.** It exerts its therapeutic activity in the lumen of the stomach and small intestine by forming a covalent bond with the active serine site of the gastric and pancreatic lipases. The inactivated enzyme is thus unavailable to hydrolyse dietary fat, in the form of triglycerides, into absorbable free fatty acids and monoglycerides.

Contra-indications and referral

- Patients taking **diabetic medications** may need their dose adjusted as they lose weight. Orlistat is not recommended for use by patients taking **acarbose**.
- Patients taking **amiodarone** may also require dose adjustment
- Patients taking **antiepileptic medication**. There is an increased risk of convulsions.
- **Treatment with orlistat should not exceed six months**, patient would need to be referred to continue using it.
- **If a patient has not been able to lose weight after 12 weeks of treatment**
- People with **chronic malabsorption syndrome**
- People with **cholestasis** (conditions where the flow of bile from the liver is blocked)
- Concurrent treatment with **ciclosporin** (as can decrease ciclosporin plasma levels), **warfarin** or other oral anticoagulants.
- **Pregnant or breast-feeding women**
- If a patient report **rectal bleeding** while taking orlistat

Dosage:

- **One 60 mg capsule three time daily**, taken with water immediately before, during or up to one hour after each main meal.
- If the meal is missed or contains no fat, the dose of Orlistat should be omitted. No more than three 60 mg capsules should be taken in 24 hours.

Interactions & cautions:

- Orlistat may indirectly reduce the availability of oral contraceptives. Advise to use an **additional contraception method** if they experience severe diarrhoea
- **Fat soluble vitamins (A, D, E and K):** treatment with Orlistat may impair absorption of fat-soluble vitamins. Advise to use a multivitamin supplement at bedtime
- **Patients taking the following should be referred:** amiodarone, oral anticoagulants, acarbose, antiepileptics, ciclosporins, levothyroxine.

Haemorrhoids (also known as piles)

Symptoms:

- ✓ Lumps or swollen veins which may protrude into the anal canal (internal)
- ✓ Or extend outside the anus (external)
- ✓ Itching, burning, pain, swelling
- ✓ May be associated with rectal bleeding
- ✓ Straining and/or incomplete defecation

Treatment:

A local anaesthetic

- Benzocaine, lidocaine, and skin protecting agents (zinc oxide, Kaolin)
- Anaesthetics should only be used for a few days as they **may cause sensitisation of the anal skin**
- They can also be absorbed through the rectal mucosa and cause irritation so **excessive application should be avoided**

Astringents

- Bismuth, zinc oxide, witch hazel (Anusol soothing relief, Germaloid)
- Cause aggregation of proteins to constitute a **protective layer across the mucous membranes**.
- All products licensed for >12 years old
- Minimal side effects include local irritation or hypersensitivity

Counselling points:

- Increased risk of haemorrhoids during pregnancy due to increased pressure on blood vessels and due to constipation
- **Give constipation advice** and treat appropriately to prevent haemorrhoids. Advise on correct **anal hygiene, keep area clean and dry to aid healing, reduce irritation and itching**
- Use baby wipes and pat dry, **advise against stool withholding and undue straining**
- Drink lots of fluid, eat plenty of fibre and exercise regularly

Cautions and referral

- Refer if unresponsive to **1 week of OTC treatment**
- Symptoms for **longer than 3 weeks**, especially in the elderly
- **Dark tarry blood in the stools** may indicate an underlying condition e.g. gastric ulcer or gastric carcinoma
- **Abdominal pain, nausea, and vomiting** (unusual in haemorrhoids)
- **Fever, or feeling hot, shivery, and generally unwell**
- **Puss leaking from the piles**
- Haemorrhoid preparations are not licensed during pregnancy. A referral may be necessary if laxatives are not helping.

Topical corticosteroids

- Hydrocortisone (Anusol HC)
- Reduces inflammation and swelling
- Long term use can cause ulceration or permanent damage due to thinning of the perianal skin
- **Not to be used in pregnancy or breastfeeding or in people <18 years old.**
- **Not to be used for longer than a week's duration, for a maximum 4 times a day**

Pregnancy

- Bulk-forming laxatives for constipation, no topical haemorrhoidal preparations are licensed for use in pregnancy

3. Oral Health

Mouth Ulcers

Symptoms:

- ✓ Minor ulcers occur in **crops of one to five**, up to **5 mm in diameter** and appear as a white or yellowish centre and **can last up to 5-14 days**
- ✓ Major ulcers are uncommon and can be **as large as 30mm** and occur in **crops of up to 10**. Healing can take up to **30 days**
- ✓ **Herpetiform ulcers** are smaller than minor ulcers and can form **irregular shapes and large cluster of up to 100**.

Treatment:

Hydrocortisone buccal tablets

- Contain 2.5 mg of hydrocortisone, **used to reduce inflammation and swelling**
- Dissolve one pellet close to the ulcer up to 4 times a day up to a max. of 5 days
- Licensed for **> 12 years old**

Anti-bacterial agents

- **Chlorhexidine (Corsodyl)**
- This is to prevent infections from occurring and to aid healing
- **For >12 years old**
- **S/E: discolouration (reversible), burning of the mouth (minor)**
- Ok in P+BF

Counselling points:

- If ulceration is due to dentures, then refer to dentist for proper fitting, also advise to **soak them in Corsodyl and to leave them out for 6-24 hours to aid healing**
- **Brushing teeth before using Corsodyl may reduce staining** but rinse mouth well after as toothpaste can inactivate chlorhexidine
- Iron, folate, zinc or VitB12 deficiency may contribute to increased risk of getting ulcers.

Cautions and referral

- If there are **no signs of healing for more than 14 days to 3 weeks**
- If ulcers are **more than 1 cm in diameter**
- If there are **crops of 5-10 ulcers** or more
- **Persistent recurrent diarrhoea**
- If weight loss and rash are present
- **Painless ulcers (sign of cancer)** and eye involvement
- Certain drugs can cause mouth ulcers: NSAIDs, cytotoxic drugs and sulfasalazine as well as herbal remedies like feverfew
- **Bleeds or becomes more painful** and red this may be a sign of an infection

Choline salicylate (Bonjela cool, Bonjela adult)

- **Aspirin is the main component so limited to >16 years old**
- Pregnant women can take doses up to 100mg/day
- Bonjela junior is available for 5 months to 16 years old children.

Local anaesthetics

- **Lidocaine, benzocaine**
- For short-term relief of painful ulcers, has a short duration of action so must be reapplied often, used when needed
- **Hypersensitivity reactions may occur due to overapplication**
- Anbesol liquid and teething gels can be used for children for no longer than 7 days

Gum disease

Symptoms:

- ✓ Inflammation of the gums caused by excess build up pf plaque on the teeth
- ✓ **Red and swollen gums**
- ✓ **Bleeding gums** after brushing or flossing your teeth
- ✓ If left untreated this could affect the tissues and bone that support the teeth known as **periodontitis**
- ✓ Symptoms of this can include **bad breath, unpleasant taste in your mouth, loose teeth, and gum abscesses.**

Cautions and referral

All of the following are symptoms of a condition called **acute necrotising ulcerative gingivitis (ANUG)**. Presentation of these symptoms in any combination should be referred to a dentist:

- bleeding, painful gums
- painful ulcers
- receding gums in between your teeth
- bad breath
- a metallic taste in your mouth
- excess saliva in your mouth
- difficulty swallowing or talking
- a high temperature (fever)
- **Gums that bleed without exposure to trauma**
- Foul taste associated with bleeding gums and loose teeth
- **Signs of systemic illness (e.g. fever)**
- Medicines such as warfarin, heparin, NSAIDs, might produce bleeding gums
- Gum hypertrophy can be caused by medications such as phenytoin, ciclosporin and nifedipine

Treatment:

The most recommended method of treatment and prevention of gum disease is to **practise good oral hygiene**:

- **Brushing your teeth** for two to three minutes twice a day (in the morning and at night)
- **Using toothpaste that contains fluoride** (fluoride is a natural mineral that helps protect against tooth decay)
- **Flossing your teeth regularly**
- **Not smoking**
- Regularly visiting your dentist

Other treatments:

- Eludril 0.1%: > 6 years old
- Hexetidine (Oraldene): > 6 years old
- Hydrogen peroxide (peroxyl): > 6 years old under supervision of an adult

Chlorhexidine gluconate: corsodyl, eludril

- **Corsodyl 2% mouthwash:** >12 years old, rinse mouth using 10 mL twice daily
- **Corsodyl 1% gel:** >12 years old, brush teeth using 1 inch of the gel up to twice a day, spit it out but do not rinse the mouth.
- **S/E:** hypersensitivity, may stain teeth with prolonged use but this is reversible
- In case of swelling and irritation stop using

Oral Thrush

Symptoms:

- ✓ Oropharyngeal candidiasis – a mucosal yeast infection
- ✓ Creamy white soft, elevated patches often on the tongue or inner cheeks and can be wiped off to reveal a red area that may bleed
- ✓ Mouth pain & discomfort is common
- ✓ This may be due to use of antibiotics (amoxicillin and macrolides), inhaled corticosteroids, immunosuppressive treatment and in diabetes (due to poor control)

Cautions and referral

- Diabetic patients – this can indicate poor control
- If does not resolve for > 3 weeks
- Immunocompromised patients
- Children under 4 months old
- Painless lesions especially in those > 50 years old and/or the patches cannot be wiped off and located at the base of the tongue – suspect Leukoplakia
- Difficulty or pain when swallowing

Treatment:

Miconazole (Daktarin oral gel)

- Licensed for > 4 months old
- Dose:
 - 4-24 months use 1.25 mL up to 4 times a day
 - 2+ years old use 2.5 mL up to 4 times a day
- Interaction: warfarin – increasing levels of bleeding
- Avoid in pregnancy
- Cautions: if patient gets skin rash, they are advised to stop using it and to seek medical attention
- Do not put on the nipple to treat breastfeeding children with thrush

Counselling points:

- Hold the gel in the mouth for as long as possible to increase contact time, use after food and do not swallow
- For dentures: advise to remove dentures at night and to brush them with the gel
- Should continue treatment for up to one week after the symptoms have disappeared
- Check for associated nappy rash with children, treat at the same time as the oral thrush
- For breastfeeding mothers: if nipples are itchy, cracked or have flaky skin then a candida infection is suspected and could also be treated with miconazole (but remove gel completely before breastfeeding)
- Patients with inhalers: advise to use a spacer and to wash their mouth out after using their inhaler

4. Respiratory System

Common Cold and Influenza

Symptoms:

- ✓ **Cold symptoms:** runny / congested nose, sneezing, sore throat, cough, mild chills, tiredness, earache
- ✓ **Flu symptoms:** fever >38°C, headache, congested nose, sneezing sore throat, dry cough, body chills, sweating

Cautions and referral

- Earache not improving with analgesic (most earaches are self-limiting and resolve spontaneously in about 3 days)
- Long-term conditions such as **COPD, asthma, kidney disease, diabetes, compromised immune system**
- **Persisting fever and productive cough**
- Vulnerable patients: old, young

Treatment:

1. **Pain relief** for earache, headache, and fever: paracetamol /ibuprofen
2. **Topical or systemic sympathomimetic** for blocked nose and sinus pressure
 - Systemic: pseudoephedrine, phenylephrine (Sudafed, Lemsip, Beechams, Benylin, day nurse etc)
 - **Avoid decongestants in hypertensive patients** (due to stimulant effects raising blood pressure), in **hyperthyroidism** (due to risk of stimulant effect in heart irregularities) and **diabetes** (due to risk of adverse effect on diabetic control) and in patients on **beta-blockers** (due to contradictory effect) **or monoamine oxidase inhibitors** (due to risk of hypertensive crisis)
 - Topical: oxymetazoline, xylometazoline (Otrivine, Sudafed nasal sprays) **max. 1 week use**
3. **Antihistamines** for rhinitis symptoms, runny nose, itchy eyes
 - Older antihistamines (chlorphenamine, promethazine) have a greater anticholinergic effect, but this is associated with greater side-effects.
 - Antihistamines should be avoided in patients **with prostatic hypertrophy, epilepsy, and closed-angle glaucoma** because of increased risk of acute urinary retention, seizures and increased ocular pressure.
4. There is some evidence supporting the use of Echinacea and Vitamin C in the prevention and alleviation of colds

Cough

Symptoms:

- ✓ Productive reflux due to irritation or obstruction, **the body's mechanism to clear airways of foreign bodies**
- ✓ In a productive cough, **excess sputum is secreted in response to an irritation of the airways.** If this sputum is non-coloured (clear or whitish) then it is not infected and is known as mucoid
- ✓ Non-productive (dry, tickly, tight) cough worse at night
- ✓ Most cases Last 7-14 days

Cautions and referral

- Chronic cough lasting **longer than 2-3 weeks**
- **Coloured sputum** (may indicate bacterial chest infection)
- **Blood in sputum** (haemoptysis)
- Persistent fever and night sweats (tuberculosis infection)
- Persistent harsh barking cough (croup)
- **Difficulty breathing, wheezing**
- **Chest pain**
- Whooping cough
- **Recurrent night-time cough (asthma)**
- Patients on ACE- inhibitors

Treatment:

Cough suppressants:

- Opiate derivatives thus may potentiate sedation, they sooth and suppress

Codeine linctus

- Adults > 18 years old
- Contraindicated in < 18 years old, liver disease, ventilatory failure, P+BF, in patients for whom it is known they are CYP2D6 ultra-rapid metabolisers
- Caution in asthma, and in patients with history of drug abuse.
- Counselling: tolerance and dependency may occur with prolonged use, may cause drowsiness

Pholcodine linctus

- Adults > 12 years old
- Children 6-12 years old for 5 days only
- Contraindications: < 6 years old, people at risk of respiratory failure, COPD, chronic bronchitis, MAOIS, liver disease
- S/E: drowsiness, confusion, sputum retention

Dextromethorphan (Benylin, Lemsip, Beechams, Robitussin)

- Adults > 12 years old
- Contra-indications: <12 years old, MAOI, SSRIs or other medications for depression, psychiatric or emotional conditions.

Cough expectorants:

- Act directly by stimulating bronchial mucus secretion, leading to increased liquifying of sputum

Guaifenesin (Benylin, Lemsip, Beechams, Robitussin)

- Adults > 12 years old
- Benylin children's chesty cough: 6-12 years old
- Contraindicated in < 6 years old

Others:

- **Antihistamines:** helps with postnasal drip, or to dry up mucus secretions
- **Diphenhydramine** containing preparations are used to aid with uninterrupted sleep for those with nocturnal cough
- **Demulcents:** simple linctus, glycerine
 - A safe alternative for children < 6 years old, pregnant & breastfeeding mothers, elderly and those taking multiple medications

Counselling points:

- **Increase your fluids** to thin the mucus
- **Avoid smoking**
- **Use steam inhalation** to clear airways
- **Reduce dairy** as it thickens phlegm
- Try **honey and/or lemon** cough drops
- **Add extra pillows** to help with nocturnal cough
- Advise patients that an unproductive cough (dry, tickly) is usually by viral infection and is self-limiting
- **Productive coughs should not be treated with cough suppressants** because this may lead to accumulation of mucus in the lungs a higher chance of infection

Sore Throat

Symptoms:

- ✓ Red swollen tonsils
- ✓ Swollen lymph glands may be felt under the chin or in the neck
- ✓ Back of the throat should be pink and moist
- ✓ Painful especially when swallowing
- ✓ May be associated with cold symptoms

Cautions and referral

- Sore throats lasting more than 10-14 days
- Extreme pain, especially in the absence of cold, cough and catarrhal symptoms
- Difficulty in swallowing (dysphagia)
- Ulceration (may be puss-filled) or white spots on tonsils or tongue
- Signs of glandular fever: fever, rash, very swollen glands
- Medicines-induced: certain drugs can cause a sore throat or may cause a reduction in white blood cells and result in neutropenia (fever, sore throat, ulceration, small haemorrhages under the skin), examples include steroid inhalers, carbimazole, cytotoxics, neuroleptics, sulfasalazine

Treatment:

Pain relief

Lidocaine (covonia throat spray)

- > 12 years old
- May cause hypersensitivity with prolonged use

Benzocaine (ultra chloraseptic sprays)

- > 6 years old

Anti-inflammatories

Benzydamine (Difflam spray and oral rinse)

- > 12 years old

Flurbiprofen (Strefen 8.75 mg)

- > 12 years old
- Contraindications: peptic ulceration, allergy to NSAIDs, avoid in pregnancy but ok in breastfeeding

Counselling points:

- To help soothe a sore throat and shorten how long it lasts, you can gargle with warm, salty water
- Drink plenty of water
- Eat cool or soft foods
- Avoid smoking or smoky places
- Suck ice cubes, ice lollies or hard sweets

Allergic Rhinitis (e.g. Hayfever)

Symptoms:

- ✓ Inflammation of the nasal lining due to allergens that lodge in the mucus and activate chemical mediators
- ✓ **Rhinorrhoea:** runny clear discharge
- ✓ **Nasal itching, watery eyes, and sneezing**
- ✓ **Nasal congestion:** due to vasodilatation of blood vessels
- ✓ **Seasonal:** April (tree pollen), May-July (grass pollen)

Cautions and referral

- **Wheezing with cough, shortness of breath, tightness of chest (Asthma)**
- **Facial pain** due to increased fluid pressure or sinus infection
- **Purulent conjunctivitis or earache**
- If not responding to medication (could be nasal obstruction)
- **Medicine-induced:** topical decongestants when used for more than 7 days, NSAIDs, Aspirin, Sildenafil, terazosin

Treatment:

Antihistamines (sedating)

Chlorphenamine: Piriton range

- Tablets: >6 years old
- Syrup: > 1 years olds
- Indicated for hay fever, skin allergies food allergies, pet allergies, house dust mite allergies, insect bites as well as itchy rash of chickenpox
- **S/E:** **drowsiness** (patients should be advised not to drive), anticholinergic side effects: dry mouth, blurred vision, constipation, urinary retention
- **Contraindications:** narrow closed angle glaucoma, liver disease, prostatic hypertrophy
- **P+BF:** only under doctor's guidance

Antihistamines (newer non-sedating)

Acrivastine: Benadryl relief, Benadryl plus

- Licensed for 12 – 65 years old
- Contraindicated in severe renal impairment
- Benadryl plus is a combination of acrivastine and pseudoephedrine for blocked nose

Cetirizine: Benadryl one-a-day, piriteze, Zirtek

- Adults & children > 6 years old
- Syrup > 2 years old
- **S/E:** fatigue, dizziness, dry mouth
- Not recommended in P+BF

Loratadine: Clarityn, Lorapaed

- Adults & children > 6 years old
- Syrup > 2 years old
- Not recommended in P+BF

Topical corticosteroids: beclomethasone, fluticasone

Beclometasone (Beconase)

- Adults >18 years old
- Contraindications: < 18 years old, glaucoma, cataracts (refer if blurry vision occurs)
- S/E: dryness, irritation of the nose & throat, rash dyspnoea

Fluticasone (Pirinase range)

- Adults > 18 years old
- Contraindications: < 18 years old, glaucoma, cataracts (refer if blurry vision occurs)
- S/E: dryness, irritation of the nose & throat, rash dyspnoea

Counselling for steroids:

- Treatment should be stopped if no improvement is seen within 7 days, they should not be used for more than 3 months, and it may take 3-4 days to see full effect. When given in high doses for long period of time, systemic effects of corticosteroids may occur.

Other treatments:

Ocular mast cell stabilisers: sodium cromoglicate (Opticrom allergy, Murine, Optrex)

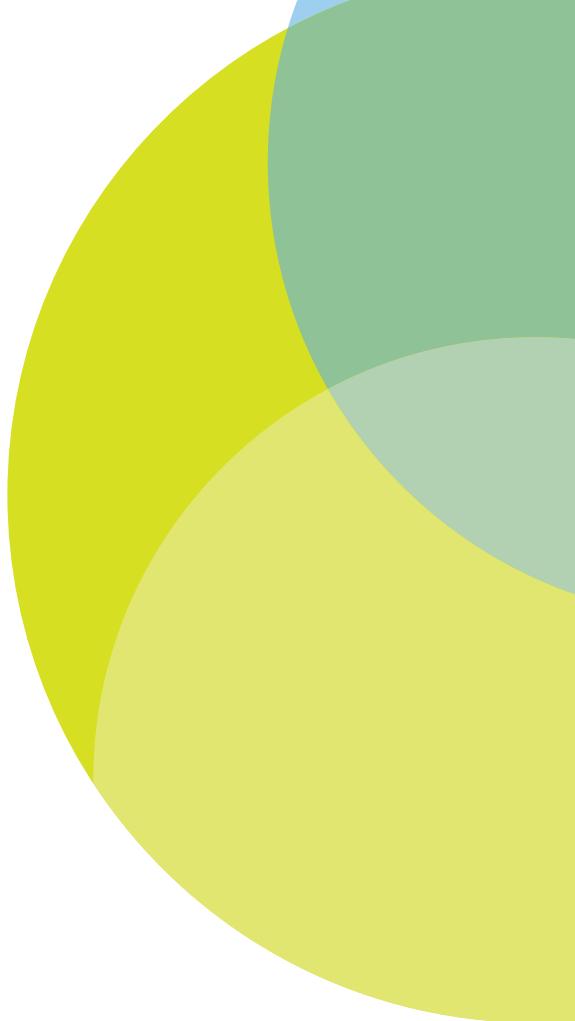
- Adults & children > 6 years old
- Discard the bottle 28 days after opening, should not be used with soft contact lenses, may cause transient blurring or local irritation

Sympathomimetics: Xylometazoline, naphazoline

- Adults > 12 years old
- Topical decongestants can cause rebound congestion if used for over 1 week

Counselling points:

- Put Vaseline around your nostrils to trap pollen
- Stay indoors whenever possible
- Close windows and air vents when pollen count is high
- Ear wraparound sunglasses to stop pollen getting into your eyes
- Shower and change your clothes after you have been outside to wash pollen off
- Vacuum regularly and dust with a damp cloth
- Buy a pollen filter for the air vents in your car and a vacuum cleaner with a HEPA filter



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