# AN EASY APPROACH TO RESPIRATORY DISEASES

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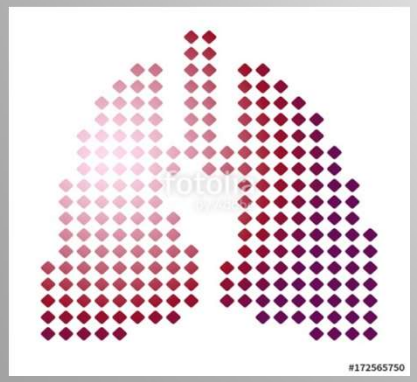


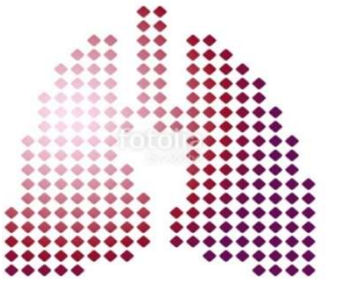
# TYPES OF RESPIRATORY DISEASES

- **AIRWAY DISEASE-** eg **A**sthma,Bronchitis, Cytic fibrosis etc
- **PARENCHYMA DISEASES-** eg Pnuemonia, Tb,Pulm oedema
- **INTERSTITIAL LUNG DISEASE -** eg-Sarcoidosis,Autommmune disorders,Interstitial pnuemonia,Pulm fibrosis
- **PULMONARY VASCULAR DISEASE** eg, Pulm embolism,Pulm hypertension
- **PLEURAL DISEASE-** eg-Pluerisy, Plueral effussion.Pnuemothorax
- **NEUROMUSCULAR DISEASE-** Guillian Barre Syndrome etc

# DIFFERENCE BETWEEN OBSTRUCTIVE AND RESTRICTIVE LUNG DISEASE

## OBSTRUCTIVE VS. RESTRICTIVE

| Obstructive disorders | Restrictive disorders |
| --- | --- |
| • **Characterized by:** reduction in airflow.<br>• So, shortness of breath → in exhaling air.<br><br>( the air will remain inside the lung after full expiration )<br><br>1. COPD<br>2. Asthma<br>3. Bronchiectasis | • **Characterized by** a reduction in lung volume.<br>• So, Difficulty in taking air inside the lung.<br><br>( DUE TO stiffness inside the lung tissue or chest wall cavity )<br><br>1. Interstitial lung disease.<br>2. Scoliosis<br>3. Neuromuscular cause<br>4. Marked obesity |

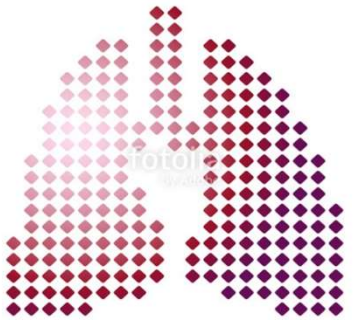


## Spirometry Interpretation: Obstructive vs. Restrictive Defect

What parameter is the most sensitive in airway obstruction?

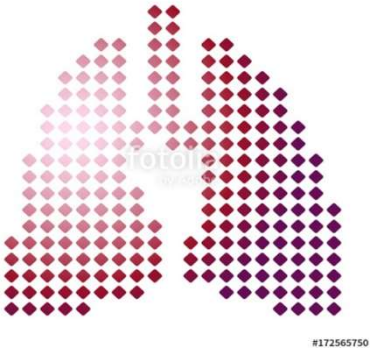
| *Parameter* | *Obstructive Disorders* | *Restrictive Disorders* |
|---|---|---|
| FVC | N or ↓ | ↓ |
| $FEV_1$ | ↓ | ↓ |
| $FEF_{25-75\%}$ | ↓ | N to ↓ |
| FEV1/FVC | ↓ | N or ↑ |
| PEFR | ↓ | N to ↓ |





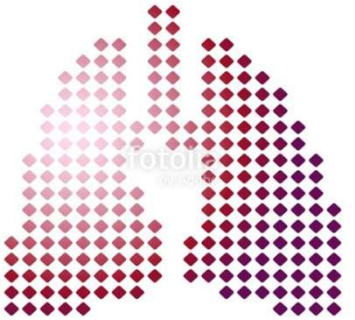
# COMPONENTS OF APPROACH TO CASE

- History
- Physical examination (General and Systemic)
- Make a provisional diagnosis
- Investigations
- Diagnosis
- Treatment



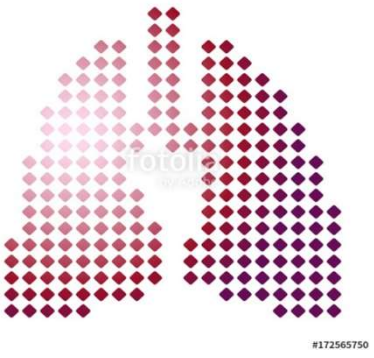
# SYMPTOMS OF RESPIRATORY ILLNESSES

- Cough
- Sputum
- Dyspnoea
- Haemoptysis
- Wheeze
- Fever
- Chest pain
- Oedema



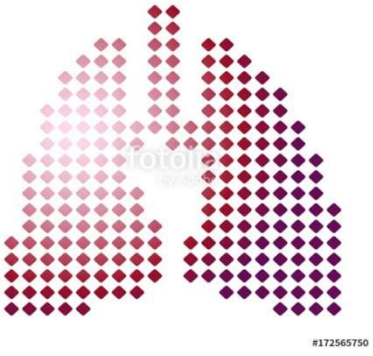
# COUGH

- **Duration**
  - **Acute** eg viral cold, AECB,foreign body
  - **Sub acute** eg sinusitis, post infectious cough
  - **Chronic** eg COPD,GERD,drugs like ACE inhibitors,Brochiectasis
- **Dry/Wet**
- **Paroxsmal cough-**
- **Time-** Diurnal/ Nocturnal variation



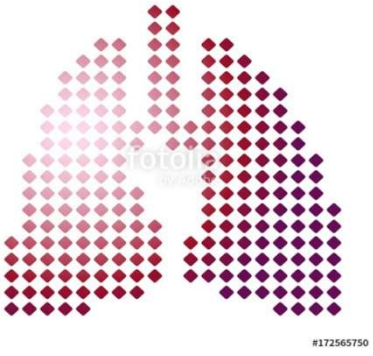
# PAROXYSMAL COUGH

- Bronchial asthma, cardiac failure, whooping cough.



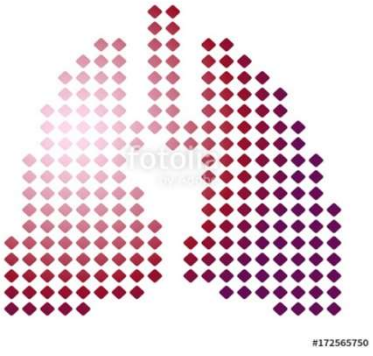
# DRY/ WET COUGH

- **Dry or unproductive cough** - In upper respiratory tract infection, pleurisy, early stage of pulmonary tuberculosis, bronchogenic carcinoma, smoker's cough, interstitial fibrosis, bronchial asthma, tropical eosinophilia, pulmonary infarction, psychogenic or habitual cough.
- **Wet or productive cough**- Bronchiectasis, lung abscess, fungal infection.



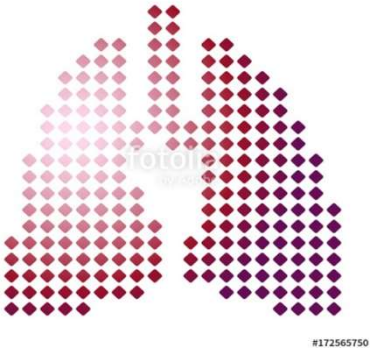
# DIURNAL VARIATIONS OF COUGH.

- Worse in night and early morning- Asthma, congestive heart failure (CHF).
- Worse on waking up in morning- chronic bronchitis



# POSTURAL VARIATION

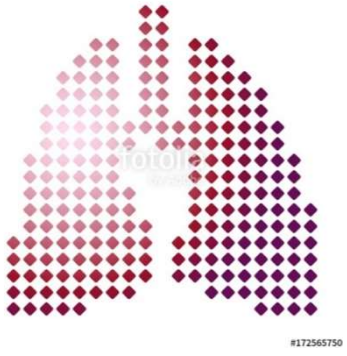
- It is Postural variations of Cough. It can be significant in bronchiectasis, lung abscess, bronchopleural fistula.
- Increased on supine position- GERD and cardiac diseases.



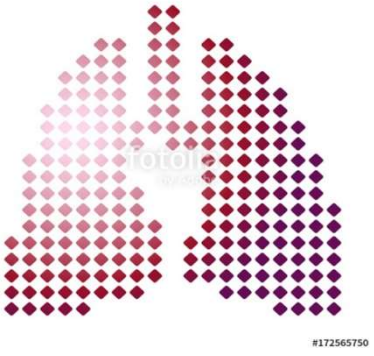
# NATURE OF COUGH

Cough can present with very specific characteristics which can be tracked down to a typical diagnosis:

- 1. **Bovine cough**- Non-explosive cough which is seen in recurrent laryngeal nerve palsy which is commonly due to Bronchogenic carcinoma.
- 2. **Whooping cough**- High pitched whoop sound or gasp causing severe coughing fits. It follows as cough and then deep inspiration with whoop noise. It occurs in Bordetella Pertussis.
- 3. **Barking cough-** It occurs in Croup (viral, mild fever of 100 F, shows steeple sign on x-ray), epiglottitis (muffed up/hot potato voice with high fever, thumb print sign on x ray) or bacterial tracheitis (high grade fever).

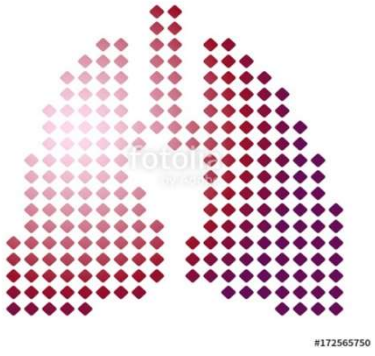


- 4. **Brassy cough**- It has a typical metallic sound and occurs in laryngeal carcinoma.
- 5. **Spluttering cough**- Cough during swallowing which occurs in tracheo-esophageal fistula.
- 6. **Foul-smelling cough**- It is typical of bronchiectasis, lung abscess or empyema.
- 7. **Hacking cough**- It is pharyngeal cough which occurs in heavy smokers, beginning of tuberculosis (short and dry cough with rough and loud sound).



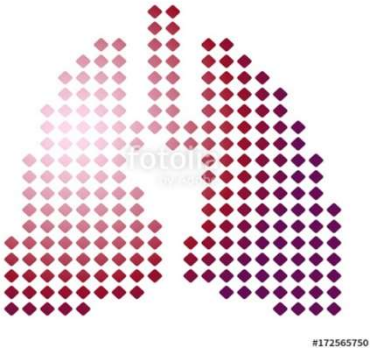
# IMPORTANT REMEDIES AS PER LOCATION

- **Illicum**- pain in region of 3rd rib about an inch or two from the sternum generally on right side (  but occasionally on left)
- **Pix liquida**- Pain at a spot about the 3rd left costal cartilage where it joins the rib…*mucopurulent sputum*, offensive odor and taste (Constant vomiting of Blackish fluid with pain in stomach) Chronic bronchitis



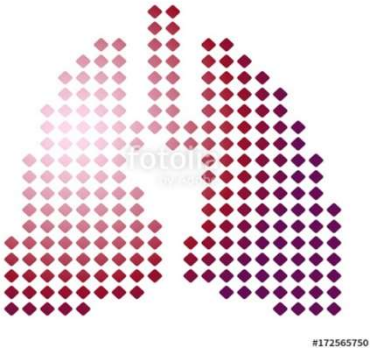
# EXPECTORATION

- Type- serous, mucoid, mucoprulent, purulent etc
- Amount
- Smell
- Postural variation

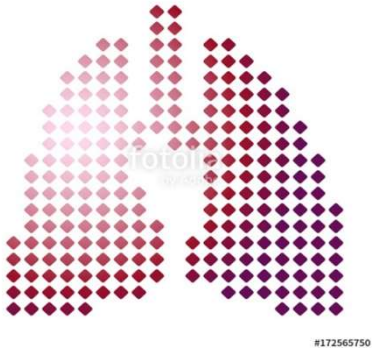


# COLOUR OF SPUTUM

- **Serous** (watery)-
- • **Clear sputum-** Normal
  • **Clear, White or Pinky froth**- Pulmonary edema
  • **Clear to white (acute)**- Viral respiratory tract infections
- **Mucoid**-
- • **Clear to gray**- Chronic bronchitis (COPD)
  • **Yellow to white**- Asthma
  • **Yellow** – Acute bronchitis
  • **Rusty golden yellow-** Acute pneumonia
  • **Green-** Pneumonia, lung abscess, chronic bronchitis, bronchiectasis, cystic fibrosis



- **Brown**- Chronic bronchitis (could be green, yellow, brown)
  - **Brown to green**- Chronic pneumonia
  - **Brown to black-** Coal worker's pneumoconiosis
  - **Brown to red/black**- Tuberculosis, lung cancer
  - **Bloody**- Pulmonary embolism



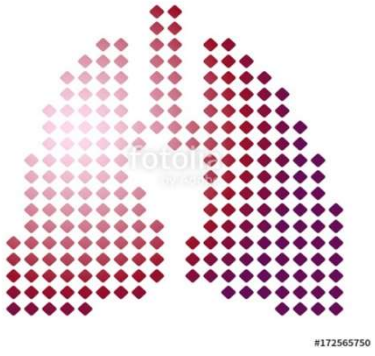
# MEDICINES ACCORDING TO COLOUR OF SPUTUM

- **EXPECTORATION - LUMPY** - smoke-colored lumps, streaked with blood kali-c.( A very typical asthma cough)
- **EXPECTORATION - COLOR - bluish** am-c. ambr.
- **COUGH - Expectoration - reddish, rust colored** -acon. BRY. carb-v. PHOS. Rhus-t. sang. SQUIL
- **EXPECTORATION - COLOR - greenish** – yellow . ars-i. CALC-SIL. carb-v. cassia-f. cub. kali-bi. KREOS. LYC. mang. MERC-I-F. NIT-AC. OL-J. PSOR. puls. stann. SYPH.
- **EXPECTORATION - COLOR - cream-** ambr. bals-p.

- **EXPECTORATION - COLOR** - white – albuminous Agar. alum. ALUMN. am-c. am-m. ant-t. Apis ARG-MET. arn. Ars. asaf. Bar-c. borx. bov. bry. calc-s. Caust. chin. COC-C. coca cur. eucal. Ferr. hydrog. ip. Kali-bi. kali-m. Laur. Med. meph. Mez. NAT-M. Nat-s. petr. Ph-ac. PHOS. Sel. SENEG. Sil. squil. Stann. sulph.
- **EXPECTORATION - COLOR -** brownish – frothy- carb-an.( as in pulm oedema )
- **EXPECTORATION - COLOR -** black- Elaps Corrallium

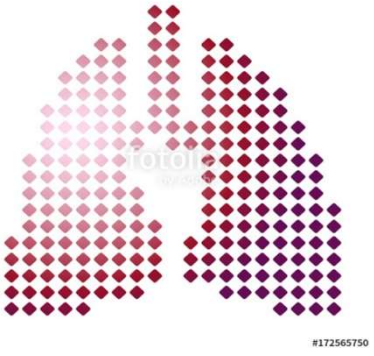
# DYSPNOEA

- Description in patients language about shortness of breath eg is it air hunger or tightness in chest, etc
- Onset- acute, subacute or insidious
- Duration
- Episodic or persistent
- Position which patient adapts in dyspnoea
- Grade of dyspnoea



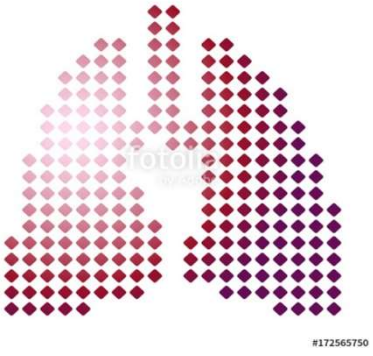
# ONSET

- Acute for say 2 or 3days associated with fever is likely to have Pnuemonia or Pnuemothorax or rapidly collecting plueral effussion
- Sudden shortness of breath with prolonged bed rest or history of injury – pulmonary embolism
- Sudden dyspnoea-Foreign body in young children, aspiration in bed ridden patients
- Slow or insidious onset- eg COPD or Interstitial lung disease

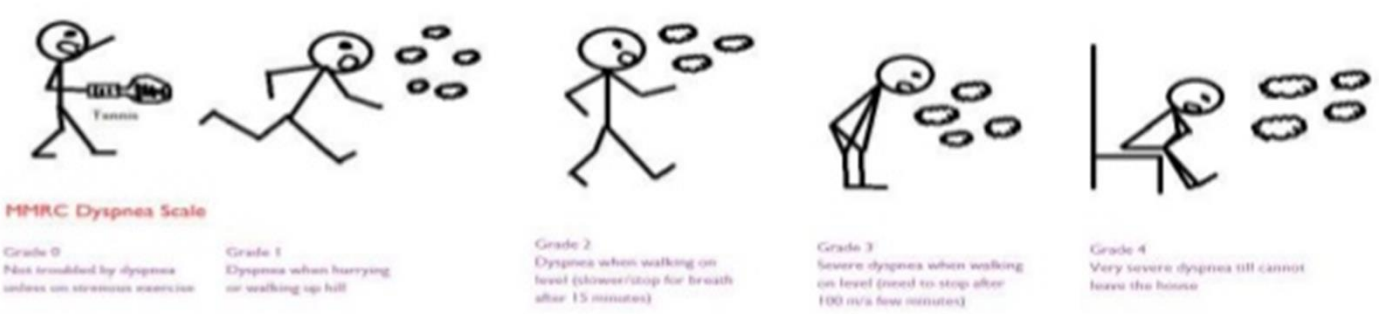


# DURATION

- We have to inquire even a minimal amount of dyspnoea patient experienced before he presented in front of us

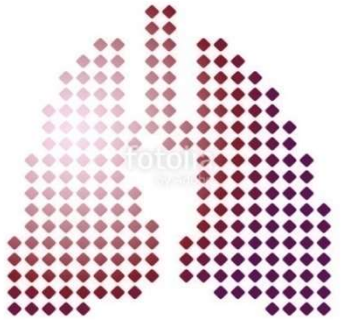


# MMRC DYSPNOEA SCALE




**The Modified Medical Research Council (MMRC) Dyspnoea Scale**

| Grade of dyspnoea | Description |
|---|---|
| 0 | Not troubled by breathlessness except on strenuous exercise |
| 1 | Shortness of breath when hurrying on the level *or* walking up a slight hill |
| 2 | Walks slower than people of the same age on the level because of breathlessness *or* has to stop for breath when walking at own pace on the level |
| 3 | Stops for breath after walking about 100 m *or* after a few minutes on the level |
| 4 | Too breathless to leave the house *or* breathless when dressing or undressing |



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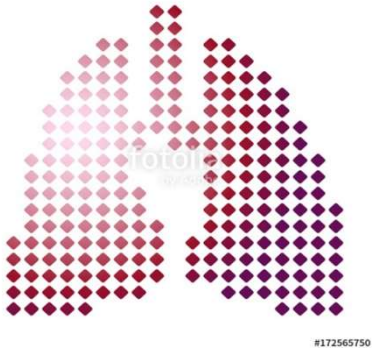
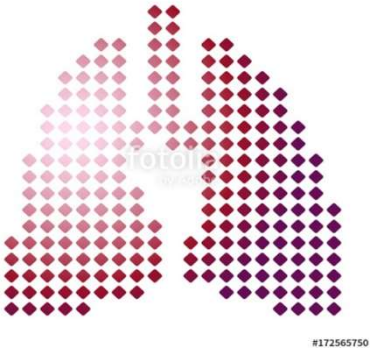
# EPISODIC OR PROGRESSIVE AND ALSO TIME OF DAY

- Episodic in Asthma  generally late night or very early morning
- In copd ..exertional and morning
- In heart patients it is on lying down- Orthopnea
- Progressive in COPD



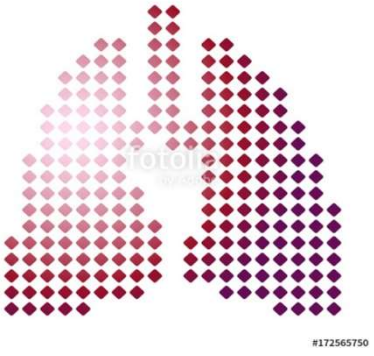
# POSITION WHICH THE PATIENT ADAPTS

- Tripod position in COPD
- Sitting position – in cardiac diseases
- Platypnoea- In AV malformation,right to left shunt, Hepatopulmonary syndrome

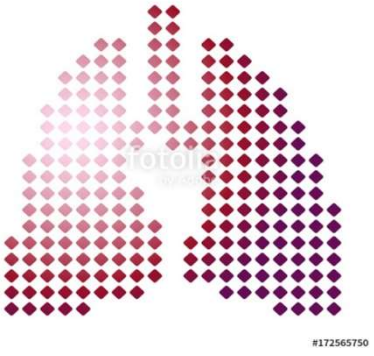


# POSITIONAL DYSPNOEA IN HOMOEOPATHY

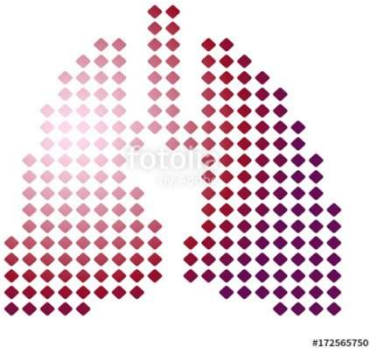
- Dyspnoea< from rest- Sil
- Dyspnoea < working – lycop.amm carb, calc carb,nat mur, samb
- Dyspnoea< walking- Acon, Ipec, Kali carb etc
- Dyspnoea< stooping- Calc c, Sil
- Dyspnoea < from sleep,sitting indoors> by rapid motion- Sep
- Dyspnoea < lying with head low - Spongia



- Dyspnoea> stretching arms apart- Psor
- Dyspnoea> standing up- Cannabis sativa
- Dyspnea- from constriction of chest; worse, any exertion. Sensation of pressure or weight in chest; better by rapid walking- Lobelia Inflata
- Dyspnea- > from fanning rapidly- Carbo veg
- Dyspnea > from fanning slowly and from distance- Lachesis



- Dysonea > by lying on abdomen- Medorrhinum
- Dysonea >Lying with hands spread wide apart- Psorinum



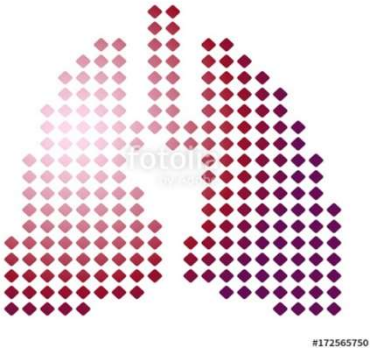
# DYSPNOEA IS CARDIAC OR RESPIRATORY ORIGIN

## DD of Bronchial & Cardiac Asthama

| | **Bronchial Asthma** | **Cardiac Asthma** |
|---|---|---|
| 1) Pathology | Bronchospasm | Pulmonary congestion oedema. |
| 2) Age | Young | Elderly (above 50-60 years) |
| 3) Sex | Both | Male mostly |
| 4) Past history | Of Eczema, urticaria (allergy) suseptibility to cold, allergy to polon, groundnuts, eggs. | No history of allergy, very few attacks, LVF, RVF |
| 5) family history | Other family members may have similar disease. | Hypertension may run in families |
| 6) personal history | Highly sensitive individual | Nil |

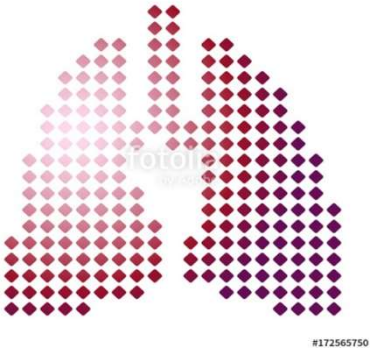
# WHEEZE

- **Inspiratory wheeze**- obstruction by foreign body ,tumour,obstruction in glottis or hysterical patients eg in Bromium, Oxalic acid
- **Expiratory wheeze**- Asthma ,COPD eg Mephitis. Chlorum
- **Cannot inhale**- Bromium
- **Cannot exhale**- Medorrhinum ,Sambucus
- **Cough with wheeze**- Eridiction, Antim ars

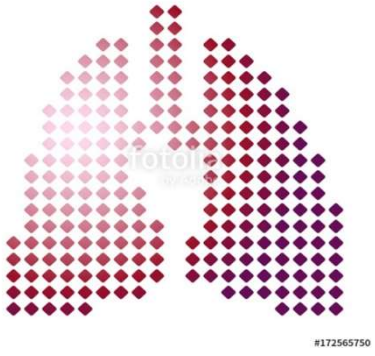


# ASSOCIATED SYMPTOMS

- **Fever**- Respiratory tract infection, lung abscess.
- **Chest pain**- Bronchitis, cancer, pulmonary embolism, pneumonia, gastroesophageal reflux disease (GERD).
- **Pleuritic chest pain**- Pleurisy, pleural effusion, bronchiectasis.
- **Dyspnoea-** COPD, asthma, bronchiectasis, bronchial adenoma/cancer, acute pneumonia, tuberculosis, sarcoidosis, cor pulmonale, congestive heart failure, occupational diseases

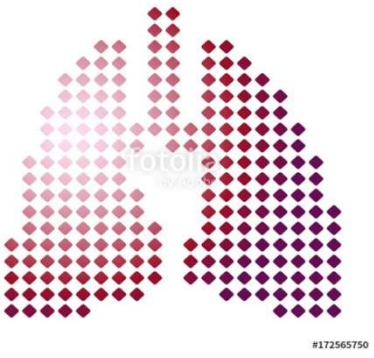


- **Wheeze**- Asthma, COPD.
- **Stridor**- Foreign body, laryngeal nerve involvement.
- **Nasal discharge or tickling sensation in throat**- Post-nasal drip.
- **Loss of weight**- Bronchogenic cancer.
- **Hoarseness of voice-** Laryngeal nerve involvement.
- **Heartburn/Regurgitation**- GERD
- **Erythema nodosum**- Sarcoidosis

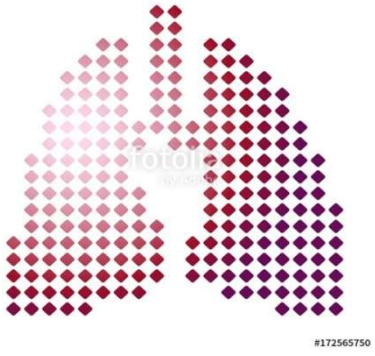


# FEW IMPORTANT SYMPTOMS DURING COUGH WHICH HELPS IN HOMOEOPATHIC PRESCRIBING

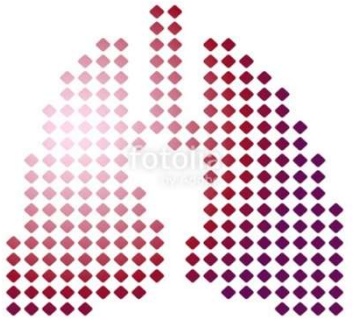
- **Cough ends in sneeze-** *Senega*
- **Grasps throat while coughing-** *Allium Cepa*
- **Flow of tears with cough-** *Nat Mur*
- **Circumscribe redness of cheeks with cough-** *Sang Can*
- **Weeping just before or with cough, Violent spasmodic cough, with facial herpes -** *Arnica Montana*
- **Nervous cough-** *Ambra Grisea*



- **Cough with tickling in larynx**- *Rumex*, *Coccus cacti*
- **Cough from undressing-** *Hepar sulph*, *Rumex*



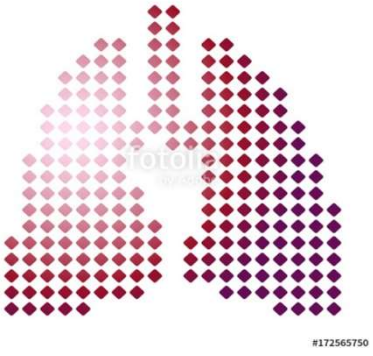
- **Cough from lump sensation in throat**- Abeis nigra



# MY RESEARCH

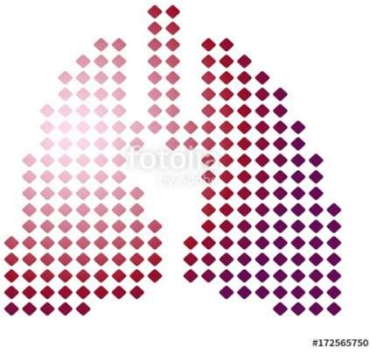
- **TOPIC**-

  EVALUATION OF ROLE OF INDIVIDUALISED HOMOEOPATHY IN MILD AND MODERATE CASES OF COPD BASED ON 6 MINUTE WALK TEST: AN OPEN PROSPECTIVE OBSERVATIONAL STUDY



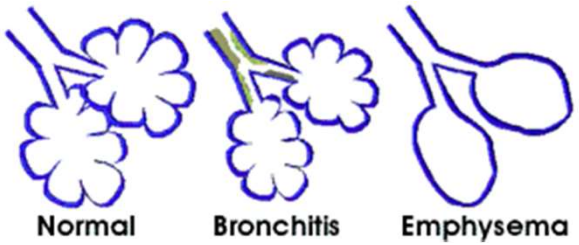
# COPD

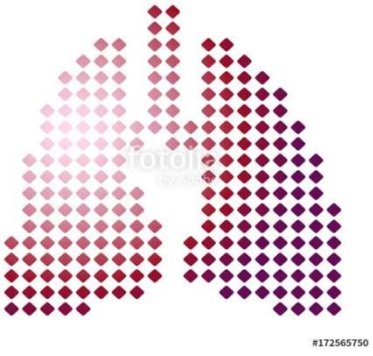
- **Chronic Obstructive** Pulmonary Disease (COPD) is a common **preventable** and **treatable disease**, characterized by **persistent** airflow limitation that is usually **progressive** and associated with an enhanced chronic inflammatory response in the airways and the lungs to noxious particles or gases.



# COPD

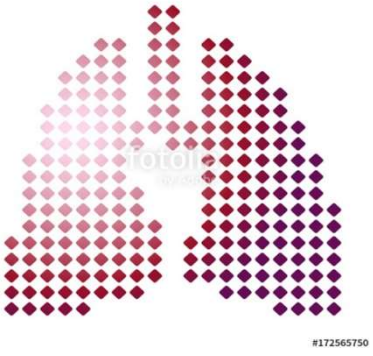
- ***Emphysema-***Empysema is defined by airspace enlargemnet due to disappearence of alveolar septae.
- ***Chronic bronchitis-***Chronic bronchitis is characterized by chronic cough for at least **3 consecutive months in two consecutive years**



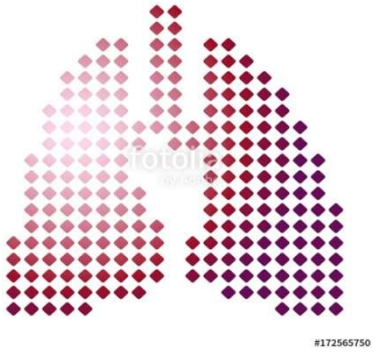
# DIAGNOSIS

- Sign and Symptoms
- Presence of Risk Factors
- Spirometry



# SIGN AND SYMPTOMS

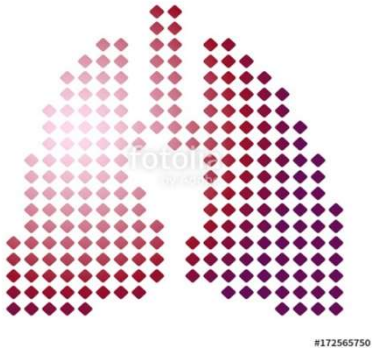
- **Chronic cough-** Cough is one of the earliest symptom of COPD
- **Dyspnoea which is progressive and persistent-** Dyspnoea is the hallmark symptom of COPD and patient complaints of a sensation of air hunger. Patient  has a typical pursed lip breathing and he adopts a tripod position.
- **Chronic sputum production-** Any pattern of sputum production may indicate COPD



- **Fatigue**- so if we see a patient of COPD who is fatigue then it is their common symptom. If we see a COPD patient who is not fatigue then that is a peculiar symptom.

- **Cyanosis**- due to hypoxia, in advanced stages

- **Oedema**-when the heart gets compromised



# RISK FACTORS

- **Smoking**

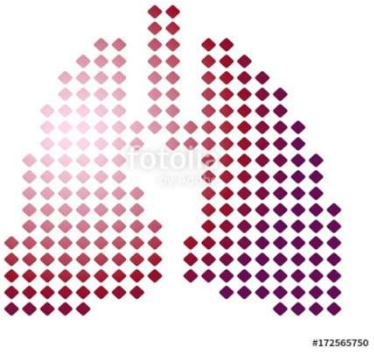
(About 3 in 20 people who smoke one packet of cigarettes

ie.20 cigarettes per day may have COPD) We calculate it as pack years which is no.of packets X no.of years

- **Exposure to indoor and outdoor air pollution**

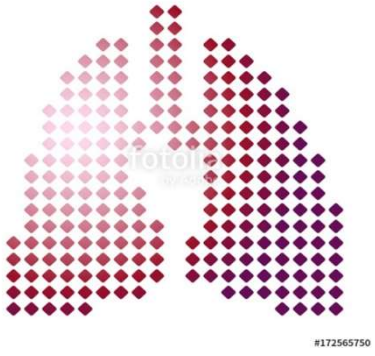
- **Heriditary -**Alpha 1 anti-trypsin deficiency

(found in less than 1 in 100 cases of COPD)



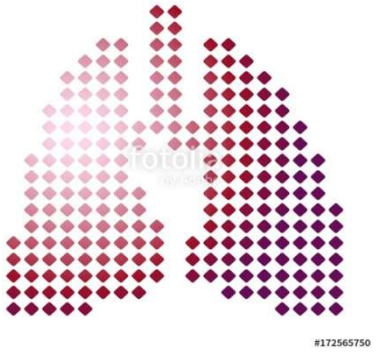
# SPIROMETRY

- The presence of a post bronchodilator $FEV_1/FVC < 0.70$ confirms the presence of airflow limitation that is not fully reversible.( there are basically two obstructive disorders- one is Asthma and COPD which needs to be differentiated. If after giving the bronchodilator we find an improvement of 200 ml or 12% in FEV1 values it is asthma ..other wise it is COPD

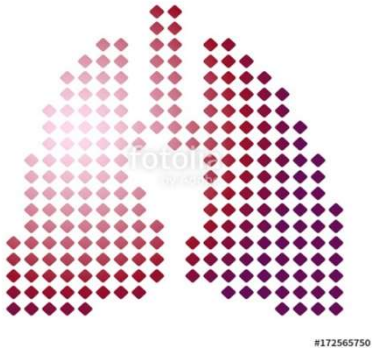


# SIX MINUTE WALK TEST

- **The 6MWT** is a practical simple test that requires a 100-ft hallway .This test measures the distance that a patient can quickly walk on a flat, hard surface in a period of 6 minutes (the 6MWD).

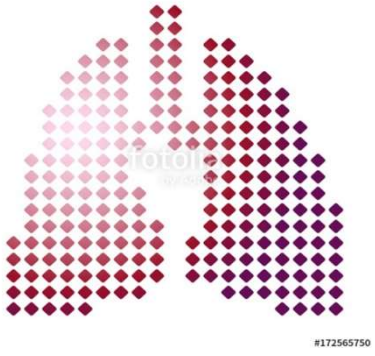


- According to GOLD guidelines- *"A clinical diagnosis of COPD should be considered in any patient who has dyspnoea, chronic cough or sputum production, and/or a history of exposure to risk factors for the disease. The diagnosis should be confirmed by Spirometry*



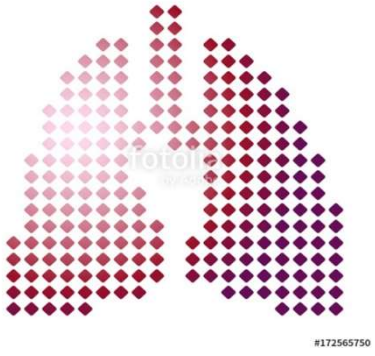
# METHODOLOGY

- **SELECTION OF SAMPLES-** On the basis of inclusion and exclusion criteria 50 patients of COPD were selected for the study( 50 were selected but 8 were dropped out, so finally 42 patients were assessed)

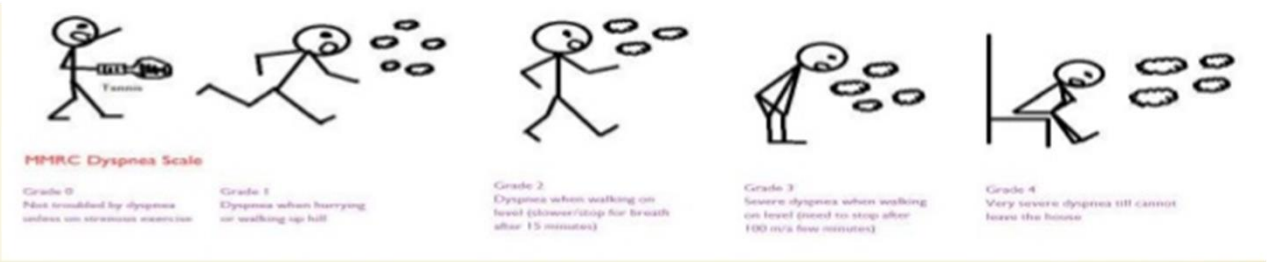


# BRIEF OF PROCEDURE

- A complete history of the patient was taken
- Individualised homoeopathic remedies were given on the basis of symptom similarity and their effects were noted .
- Patient follow up was done at interval of 3, 7,10,14 or 30 days as per the need and severity of the symptoms.
- Statistical analyses were done using computer software (SPSS version 20 and Primer).
- Significance levels for tests were determined a 95% (P< 0.05).



# SCALES USED TO MEASURE DYSPNOEA

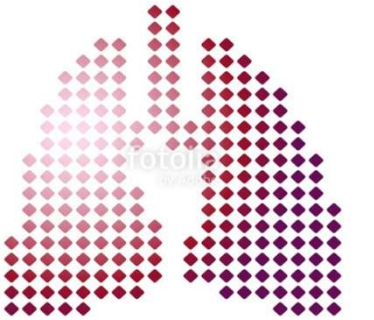



**The Modified Medical Research Council (MMRC) Dyspnoea Scale**

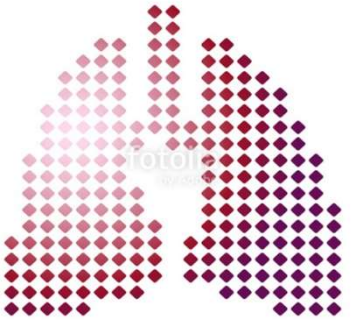
| Grade of dyspnoea | Description |
|---|---|
| 0 | Not troubled by breathlessness except on strenuous exercise |
| 1 | Shortness of breath when hurrying on the level *or* walking up a slight hill |
| 2 | Walks slower than people of the same age on the level because of breathlessness *or* has to stop for breath when walking at own pace on the level |
| 3 | Stops for breath after walking about 100 m *or* after a few minutes on the level |
| 4 | Too breathless to leave the house *or* breathless when dressing or undressing |

# BORG SCALE

- **Scoring system on BORG scale:-**
- 0 Nothing at all
- 0.5 Very, very slight (just noticeable)
- 1 Very slight
- 2 Slight (light)
- 3 Moderate
- 4 Somewhat severe
- 5 Severe (heavy)
- 6
- 7 Very severe
- 8
- 9
- 10 Very, very severe (maximal)



# OBSERVATIONS



# DISTRIBUTION OF CASES ACCORDING TO MMRC DYSPNOEA SCALE OUTCOME

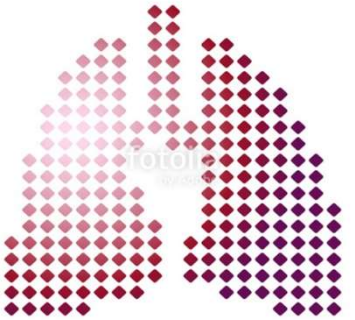
| MMRC outcome | Number of patients | % |
|---|---|---|
| Improved | 20 | 47.61 |
| Not improved | 19 | 45.23 |
| Worsen | 3 | 7.14 |
| Total | 42 | 100 |

# 6 MWD OUTCOME STATUS

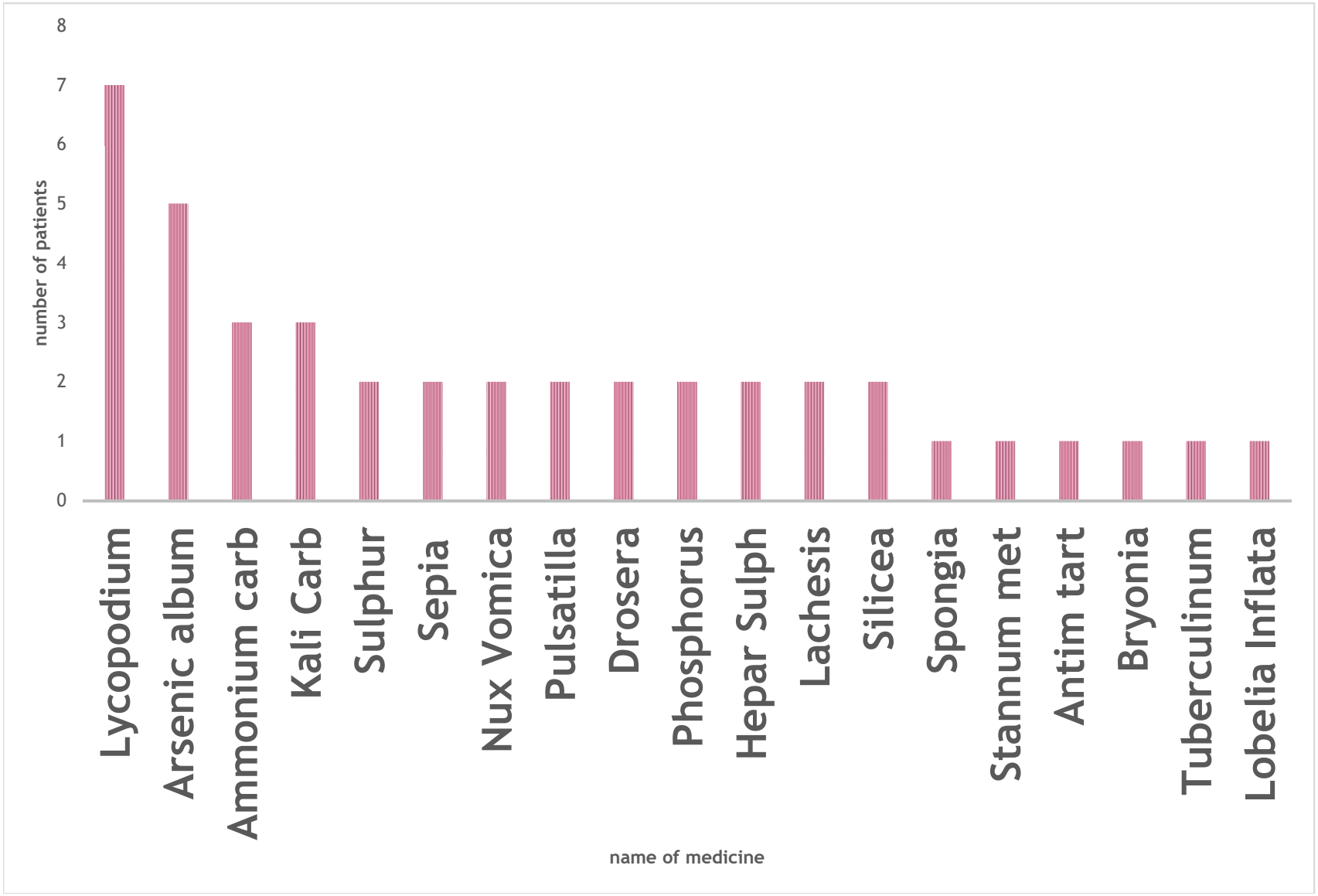
| 6 MWD IMPROVEMENT | | | | |
|---|---|---|---|---|
| Outcome of 6MWT | N | Mean distance(m) | Std. Deviation | P Value |
| Improved | 20 | 76.60 | 21.19 | |
| Not improved | 22 | 38.05 | 9.52 | |
| Total | 42 | 56.40 | 25.19 | <0.001 |

# INDIVIDUALISATION

- In Aphorism 82 of the Organon of medicine Hahnemann says about the treatment of Psoric diseases " ***No genuine cure of this, or any of the remaining disease, can take place without the strict particular treatment (individualization ) of each case of disease.***

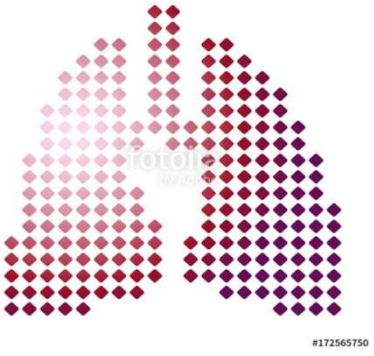


# Distribution of patients on the basis of prescribed Individualised medicines



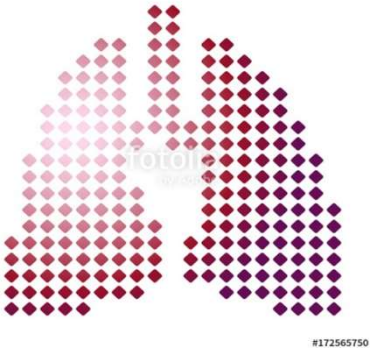
# RESULTS

- Most common MMRC grades which got improvement from homoeopathic medicines were 2 and 3.
- There was significant change in Pulse rate and $SPO_2$ after the treatment.
- Clinical improvement was observed in Cough
- Significant and clinical improvement was observed in Dyspnoea measured by BORG scale.
- No significant improvement was observed in fatigue.

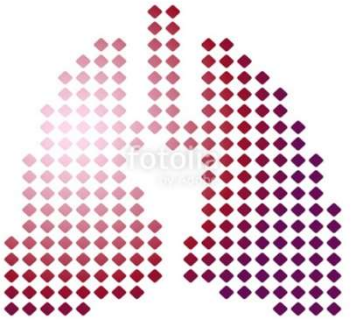


# CONCLUSION

- Individualised Homoeopathic medicines can improve dyspnoea, cough and FEV1 values in the patients of COPD. It can also increase the exercise tolerance and overall health status of a patient . Hence they have a good role in the patients suffering from moderate  COPD.



# TAKE HOME PICTURES

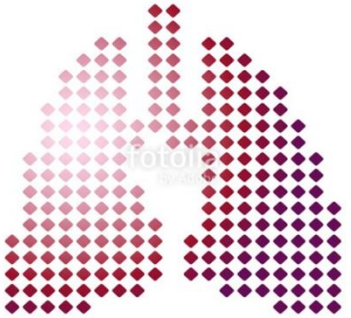


# SUB CUTANEOUS EMPHYSEMA

# TRIPOD POSITION IN COPD

# PURSE LIP BREATHING





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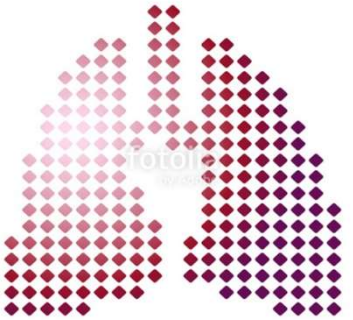
# ERYTHEMA NODOSUM

# THUMB SIGN AND STEEPLE SIGN

**Thumb sign**
**(Epiglottitis)**

**Steeple sign**
**(Croup)**

# SWITCH TO ELECTRONIC CIGARETTES MAY HELP COPD PATIENTS



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# HAPPY DIWALI

# HAPPY DIWALI


# THANKS

## BREATHE IN THE KNOWLEDGE