

# Cough



- An elderly woman was brought to the hospital to manage hip fracture, she fall on the ground and she said “I have dizziness”,she has a history of heart failure (using diuretics), and was recently taking OTC drugs for wet cough :, the cause of this condition is:

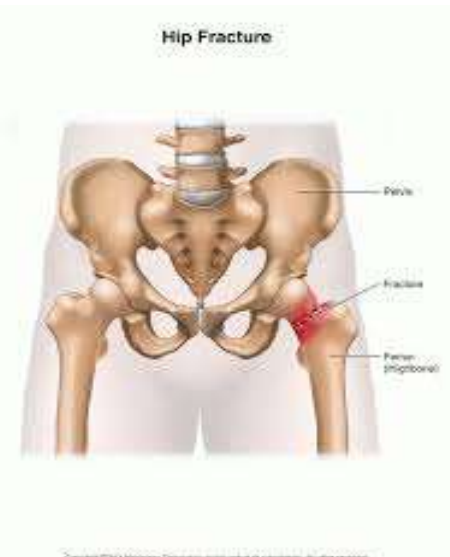
Side effects of drugs used.

Infection of inner ear.

Heart failure.

a and b are correct.

All are correct.



A young lady comes to your pharmacy asking for help regarding severe cough which even disturbs her sleep, cough is common in which of the following conditions?

Common cold.

Asthma.

Bacterial throat infection.

Patients using  $\beta$  agonists.

Influenza.



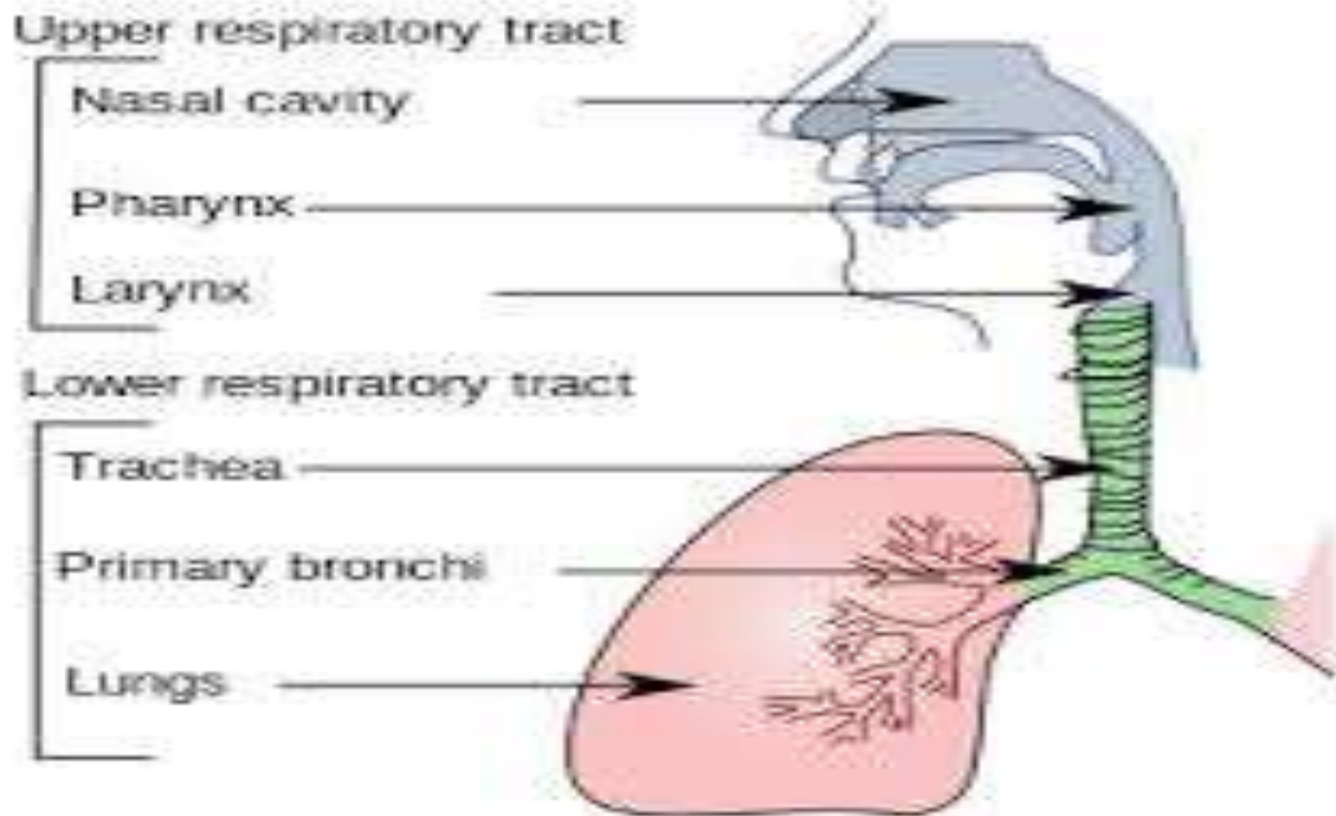
- Upon ingestion of a cough mixture, a patient's pulse increased with headache and nausea side effects. The cough mixture contains:
- Codein.
- Phenylephrine.
- Theophylline.
- Diphenhydramine.
- Glyceryl quiacolate.



# Definition

- Is an important defensive respiratory reflex caused when the airway is irritated or obstructed.

Mainly caused by upper respiratory tract viral inf. Since viruses increase cough receptor sensitivity and it may be associated with other symptoms of cold



# Classification



- According to duration

1- acute: <3 weeks. Upper respiratory viral inf, common cold

2- subacute: 3-5 weeks. Bacterial sinusitis, asthma.

3- chronic: >5 weeks. Asthma, GERD, COPD, Heart disease, Carcinoma, TB, Drugs.

## Drugs which may cause chronic cough

- ACEIs: cause dry cough in 20% of users which develop within few days, weeks, or months of treatment.
- $\beta$  blockers: in patients with asthma or COPD.



# Complications

- Exhaustion, insomnia, musculoskeletal pain, h  
-orsiness, urinary incontinence.

Classifications according to Cl.P

**productive (watery, chesty)** : with sputum

- Effective: expelled secretions.
- Ineffective: difficult to expels

**non-productive** caused by viral inf. And usually self-limiting

## Sputum:

- ❖ Non- colored (clear or white) → uninfected
- ❖ Colored → inf.(eg pneumonia)
- ❖ Pink or red contains bd (hemoptysis) → TB
- ❖ Frothy or bright red → heart failure or mitral stenosis.

# Treatment

- Non pharmacotherapy:

Lozenges

Humidifiers

Hydration.



- Lozenges sooth the throat and safe for pregnant women and children > 3 years.
- Humidifiers increase moisture in inspired air and sooth the throat.
- Hydration produces less viscous easily expelled secretions.

(hydration is used with caution in HF, RF, lower RT inf. Like pneumonia)

# pharmacologic treatment

- Cough suppressants
- Expectorants
- Others



# Cough suppressants(antitussive-dry cough)

1. Codein and pholcodin:  
Centrally acting to increase  
cough threshold very effective  
For cough.

S.E drowsiness, constipation  
(low OTC doses), respiratory  
Depression (high doses).

Codein is liable to be abused  
Pholcodin lower S.E.

Safety is not established in children  
CI asthma, COPD



2- hydrocodone, hydromorphone:

Similar efficacy but greater risk of S.E.

These comp. are metabolized in the liver to morphin, additive CNS suppressant effect if used with alcohol or other CNS suppressants.

3- dextromethorphan:

Non-opioid analogue of levorphanol (a codeine analogue), no sedative or respiratory depressive effect or additive properties at usual antitussive doses, but higher doses produce such effects.

## Expectorants (protussives-wet in-effective cough)

- Stimulate mucus secretion so inc. liquification of sputum and easy to expel

- ✓ Guaifenesin (glyceryl quiacolate)

S.E: NV, dizziness, headache.

- ✓ Ipecacuanha

- ✓ Ammonium chloride Or bicarbonate

S.E vomiting, acidosis, unpleasant taste.

Expectorants are not used for asthma, COPD, smokers.



# others

- Antihistamines (diphenhydramine) dry cough: S.E sedation, anticholinergic (dry mouth, blurred vision, urinary incontinence, respiratory depression, the non-sedating antihistamine (loratidine) lacks the anti-tussive effect. In children it may cause excitability.

- Sympathomimetics (pseudoephedrin and phenylpropanolamin)

Included in cough mixtures for their bronchodilator and decongestant effect but has a stimulant effect and may cause insomnia if taken close to bed time

Stimulate the heart (inc. BP)

Alter diabetic control



- Theophyllin

Included in cough mixtures for bronchodilatory effect, narrow therapeutic index

Cimetidin, erythromycin increases its action

Smoking, CMZ, phenytoin reduce its level

S.E CNS, GIT, CV.

- **Thank you for listening**