

Clinical Pharmacy I

Gastrointestinal Tract Problems

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References

Symptoms in the Pharmacy

A Guide to the Management of Common Illnesses

SEVENTH EDITION

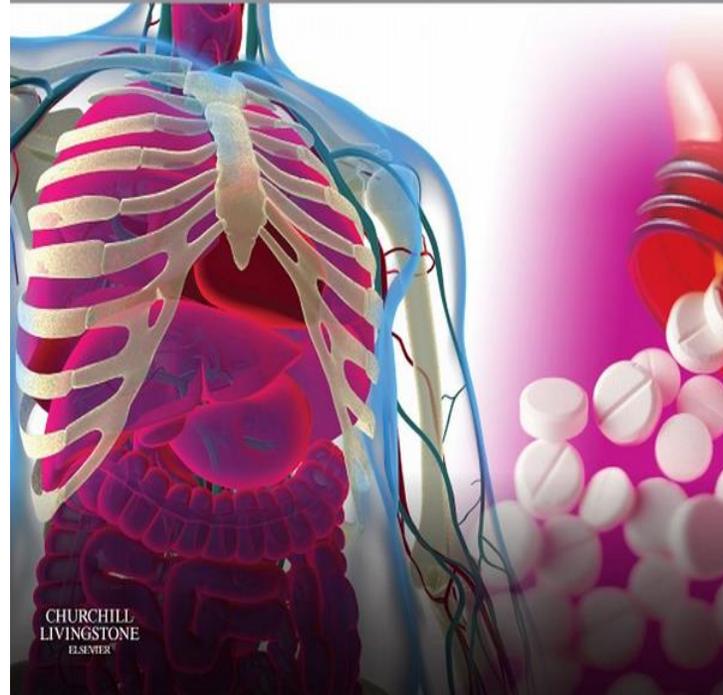


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Symptoms in
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Clinical Pharmacy I

Respiratory tract problems

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2018

Respiratory problems: Cold & Flu

Two common upper **respiratory tract conditions** – the common cold and influenza exhibit similar symptoms and are often confused by patients.

Symptoms Common cold (infectious rhinitis)

- There may be **sore throat and cough** due to irritation of the pharynx and mucus dripping down from the nasopharynx into the bronchus (postnasal drip)
- Recovery is usually **within 4–10 days**, although complications – **laryngitis, sinusitis and otitis media** – **may follow and become complicated by secondary bacterial infection**
is uncommon in adults
directly or passed on to fingers via surfaces

Symptoms Influenza

- **Severe symptoms last up to 4–5 days. With no complications recovery is complete in 7–10 days**, but lassitude, fatigue and depression can persist for several weeks
- Secondary bacterial complications may lead to **more serious respiratory conditions, such as pneumonia**
nausea and vomiting

Respiratory problems: Cold & Flu

Is it a cold or flu?

It can sometimes be difficult to distinguish if it's cold or flu. But the main differences include:

Flu symptoms •	Cold symptoms •
<ul style="list-style-type: none">• come on quickly• usually include a headache, fever and aching muscles• make you feel too unwell to continue your usual activities	<ul style="list-style-type: none">• come on gradually• mainly affect your nose and throat• are fairly mild, so you can still get around and are usually well enough to go to work

Respiratory problems: Cold & Flu

When to refer

Earache not settling with analgesic (see above)
In the very young
In the very old
In those with heart or lung disease, for example, COPD, kidney disease, diabetes, compromised immune system
With persisting fever and productive cough
With delirium
With pleuritic-type chest pain
Asthma

Treatment timescale

Within 14 days if symptoms not improved after otc trt

Respiratory problems: Cold & Flu

Management

Bed rest and use plenty of fluids+ pain killer + decongestant only

-Pain killer

Include paracetamol & ibuprofen (liquids for children) Aspirin for 16y&older

-Decongestants (oral or nasal) (used as TID or QID)

However, they're generally only effective for a short period and **they can make your blocked nose worse if they're used for more than a week.**

- They are not recommended for children <6
- They are not OTC for children 6-12 (NHS choices 2016)
- They are not recommended for pt with DM; HT; Hypothyroid; BPH & glaucoma (especially oral forms) and MAO- inhibitors within 1 wk

Respiratory problems: Cold & Flu

Management

Side effects of decongestants

- irritation of nose ; dry mouth & headaches
- feeling or being sick
- feeling restless or agitated & (tremor)
- a rash problems sleeping (insomnia)
- (palpitations) & (arrhythmia)
- difficulty passing urine

EX: Ephedrine and pseudoephedrine, (a **sympathomimetics**) (systemically used) **antihistamines** like chlorpheniramine ; promethazine etc S/E discussed earlier

Respiratory problems: Cold & Flu

Management

Other remedies may also help relieve your symptoms.

-Gargling and menthol sweets

can help relieve a sore throat and blocked nose.

-Vapour rubs

can help **babies and young** children **breathe more easily** when they have a cold. Apply the rub to your child's chest and back.

Avoid nostril application (cause nasal irritation)

-Nasal saline drops

relieve a blocked nose in babies and young children.

-Vitamin and mineral supplements

zinc supplements reduce the severity of symptoms. And get rapid recovery

Vitamin C probably same result like Zinc

Respiratory problems: Cold & Flu

Practical points

Inhalations

such as eucalyptus. < effective than steam-based inhalations in moistening the airways

-Nasal sprays or drops?

According to Age

<6 y use drops (due to very small nostrils)

>6 y spray better

-generally spray better than drops (mist reach a large surface area. Drops are more easily swallowed, which increases the possibility of systemic effects.)

Respiratory problems: Cold & Flu

Practical points

Treatments not recommended

there isn't strong evidence to suggest they're effective, and they may cause unpleasant side effects:

antihistamines

cough treatments or syrups

antibiotics – these are only effective against bacteria (colds are caused by viruses)

complementary and alternative medicine (CAM) treatments such as echinacea and Chinese herbal medicines (**NHS choices 2016**)

Respiratory problems: Cold & Flu

Practical points

prevention of flu

three main ways of preventing flu: the flu vaccination, good hygiene (such as handwashing and cleaning) and antiviral medication.

The flu vaccine

The **annual flu** vaccine can help reduce your risk of getting flu each year, although it's not 100% effective because it doesn't work against every possible type of flu virus.

- available as **injection** for age 18> & 6months – 2y age
- as **spray** for 2-4y and school children
- Better to be given on autumn

Respiratory problems: Cold & Flu

Practical points

Antiviral medication

Taking the antiviral medicines **oseltamivir (Tamiflu)** or **zanamivir (Relenza)** to prevent flu is recommended if all of the following apply:

- there is a lot of flu around

- elderly > 65, pregnant, or have a medical condition that puts you at risk of complications of flu, such as diabetes, heart disease, lung disease, kidney disease or a neurological disease

- If pt has been in contact with someone with a flu-like illness and can start antiviral treatment within 36-48 hours

- if pt not had the flu vaccination

Respiratory problems: Cough

What you need to know

Age (approximate)

Baby, child, adult

Duration

Nature

Dry or productive

Associated symptoms

Cold, sore throat, fever

Sputum production

Chest pain

Shortness of breath

Wheeze

Previous history

COPD (chronic bronchitis, emphysema, chronic obstructive airways disease)

Asthma

Diabetes

Heart disease

Gastro-oesophageal reflux

Smoking habit

Present medication

Respiratory problems: Cough

WHAT YOU NEED TO NOW

AGE

-Effect choice of trt or referral.

DURATION

-Most cases cough cases take few say to resolve

-cough > 2wks needs referral

Nature or types of coughs

- **Dry none productive –(no sputum)** related **to viral infection** and self **limited**
- **Chesty (Productive) cough –(with sputum)**
- See color of sputum?
- 1- clear or mucoid may be due to irritation or allergy
- 2- colored yellowish green → bacterial infection

Respiratory problems: Cough

What can cause a cough?

Common causes of a short-term cough include:

- An upper respiratory tract infection (URTI) that affects the throat, windpipe or sinuses – examples are a cold, flu, laryngitis, sinusitis or whooping cough
- A lower respiratory tract infection (LRTI) that affects your lungs or lower airways – examples are acute bronchitis or pneumonia
- An allergy, such as allergic rhinitis or hay fever
- A flare-up of a long-term condition such as asthma, chronic obstructive pulmonary disease (COPD) or chronic bronchitis
- Inhaled dust or smoke
- In rare cases, a short-term cough may be the first sign of a health condition that causes a persistent cough.

Respiratory problems: Cough

What can cause a cough?

Persistent coughs

- a **long-term respiratory tract infection**, such as chronic bronchitis
asthma – present with other symptoms, such as wheezing, chest tightness and shortness of breath
- an **allergy**
- smoking – a smoker's cough can also be a symptom of COPD
-bronchiectasis – where the airways of the lungs become abnormally widened
- **postnasal drip** – mucus dripping down the throat from the back of the nose, caused by a condition such as **rhinitis** or sinusitis
- **gastro-oesophageal reflux disease (GORD)** – where the throat becomes irritated by leaking stomach acid

Respiratory problems: Cough

What can cause a cough?

Persistent coughs

- **a prescribed medicine**, such as an angiotensin-converting enzyme inhibitor (ACE inhibitor), which is used to treat high blood pressure and cardiovascular disease
- Rarely, a persistent cough can be a symptom of a more serious condition, such as lung cancer, heart failure, a pulmonary embolism (blood clot on the lung) or tuberculosis.

Respiratory problems: Cough

What can cause a cough?

Coughs in children (probably same to above)

Causes of coughs that are more common in children than adults include:

-bronchiolitis – a mild respiratory tract infection that usually causes cold-like symptoms

-croup – this causes a distinctive barking cough and a harsh sound known as stridor when the child breathes in

-whooping cough – look out for symptoms such as intense, hacking bouts of coughing, vomiting, and a "whoop" sound with each sharp intake of breath after coughing

-Occasionally, a persistent cough in a child can be a sign of a serious long-term condition, such as cystic fibrosis.

Respiratory problems: Cough

When to see your GP

-cough >3weeks

-cough is particularly severe or is getting worse

- cough up blood or experience shortness of breath, breathing difficulties or chest pain

-Presence of following worrying symptoms,

1-such as unexplained weight loss, a persistent change in your voice,

2-or lumps or swellings in your neck.

Respiratory problems: Cough

What treatments are available?

- Most cases are self limited due to viral infection trt by rest& warm fluid

Cough medicines and remedies

-Expectorants

-cough suppressant

-Demulcents (sooth the larynx)

-Compound preparations

#cough suppressant

Codiene	phocodeine	Dextromethorphan
Drowsiness	drowsiness	Less drowsiness
Constipation	Less constipation	Rarely constipating
More drug abused	No drug abuse	rare abuse report
Used for >18 y pt	Used for 6 y and above pt	Used for 6 y & above pt

Respiratory problems: Cough

Demulcents

- such as glycerine, lemon and honey or Simple Linctus are
- Have useful soothing effect.
- They do not contain any active ingredient
- Safe in children and pregnant women.
- Recommended for children under 6.

Respiratory problems: Cough

Expectorants

Act to increase mucous secretion and liquefy the mucous

-Guaifenesin (guaiphenesin)

Guaifenesin is commonly found in cough remedies. In adults, the dose required to produce expectoration is 100–200mg,

#Cough remedies: other constituents

Antihistamines

-Ex OTC diphenhydramine; promethazine.

-Theoretically, these reduce the frequency of coughing and have a drying effect on secretions, but in practice they also induce drowsiness.

- Combinations of antihistamines with expectorants is better to avoided

Respiratory problems: Cough

#Cough remedies: other constituents

Antihistamines

-A combination of an **antihistamine** and a **cough suppressant** may be useful in that antihistamines can help to dry up secretions and the combination can be given as a night-time dose if the cough is disturbing sleep.

-The **non-sedating antihistamines** are **less effective** in symptomatic treatment of coughs and colds because of their **less pronounced anticholinergic** actions.

Sympathomimetics (Pseudoephedrine)

- has some **bronchodilatory; stimulant and decongestant** actions. It has a. It may be useful for blocked nose with cough

Used with **expectorant or cough suppressant /decongestant** combination

Respiratory problems: Cough

#Cough remedies: other constituents

Sympathomimetics (Pseudoephedrine)

precautions

-Diabetes

-Coronary heart disease (e.g. angina)

-Hypertension (uncontrolled)

-Hyperthyroidism

Interactions: Avoid in those taking

- monoamine oxidase inhibitors (e.g. phenelzine)

- reversible inhibitors of monoamine oxidase A (e.g. moclobemide)

- beta-blockers

-tricyclic antidepressants (e.g. amitriptyline) – a theoretical interaction that appears not to be a problem in practice

Respiratory problems: Cough

#Cough remedies: other constituents

Theophylline (bronchodilator effect)

-OTC theophylline should not be taken with prescribed theophylline to avoid get toxic blood levels and side effects may occur.

#Interactions:

- Its action increase by: cimetidine and erythromycin.

Action reduced by smoking and drugs such as carbamazepine, phenytoin and rifampicin that induce liver enzymes,

#S/E

GIT Upset, palpitations, insomnia and headaches.

Dose adult dose is typically 120 mg, TID or QID

- It is not recommended in children.

Respiratory problems: Cough

Practical points

Diabetes

-In short-term acute conditions, the amount of sugar in cough medicines is relatively unimportant.

-**Diabetic control** is often upset during infections and the **diabetic control** is now not considered to be a major problem. Nevertheless, **diabetic control** patients may prefer a sugar-free products

Steam inhalations

-These can be useful, particularly in **productive coughs**. **menthol** and eucalyptus or a proprietary inhalant.

-One teaspoonful of inhalant should be added to a pint of water for a better effect



Respiratory problems: Sore throat

-90% caused by viral and most cases are self limited

Causes and symptoms of sore throats

Sore throats are usually caused by viruses (like cold or flu) or from smoking.

Symptoms include:

- painful throat especially when swallowing**
- dry scratchy throat**
- redness in the back of the mouth**
- bad breath**
- mild cough**
- swollen neck glands**
- The symptoms are similar for children, but children can also get a temperature and appear less active.**

Respiratory problems: Sore throat

-90% caused by viral and most cases are self limited

Causes

-Laryngitis

-Tonsillitis

- Strep throat (streptococcal infections)(common in school children)

Glandular fever

It is also known as infectious mononucleosis, or "mono". Common symptoms include: a high temperature (fever); a severely **sore throat**; **swollen glands** in the neck and fatigue (extreme tiredness)

most of symptoms them should pass within two to three weeks. **Fatigue**, however, can occasionally **last several months**.

-Glandular fever produce body rash when use beta lactam antibiotics?!!

Respiratory problems: Sore throat

-When to refer

- sore throat doesn't improve after a week
- Frequent get sore throats
- hoarseness
- sore throat and a temperature of 38C or above
- Sore throat plus immune suppression - for example because of HIV or chemotherapy
- Dysphagia

Difficulty in swallowing can occur in severe throat infection. It can happen when an **abscess develops in the region of the tonsils(quinsy)**

- **Swelled neck lymph nodes (glandular fever)**
- **Oral thrush with sore throat (possibility of low immunity)**

Respiratory problems: Sore throat

-Management (self remedy)

-Gargle with warm salty water

- drink plenty of water - but avoid hot drinks

- eat cool or soft foods

- avoid smoking or smoky places

- suck ice cubes, ice lollies or hard sweets

- but don't give young children anything small and hard to suck because of the risk of choking

-rest

Respiratory problems: Sore throat

-Management (in pharmacy)



Respiratory problems: Sore throat

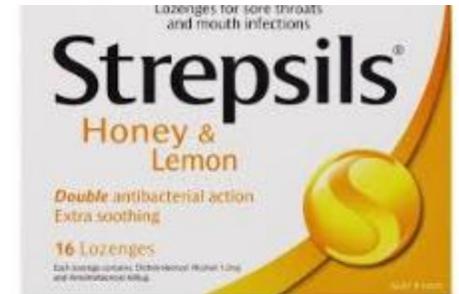
-Management (in pharmacy)

#Lozenges and pastilles (OTC)

Lozenges and pastilles can be divided into three categories.

-Antiseptic (e.g. cetylpyridinium)

-Antifungal (e.g. dequalinium)



Respiratory problems: Allergic rhinitis (hay fever)

-Allergic rhinitis is inflammation of the inside of the nose caused by an allergen, such as pollen, dust, mould, or flakes of skin from certain animals.

Allergic rhinitis can be classified as:

-**Intermittent.** Occurs less than 4 days/week or for less than 4 weeks

-**Persistent.** > 4 days/week and >4weeks

- **Mild.** symptoms not troublesome and not effect usual daily activities

-**Moderate.** Effect 1 or 1> usual daily activities

Symptoms (like cold)

-rhinorrhea (runny nose)

-nasal congestion

-nasal sneezing & itching some time with lacrimation

Respiratory problems: Allergic rhinitis (hay fever)

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- nasal congestion
- nasal sneezing & itching some time with lac



Respiratory problems: Allergic rhin

-Previous history

- allergic rhinitis :it can occur at any age, so the absence of any previous history
- Incidence could be **seasonal or perennial**

Danger symptoms/associated conditions(referred)

- wheezing
- Chest fighting
- Ear ache & facial pa
- Purulent conjunctiv

When to refer

- Wheezing and shortness of breath
- Tightness of chest
- Painful ear
- Painful sinuses
- Purulent conjunctivitis
- Failed medication

What you need to know

- Age (approximate)
 - Baby, child, adult
- Duration
- Symptoms
 - Rhinorrhoea (runny nose)
 - Nasal congestion



Respiratory problems: Allergic rhinitis (hay fever)

#Causes of allergic rhinitis

- Oversensitive immune system
- Common allergens
- House dust mites
- Pollen and spores
- Animals
- Work-related allergens
such as wood dust, flour dust or latex

Diagnosis

- check for [nasal polyps](#).
- Allergic rhinitis is usually confirmed by response to antihistamine



Respiratory problems: Allergic rhinitis (hay fever)

#Management

- Antihistamine
- first-line treatment for mild-to-moderate cases intermittent symptoms of allergic rhinitis.
- They are effective in reducing **sneezing and rhinorrhoea**, less so in reducing nasal congestion
- **Types of antihistamines**
- **First generation(Sedating)**
- like diphenhydramine ; promethazine , chlorpheniramine and dexachloropheniramine; doxylamine
- all have h1 block effect plus variable anticholinergics

Respiratory problems: Allergic rhinitis (hay fever)

#Management

- **Types of antihistamines**
- **2nd generation (Non Sedating) (better say less sedating)**
- **OTC include acrivastine, cetirizine and loratadine.**
- **Cetirizine (6y & older) and loratadine (For 2y & older) are taken once daily,**
- **while acrivastine is TID (>12 y)**
- **Anticholinergic activity is very much lower among the newer drugs compared to the older drugs.**
- **Interactions:** The potential sedative effects of older antihistamines
- **are increased by alcohol, hypnotics, sedatives and anxiolytics & alcohol..**
- **plasma concentration of loratadine may be increased by amprenavir and cimetidine. ritonavir; ↑ conc of non sedating**

Respiratory problems: Allergic rhinitis (hay fever)

#Management

- **Decongestants**
- Oral or topical decongestants may be used short term to reduce nasal congestion alone or in combination with an antihistamine.
- They can be **useful in patients starting to use a preventer** such as a nasal corticosteroid (e.g. beclometasone) or sodium cromoglicate where congestion can prevent the drug from reaching the nasal mucosa.
- Topical decongestants can cause **rebound congestion**, especially with prolonged use. They should not be used for more than 1 week.
- **Eye drops** containing an antihistamine and sympathomimetic combination are available and may be of value in troublesome eye symptoms

Respiratory problems: Allergic rhinitis (hay fever)

#Management

-Steroid nasal sprays include:

-Beclometasone nasal spray (aqueous pump rather than aerosol version)

-fluticasone metered nasal spray can be used for the treatment of seasonal allergic rhinitis.

-Indication for moderate–to-severe nasal symptoms that are continuous.

-It some time take several days before the full treatment effect is reached.

-Dryness and irritation of the nose and throat as well as nose-bleeds have occasionally been reported;.

Beclometasone and fluticasone nasal sprays can be used in patients over **18 years of age for up to 3 months.**

-C/I for pregnant women or for anyone with glaucoma

Respiratory problems: Allergic rhinitis (hay fever)

#Management

-Sodium cromoglicate (OTC)

Dosage form :nasal drops or sprays and eye drops.

Used as a prophylactic . started at least 1 week before the hay fever season

Cromoglicate eye drops are effective for the treatment of eye symptoms that are not controlled by antihistamines. (needs continuous trt) **QID**

Topical antihistamines

Nasal treatments

Azelastine is a nasal spray used in allergic rhinitis. The BNF suggests that treatment should begin 2–3 weeks before the start of the hay fever