Community pharmacy

Respiratory problems

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Respiratory problems

- COLDS AND FLU
- COUGH
- SORE THROATS
- ALLERGIC RHINITIS
COLDS AND FLU

- The common cold comprises a mixture of viral upper respiratory tract infections (URTIs).
Specific questions to ask the patient:

1-Age: Children are more susceptible to URTI than adults.

2-Duration:
rapid onset of symptoms----flu
gradual onset over several hours--common cold

The symptoms of the common cold usually last for 7–14 days. Some symptoms, such as a cough, may persist after the worst of the cold is over.
3-Symptoms

- **Runny/blocked nose:**
  
  Initially a clear watery fluid → thicker and more tenacious mucus (this may be purulent).

- **Sneezing:** → nasal passages are irritated and congested.

- **Coughing:** → pharynx is irritated (producing a dry, tickly cough) or as a result of irritation of the bronchus caused by postnasal drip.
Aches and pains/headache:

persistent frontal headache (pain above or below the eyes) may be due to sinusitis.

muscular and joint aches is more likely to occur with flu than with the common cold.
High temperature:

The presence of fever may be an indication that the patient has flu rather than a cold.

Sore throat:

The throat often feels dry and sore during a cold and may sometimes be the first sign.
Earache:
Is a common complication of colds, especially in children.

Acute otitis media (AOM) is a common infection in young children (the ear becomes acutely painful and can require antibiotics).
4-**Previous history:** People with a history of chronic bronchitis

5-**Present medication:** it is important to know any medicines being taken by the patient to prevent drug interactions
The ‘flu’ season tends to be between December and March, whereas the common cold, although more common in winter months, can occur at any time.
Flu often starts abruptly with:

- sweats and chills,
- muscular aches,
- pains in the limbs,
- a dry sore throat,
- cough and high temperature.

Someone with flu may be bedbound and unable to go about usual activities.
Flu can be complicated by secondary lung infection (pneumonia). Complications are much more likely to occur in the very young, the very old and those who have pre-existing heart or lung disease (chronic bronchitis). Warning that complications are developing may be given by a severe or productive cough, persisting high fever, or delirium.
TRIGGER POINTS indicative of referral

1. Patient with Earache not settling with analgesic.
2. Very young and very old patient.
3. Patients with severe productive cough, persisting high fever, pleuritic-type chest pain or delirium.
4. Patients with heart or lung disease.
5. Asthmatic and diabetic patients.
Management

Once the pharmacist has recommended treatment, patients should be advised to see their doctor in **10–14 days** if the cold has not improved.
A. Sympathomimetic

- pseudoephedrine
- ephedrine
- phenylephrine
- oxymetazoline
- xylometazoline

Can be effective in reducing nasal congestion.
Sympathomimetic can cause raised blood pressure, stimulation of the heart and alterations in diabetic control.

Oral sympathomimetic should be used with caution in patients with:
- diabetes
- coronary heart disease (e.g. angina)
- hypertension
- hyperthyroidism
B. Antihistamines

1. sedating antihistamines
   - Chlorphenamine
   - Promethazine
   - Doxylamine

2. non-sedating antihistamines
   - Loratadine
   - Cetirizine
   - Acrivastine

Can reduce some of the symptoms of a cold: runny nose (rhinorrhoea) and sneezing.
C. Analgesics and antipyretic products

- Aspirin
- Paracetamol
- Ibuprofen

These are often combined with other constituents such as codeine, dihydrocodeine, doxylamine and caffeine.

They are available in a variety of dosage forms like tablets, capsules, syrups, suspension and suppositories.
D. Alternative therapies:

- Zinc lozenges
- Echinacea
- Vitamin C

They are beneficial in reducing the duration and severity of the common cold in healthy people, when taken within 24 hours of onset of symptoms.
D. Alternative therapies

- **Vapor inhalation**: Steam inhalation has long been advocated to aid symptoms of the common cold, usually with the addition of menthol crystals.
D. Alternative therapies

- **Saline nose drops** can be used from birth to help with congestion. This would be a more suitable and safer alternative than a topical sympathomimetic.
E. Cough remedies and products for sore throats.
Coughing is a protective reflex action, to clear the airway so that breathing can continue normally.
Causes of cough and their relative incidence in community pharmacy

<table>
<thead>
<tr>
<th>Incidence</th>
<th>Cause</th>
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<tbody>
<tr>
<td>Most Likely</td>
<td>Viral infection</td>
</tr>
<tr>
<td>Likely</td>
<td>Upper airways cough syndrome (formerly known as postnasal drip and includes allergies), acute bronchitis</td>
</tr>
<tr>
<td>Unlikely</td>
<td>Croup, chronic bronchitis, asthma, pneumonia, ACE inhibitor induced</td>
</tr>
<tr>
<td>Very unlikely</td>
<td>Heart failure, bronchiectasis, tuberculosis, cancer, pneumothorax, lung abscess.</td>
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Specific questions to ask the patient:

1. **Age**

2. **Duration**: Most coughs are self-limiting and will be better within a few days with or without treatment. The most likely diagnoses of cough are as follows:

   - at 3 days duration will be a URTI;
   - at 3 weeks duration will be acute or chronic bronchitis;
   - and at 3 months duration conditions such as chronic bronchitis, tuberculosis and carcinoma become more likely.
3. **Nature of cough**

- **Unproductive** (dry, tickly or tight): In an unproductive cough no sputum is produced. These coughs are usually caused by viral infection and are self-limiting.

- **Productive** (chesty or loose): Sputum is normally produced. It is an over secretion of sputum that leads to coughing.
Sputum colour:

- Mucoid (clear and white) is normally of little consequence and suggests that no infection is present.

- **Yellow, green or brown** sputum normally indicates infection.

- Mucopurulent sputum is generally caused by a viral infection and does not require automatic referral.

- Hemoptysis (pneumonia)
- **pink** (left ventricular failure)
- **dark red** (carcinoma)
Nature of sputum:

- Thin and frothy (Mucus that contains bubbles and is *foamy*) suggests left ventricular failure.

- Thick, mucoid (clear, white or grey) to yellow can suggest asthma.

- Offensive foul-smelling sputum suggests either bronchiectasis or lung abscess.
Specific questions to ask the patient:

4. **Smoking history:** Smoking will exacerbate a cough and can cause coughing since it is irritating to the lungs.

5. **Associated symptoms:** Cold, sore throat, postnasal drip, fever.

6. **Previous history of:** Chronic bronchitis, asthma, history of heart disease, and Gastro-esophageal reflux.

7. **Present medication:**
TRIGGER POINTS indicative of referral

1. Cough lasting 2 weeks or more and not improving
2. Sputum (yellow, green, rusty or blood-stained)
3. Chest pain
4. Shortness of breath
5. Wheezing
6. Whooping cough or croup
7. Recurrent nocturnal cough
8. Suspected adverse drug reaction
9. Failed medication
Treatment timescale

Once the pharmacist has recommended an appropriate treatment, patients should see their doctor 2 weeks after the cough started if it has not improved.
Management

- The choice of treatment depends on the type of cough.

A. Cough suppressants:

1. Codeine
2. Pholcodine
3. Dextromethorphan
4. Antihistamines. Examples used in OTC products include diphenhydramine and promethazine.
5. Demulcents: Preparations such as glycerin, lemon and honey or Simple Linctus are popular remedies and are useful for their soothing effect.
Pholcodine has several advantages over codeine in that it produces fewer side-effects (even at OTC doses codeine can cause constipation and, at high doses, respiratory depression) and pholcodine is less liable to be abused.

Dextromethorphan have a low potential for abuse.
B. Expectorants

- Guaifenesin
Guaifenesin

- The dose required to produce expectoration is 100–200 mg, so in order to have a theoretical chance of effectiveness, any product recommended should contain a sufficiently high dose.
Combinations of *antihistamines* with *expectorants* are illogical and best avoided.

A combination of an *antihistamine* and a cough *suppressant* may be useful in that antihistamines can help to dry up secretions and, when the combination is given as a night-time dose if the cough is disturbing sleep, a good night’s sleep will invariably follow.
Fluid intake

Maintaining a high fluid intake helps to hydrate the lungs and hot drinks can have a soothing effect. General advice to patients with coughs and colds should be to increase fluid intake by around 2 L a day.
SORE THROATS

- Sore throats mean pain in the throat, are often associated with the common cold.

- Pain can range from irritation to severe pain.
Specific questions to ask the patient:

- Age

Establishing who the patient is will influence the choice of treatment and whether referral is necessary. Streptococcal (bacterial) throat infections are more likely in children of school age.
Duration

Most sore throats are self-limiting and will be better within 7 days.
**Severity**

If the sore throat is described as being extremely painful, especially in the absence of cold, cough and catarrhal symptoms, then referral should be recommended when there is no improvement within 24–48 h.
**Associated symptoms**

**Like:**
- Cold
- Catarrh
- cough
- Fever
- general aches and pains.

These are in keeping with a minor self-limiting viral infection.

- Both hoarseness of longer than 3 weeks’ duration and difficulty in swallowing (dysphagia) are sometimes seen with tonsillitis.....refer
Previous history

Smoking habit: Smoking will exacerbate a sore throat.

Present medication: e.g. Steroid inhalers (beclometasone or budesonide) can cause hoarseness and candidal infections of the throat and mouth. Generally, they tend to do this at high doses. Such infections can be prevented by rinsing the mouth with water after using the inhaler.
TRIGGER POINTS indicative of referral

1. Sore throat lasting 1 week or more.
2. Recurrent bouts of infection.
3. Hoarseness of more than 3 weeks’ duration.
4. Difficulty in swallowing (dysphagia).
5. Failed medication.
1. Local anaesthetics (lidocaine, benzocaine)
All local anaesthetics have a short duration of action and frequent dosing is required to maintain the anaesthetic effect, whether formulated as a lozenge or spray.

2. Mouthwashes and sprays
Anti-inflammatory (e.g. benzydamine) is an anti-inflammatory agent that is absorbed through the skin and mucosa. It is effective in reducing pain and inflammation in conditions of the mouth and throat.

3. Flurbiprofen lozenges have also been shown to be more effective than placebo in reducing pain associated with sore throat.
4. Oral analgesics:
   Paracetamol, aspirin, ibuprofen and Flurbiprofen.
Seasonal allergic rhinitis (hay fever) is simply inflammation of the nasal lining. It is characterized by
- Rhinorrhea,
- Nasal congestion,
- Sneezing
- Itching.

Allergens responsible for seasonal allergic rhinitis include grass pollens, tree pollens and fungal mould spores.
Specific questions to ask the patient:

1. **Age**: There is frequently a family history of allergic rhinitis sufferers. The condition often improves or resolves as the child gets older.

2. **Duration**: Sufferers will often present with seasonal rhinitis as soon as the pollen count becomes high. Hay fever peaks between the months of May and July, when grass pollen levels are highest.
3. **Symptoms**

4. **Previous history.** There is commonly a history of hay fever going back over several years.

5. **Medication**
TRIGGER POINTS indicative of referral

1. Tightness of the chest, wheezing, shortness of breath (These symptoms may indicate the onset of an asthmatic attack).

2. Very painful and red eye with coloured and sticky purulent discharge (secondary bacterial infection).

3. Persisting severe pain in ear and face indicate secondary bacterial infection in the middle ear (otitis media) or the sinuses (sinusitis).

4. Failed medication: If symptoms are not adequately controlled with OTC preparations.
If no improvement is noted after 5 days, the patient might be referred to the doctor for other therapy.
Management

Non-pharmacological treatment:

- Patients may choose to stay indoors when pollen counts are high.
- Windows should be closed (both when in the house and when travelling in cars).
- Patients should avoid walking in areas with the potential for high pollen exposure (grassy fields, parks and gardens) as well as areas such as city centers to avoid exhaust fumes and cigarette smoke.
- Avoid exposure to the house dust mite and animal dander (The offending pet can be excluded from certain parts of the house such as living areas and bedrooms).
Medication

A. Systemic therapy:

Antihistamines:

- **Non-sedating antihistamines**: available OTC include acrivastine, cetirizine and loratadine.

- **Sedating antihistamines**: Promethazine, diphenhydramine, chlorphenamine (chlorpheniramine) and clemastine have greater tendency to produce sedative effects.
B. Topical therapy

- Intranasal medication

1. Corticosteroids: They have a slow onset of action (12 hours) and maximum clinical efficacy can take up to 2 weeks.

- Like; Beclometasone, fluticasone and triamcinolone

- A steroid nasal spray is the treatment of choice for moderate to severe nasal symptoms that are continuous
2. Topical antihistamines

- *Azelastine* is a nasal spray used in allergic rhinitis. The treatment should begin 2–3 weeks before the start of the hay fever season.
3. Mast cell stabilizer:

Like: Sodium cromoglicate:

Is available as nasal drops or spray and as eye drops.

Can be effective as a prophylactic if used correctly.

It should be started at least 1 week before the hay fever season is likely to begin and then used continuously.

4. Decongestants
– Intraocular medication

- Mast cell stabilisers: Sodium cromoglicate

- Antihistamines: The only ocular antihistamine available OTC is antazoline. It is available in combination with xylometazoline.

- Sympathomimetics: OTC ocular sympathomimetics are commonly used to control ocular redness and discomfort
thank you