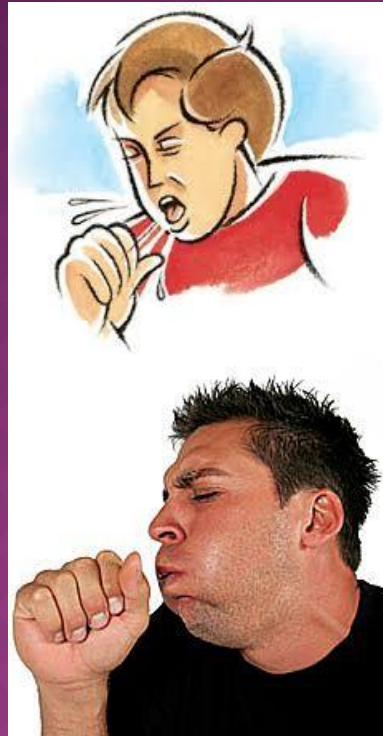


PRACTICAL CLINICAL PHARMACY  
LAB 3



COUGH



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# COUGH

- ◉ The main cause of cough is air ways and lungs clearance from secretions and foreign bodies.
- ◉ Cough can be either acute or chronic.
- ◉ An acute cough lasts less than 3 weeks, sub acute cough lasts 3-8 weeks, while chronic cough lasts more than 8 weeks.
- ◉ The most common cause of acute cough is viral URTI in all ages.
- ◉ Viral cough usually present with sudden onset and associated with cold symptoms and fever but sputum production is minimal, these usually last between 7-10 days. Duration longer than 14 days might suggest secondary bacterial infection.

# WHAT YOU NEED TO KNOW

- ◉ Age (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

Asthma

Diabetes

Heart disease

Gastro-oesophageal reflux

Smoking habit

Present medication

# TYPES OF COUGH

- ◉ **Productive ( chesty, loose):** It is an oversecretion of sputum that leads to coughing.
- ◉ Oversecretion may be caused by irritation of the airways due to infection, allergy, etc., or when the cilia are not working properly (e.g. in smokers).
- ◉ **Non- productive ( dry, tickly, tight):** usually caused by viral infection and are self-limiting.
- ◉ Antibacterial agents will not help.

# WHEN YOU NEED TO REFER PATIENT

- ◉ Cough lasting 2 weeks or more and not improving
- ◉ Sputum (yellow, green, bloody)
- ◉ Chronic cough with haemoptysis associated with chronic fever and night sweats
- ◉ Chest pain, Shortness of breath, and history of heart failure
- ◉ Wheezing, recurrent nocturnal cough, chronic cough, a family history of eczema, and asthma
- ◉ Whooping cough with catarrhal (mucus) symptoms
- ◉ Suspected adverse drug reaction
- ◉ Failed medication



# MANAGEMENT

- ◉ Cough suppressant
  1. codeine
  2. Pholcodine
  3. dextromethorphan
- ◉ Expectorants
  - Guaifenesin
- ◉ Theophylline
- ◉ Antihistamines
  1. Diphenhydramine
  2. promethazine.
- ◉ Demulcents
  1. Glycerin
  2. Honey
- ◉ Sympathomimatics (decongestant)
  - Pseudoephedrine

# NON PHARMACOLOGICAL INTERVENTION

- ◉ Steam inhalation
- ◉ Fluid intake and hydration
- ◉ Smoking cessation

# Case study 1



# CASE STUDY 1

SS is a 40-year-old man who comes to the pharmacy with a cough that is bringing up mucus from his lungs. He has no fever or any other symptoms but feels uncomfortable with the cough. He states he has been out of work for 2 days because of the discomfort and needs something to relieve his cough. He has no known drug allergies. When you review his medication profile, you see he is taking hydrochlorothiazide 25 mg daily, and fexofenadine 180 mg daily. What type of self-care product would you recommend to SS's cough?

# CASE STUDY 1

## Answer

- ⊙ **Expectorants** would be the **drug class of choice** for symptomatic relief. You can recommend guaifenesin 400 mg every 4 hours.
- ⊙ It is important to **counsel SS** on the possible side effects he may experience, such as nausea, vomiting, dizziness, headache, diarrhea, or rash.
- ⊙ Guaifenesin will not interact with any of his medications.

- ◉ You can also **educate SS** on **nonpharmacologic** measures, such as staying hydrated by drinking at least 8 glasses of water per day, increasing moisture in the air by using a humidifier, and getting adequate rest.

# Case study 2

## CASE STUDY 2

- ◉ Abu Jassim is 42 years old male visited the local community pharmacy asking the pharmacist to **refill** his prescribed theophylline. Pharmacist asked the patient several questions to insure patient safety, upon questioning Abu Jassim seemed to be smoker and he has history of heart burn and used to take antacids to relieve this gastro esophageal reflux symptoms and he used to take theophylline with some antihistamines to relieve his cough associated with asthma symptoms .

# CASE STUDY 2

## ◉ Counseling the patient:

1. The pharmacist explained to his patient about the safety and drug interaction with theophylline, smoking and cimetidine (drug indicated to treat peptic ulcer and gastro esophageal reflux disease might potentiate the action of theophylline).
2. Theophylline then might cause toxicity (seizure and arrhythmias).
3. Also the pharmacist advised the patient to try to use smoking cessation products like transdermal patches and gums.



**Thank you**