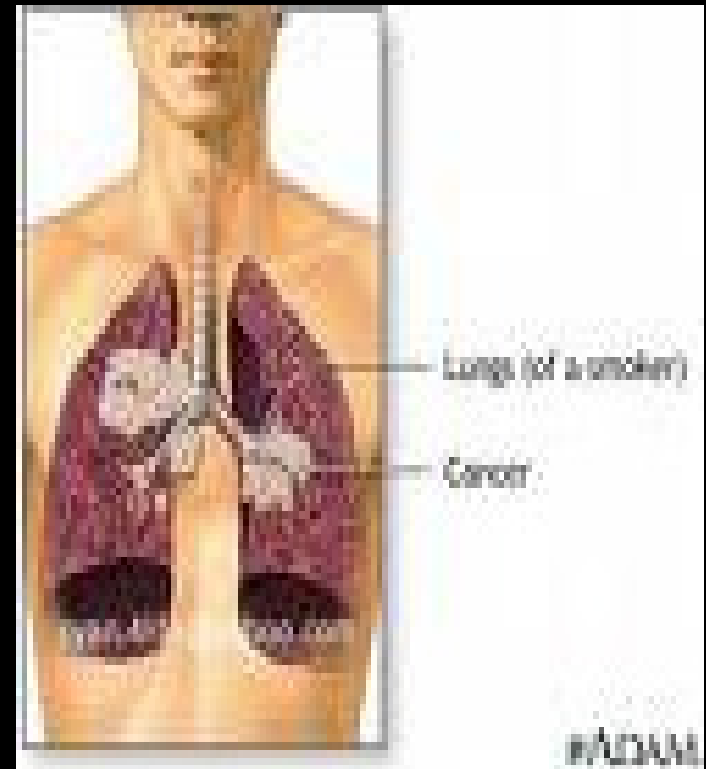




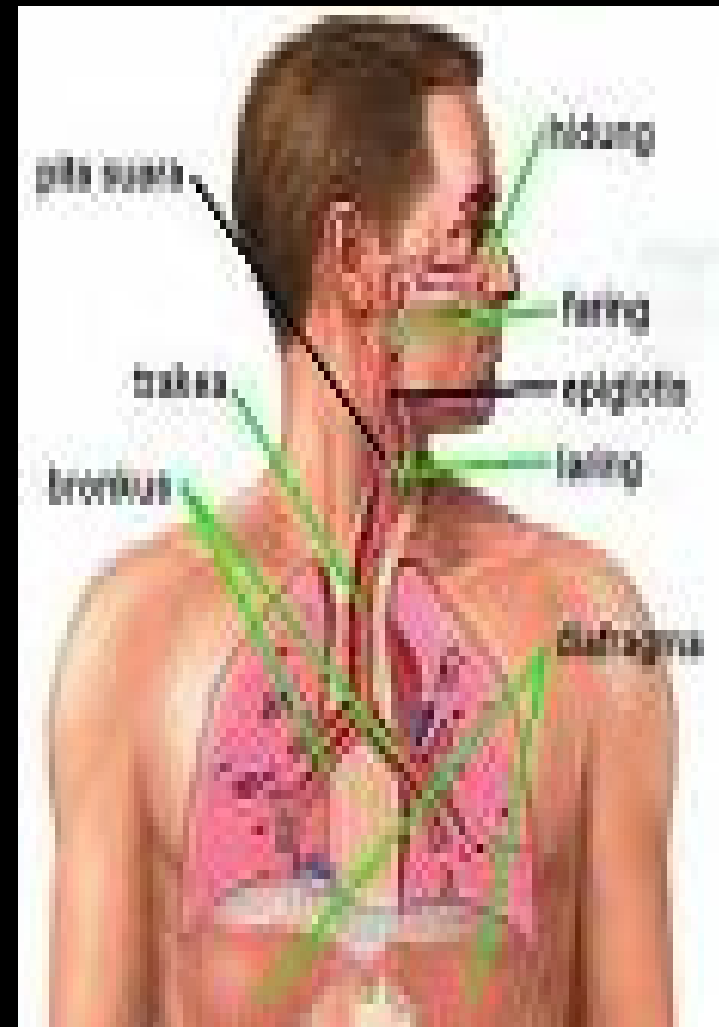
BY. NUR ASNAH SITOANG,S.Kep.Ns.M.Kep

# DEFENISI

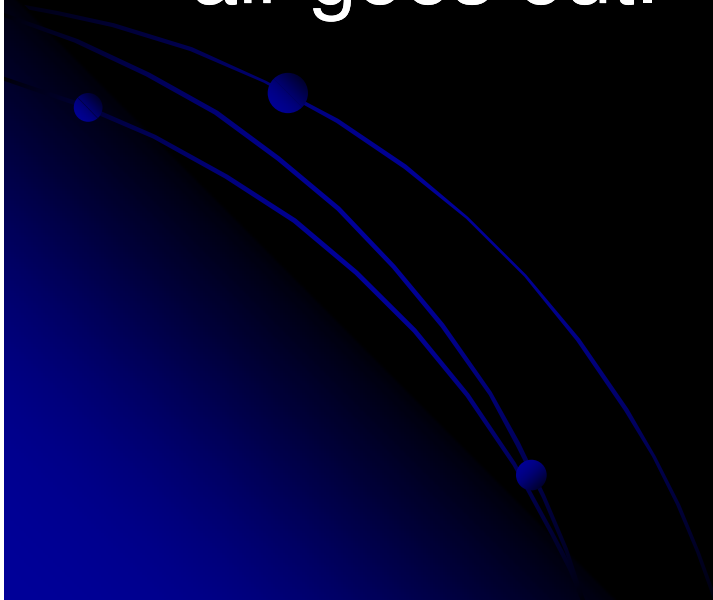
- is a progressive disease that makes it hard to breathe. "Progressive" means the disease gets worse over time.



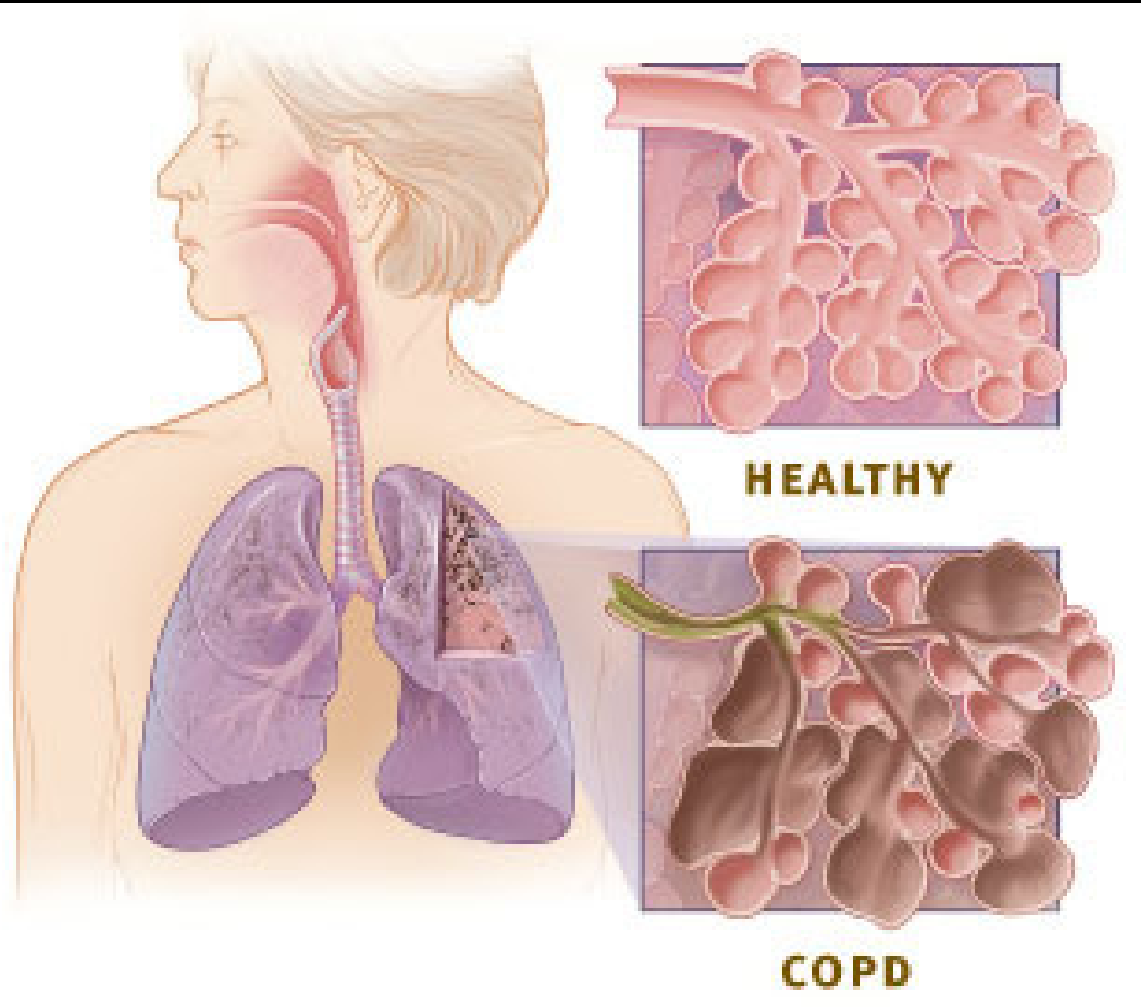
- To understand COPD, it helps to understand how the lungs work. The air that you breathe goes down your windpipe into tubes in your lungs called bronchial tubes, or airways.
- The airways are shaped like an upside-down tree with many branches. At the end of the branches are tiny air sacs called alveoli



- The airways and air sacs are elastic. When you breathe in, each air sac fills up with air like a small balloon. When you breathe out, the air sac deflates and the air goes out.



- In COPD, less air flows in and out of the airways because of one or more of the following:
- The airways and air sacs lose their elastic quality.
- The walls between many of the air sacs are destroyed.
- The walls of the airways become thick and inflamed (swollen).
- The airways make more mucus than usual, which tends to clog the airways.

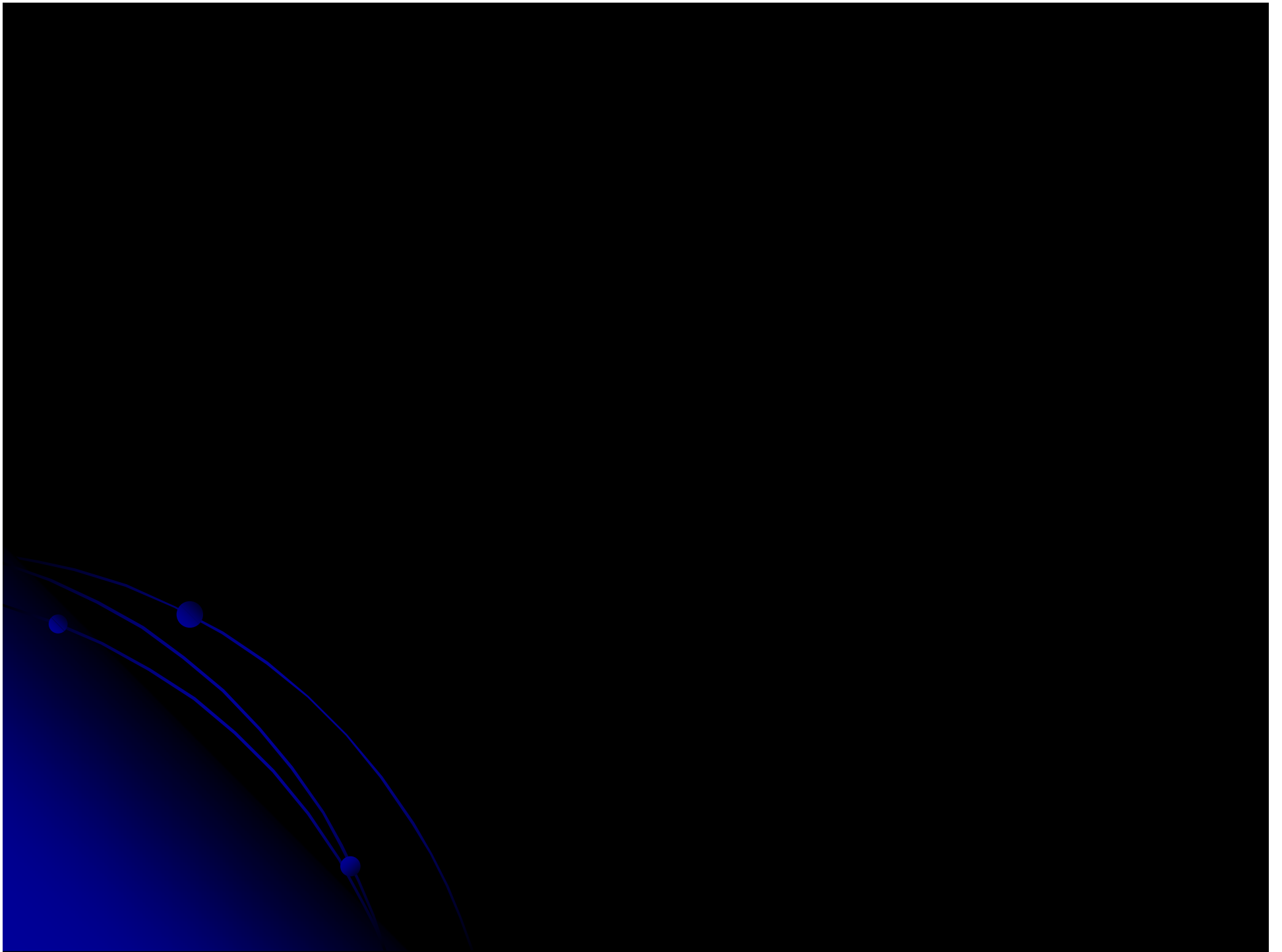


Bronkus yg normal



Bronkitis





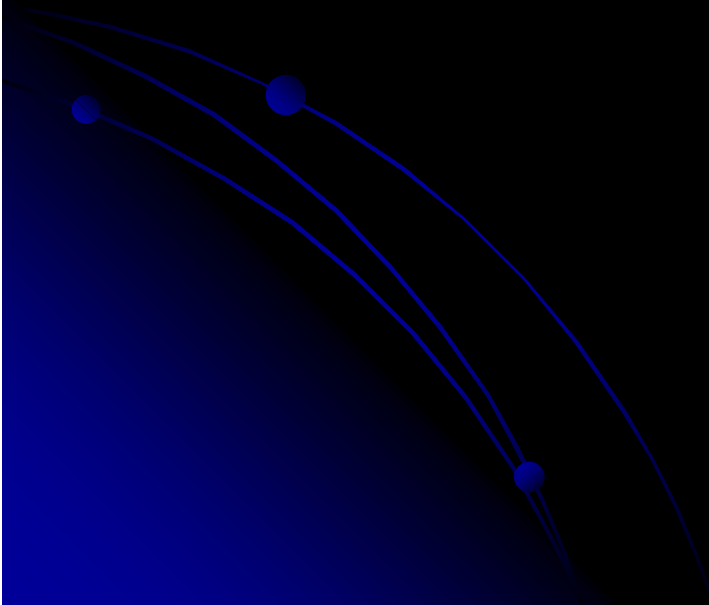


- In the United States, the term "COPD" includes two main conditions—emphysema and chronic obstructive bronchitis.
- In emphysema, the walls between many of the air sacs are damaged, causing them to lose their shape and become floppy. This damage also can destroy the walls of the air sacs, leading to fewer and larger air sacs instead of many tiny ones.

- In chronic obstructive bronchitis, the lining of the airways is constantly irritated and inflamed. This causes the lining to thicken. Lots of thick mucus forms in the airways, making it hard to breathe.
- Most people who have COPD have both emphysema and chronic obstructive bronchitis. Thus, the general term "COPD" is more accurate.

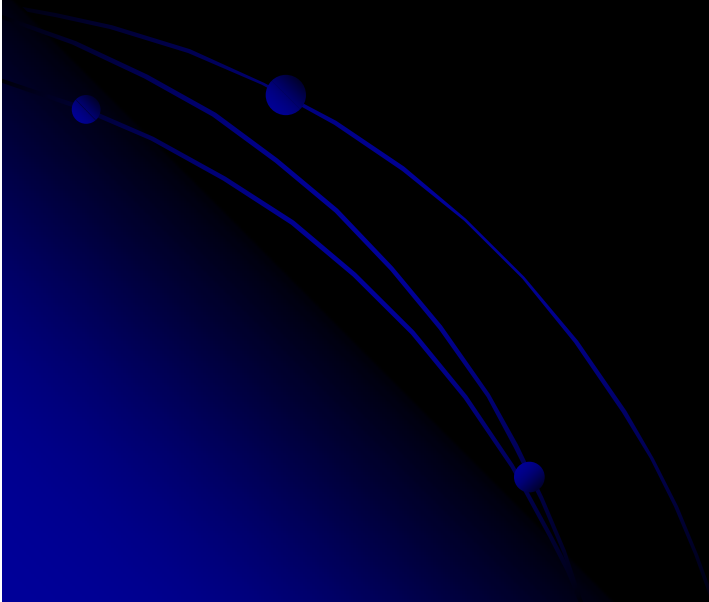
- COPD is a major cause of disability, and it's the fourth leading cause of death in the United States. More than 12 million people are currently diagnosed with COPD. An additional 12 million likely have the disease and don't even know it.
- COPD develops slowly. Symptoms often worsen over time and can limit your ability to do routine activities. Severe COPD may prevent you from doing even basic activities like walking, cooking, or taking care of yourself.

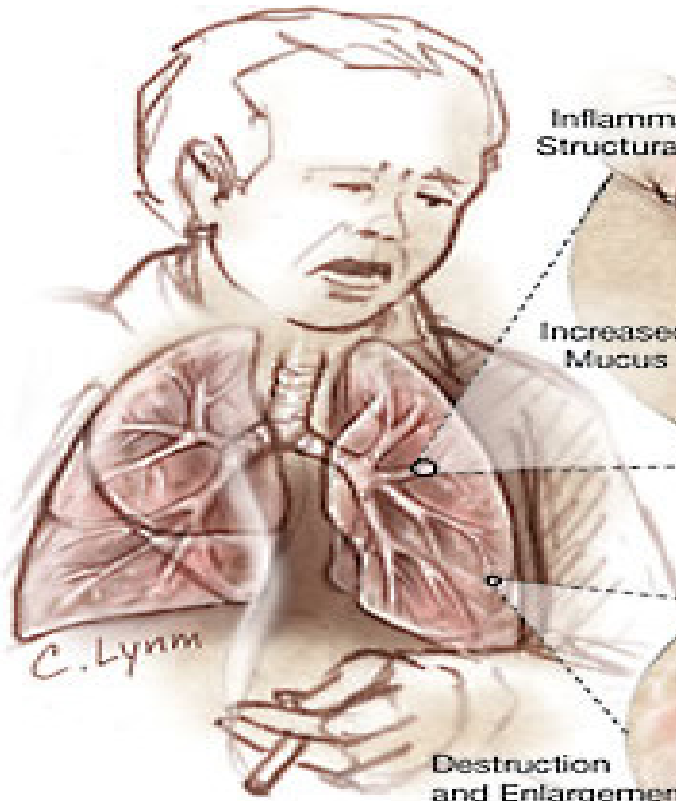
- Most of the time, COPD is diagnosed in middle-aged or older people. The disease isn't passed from person to person—you can't catch it from someone else.



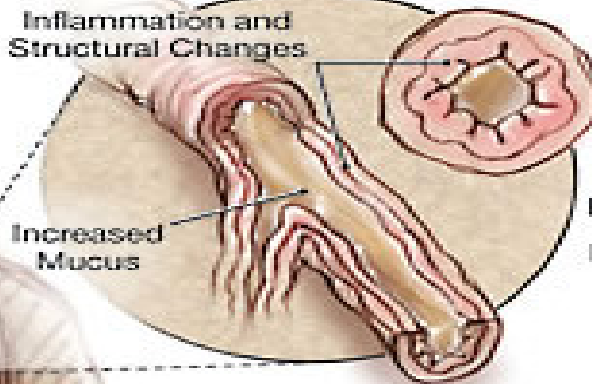
# Other Names for COPD

- Chronic obstructive airway disease
- Chronic obstructive bronchitis
- Chronic obstructive lung disease
- Emphysema

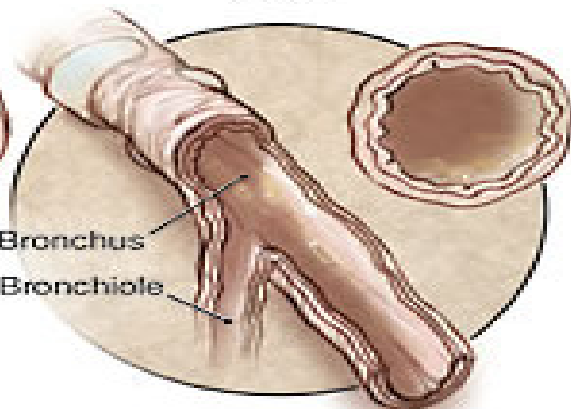




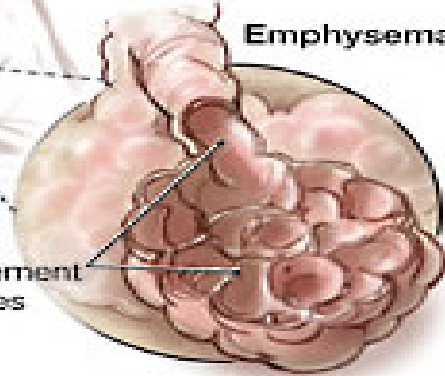
**Chronic Bronchitis**



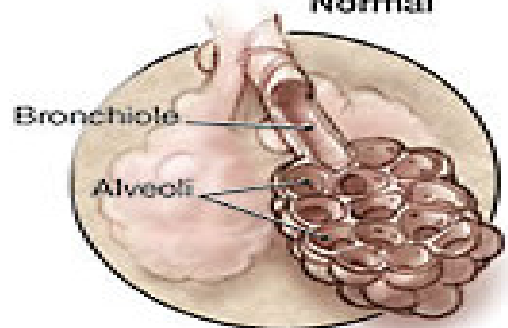
**Normal**



**Emphysema**

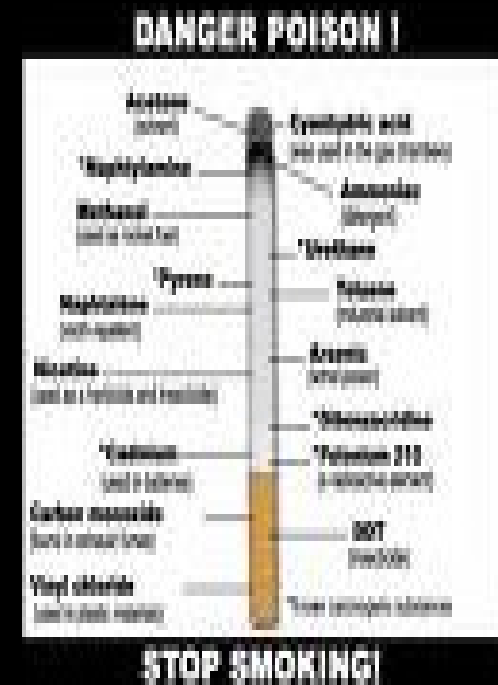


**Normal**



# What Causes COPD?

- Most cases of COPD develop after long-term exposure to lung irritants that damage the lungs and the airways.
- In the United States, the most common irritant that causes COPD is cigarette smoke. Pipe, cigar, and other types of tobacco smoke also can cause COPD, especially if the smoke is inhaled. Secondhand smoke—that is, smoke in the air from other people smoking—also can irritate the lungs and contribute to COPD.
- Breathing in air pollution and chemical fumes or dust from the environment or workplace also can contribute to COPD.



- In rare cases, a genetic condition called alpha-1 antitrypsin deficiency may play a role in causing COPD. People who have this condition have low levels of alpha-1 antitrypsin (AAT)—a protein made in the liver.
- Having a low level of the AAT protein can lead to lung damage and COPD if you're exposed to smoke or other lung irritants. If you have this condition and smoke, COPD can worsen very quickly





# Who Is At Risk for COPD?

- The main risk factor for COPD is smoking
- People who have a family history of COPD are more likely to get the disease if they smoke.
- Long-term exposure to other lung irritants also is a risk factor for COPD
- a genetic condition

# What Are the Signs and Symptoms of COPD?

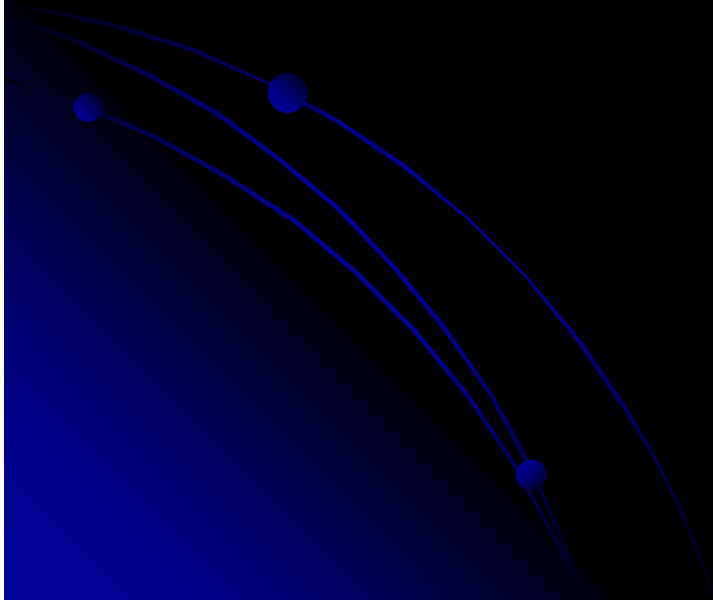
- The signs and symptoms of COPD include:
- An ongoing cough or a cough that produces large amounts of mucus (often called "smoker's cough")
- Shortness of breath, especially with physical activity
- Wheezing (a whistling or squeaky sound when you breathe)
- Chest tightness

# How Is COPD Diagnosed?

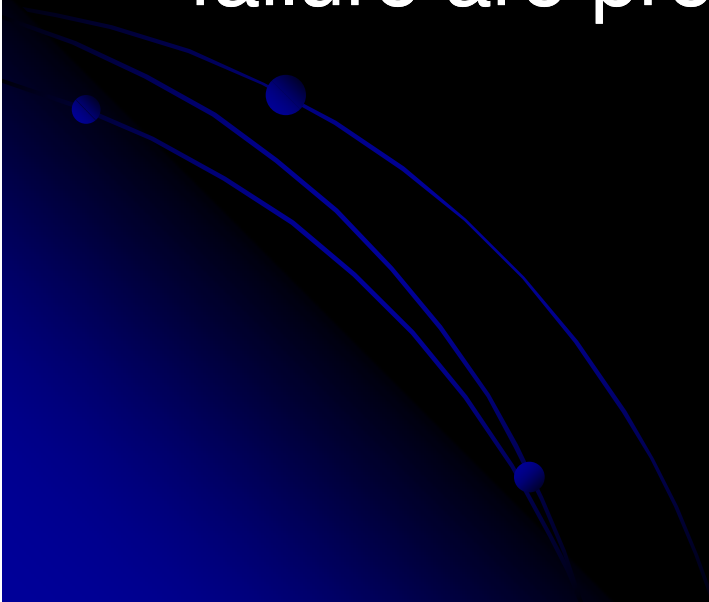
- Lung Function Test :spirometry



- A chest x ray or chest computed tomography (CT) scan



- Arterial blood gases : should be performed in all patients with an FEV1 less than 40% predicted or when clinical signs of respiratory failure/ righth –sided heart failure are present

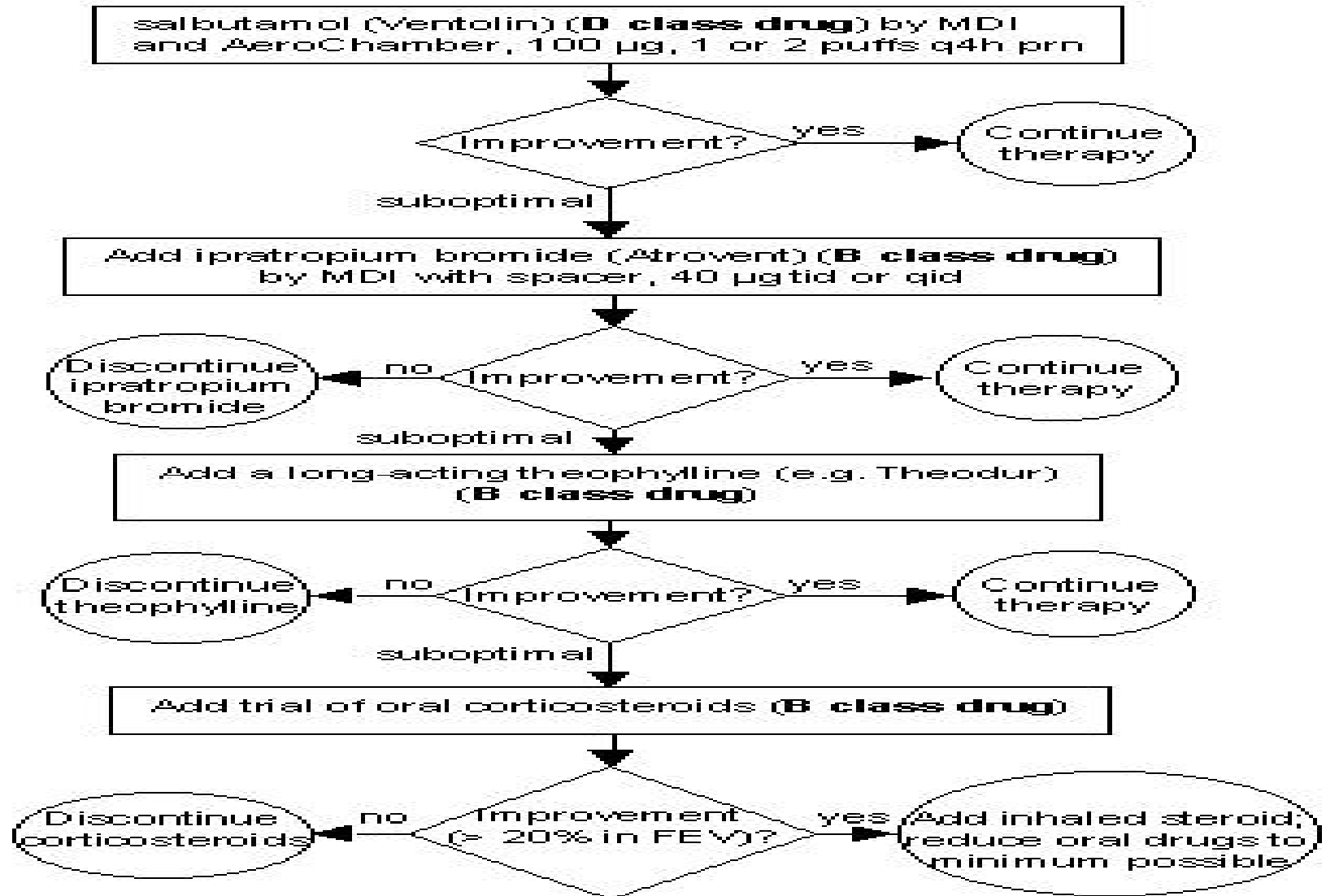


# How Is COPD Treated?

- Quitting smoking
- Other treatments for COPD may include medicines, vaccines, pulmonary rehabilitation (rehab), oxygen therapy, surgery, and managing complications.

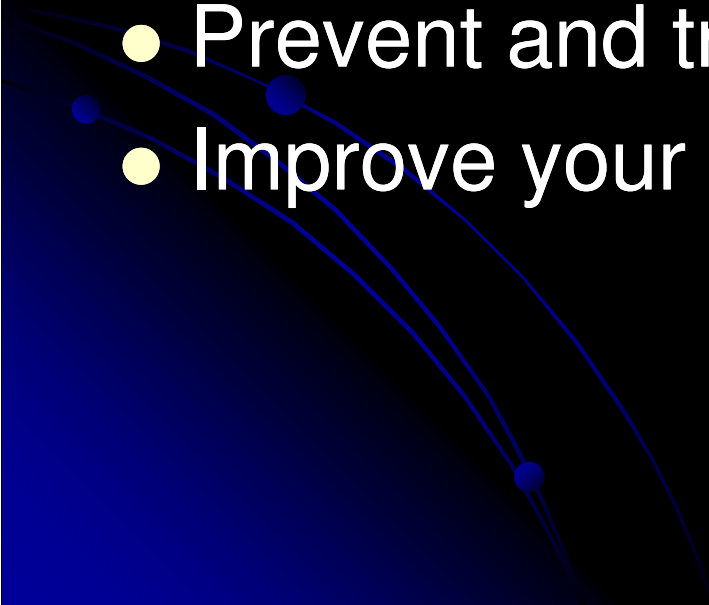


**Fig. 2: Recommended Drug Treatment for Chronic COPD**



Source: *Therapeutic Choices* (Gray 1998)

# The goals of COPD treatment

- Relieve your symptoms
  - Slow the progress of the disease
  - Improve your exercise tolerance (your ability to stay active)
  - Prevent and treat complications
  - Improve your overall health
- 



# Stage of COPD and their treatment

Stage	characteristics	Recommended treatment
all		<ul style="list-style-type: none"><li>○ avoidance of risk factor</li><li>○ influenza fac</li></ul>
0: at risk	<ul style="list-style-type: none"><li>• chronic symptoms</li><li>• Exposure to risk factor</li><li>• Normal spirometry</li></ul>	Short acting bronchodilator when needed

<p>1. Mild COPD</p>	<p>-FEV<sub>1</sub>/FVC &lt;70%</p> <p>-FEV<sub>1</sub> &gt;80% predicted</p> <p>-With or without symptom</p>	<p>-short acting bronchodilator when needed</p>
<p>2. Moderate COPD</p>	<p>II A</p> <p>- FEV<sub>1</sub>/FVC &lt;70%</p> <p>-FEV<sub>1</sub> &lt;80% predicted</p>	<p>Regular treatment with one/more bronchodilator</p> <p>-Rehabilitation</p>

## IIB

- FEV<sub>1</sub>/FVC  
<70%

- 30%  
FEV<sub>1</sub>, <50%  
predicted

- With or without  
symptom

- Regular  
treatment with  
one/more  
bronchodilator  
- Rehabilitation  
- Inhaled  
glucocorticoster  
oid if significant  
symptom & lung  
function  
respon/if  
repeated  
exacerbation

### III. Severe COPD

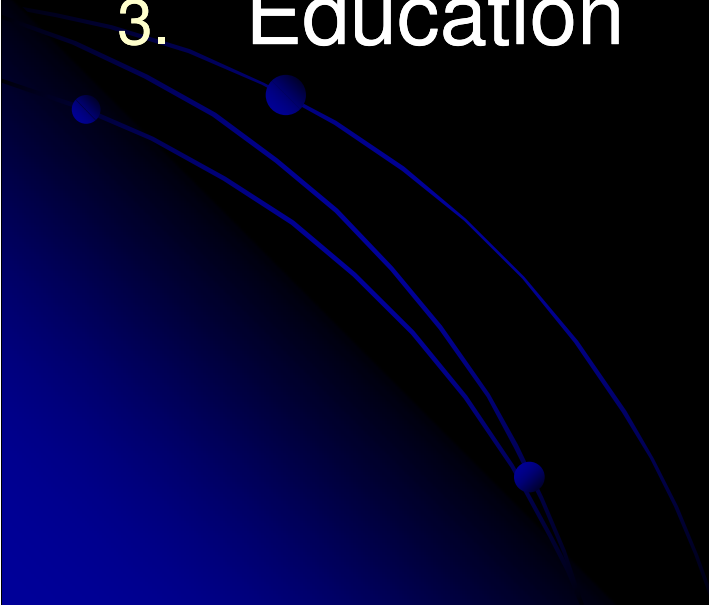
- FEV<sub>1</sub>/FVC <70%

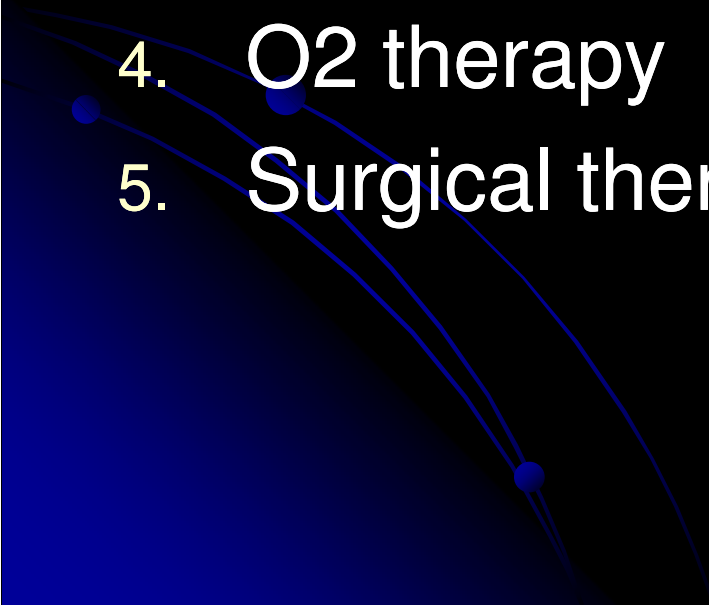
- 30% FEV<sub>1</sub>, predicted or presence of respiratory failure or right heart failure

- Idem stage II + ;

- treatment of complications
- rehabilitation
- long term O<sub>2</sub> therapy if respiratory failure
- consider surgical treatment

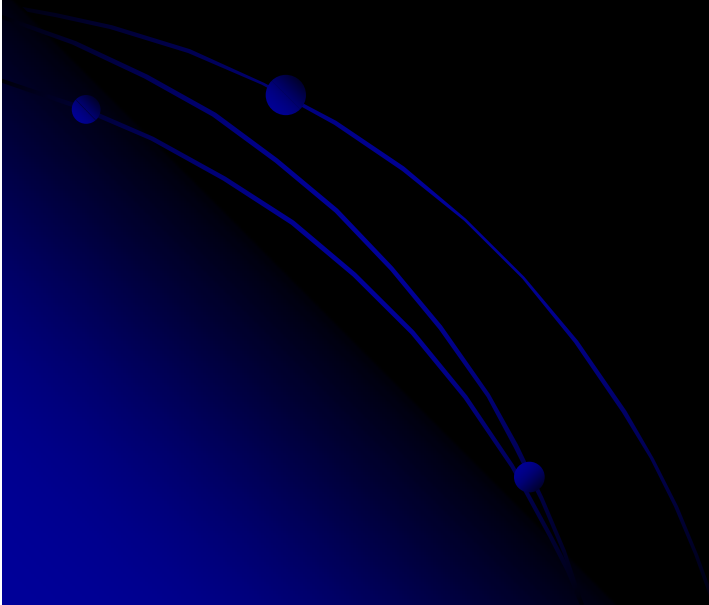
# The 2001 GOLD guidelines for diagnosis, management & prevention COPD

- Nonpharmacological therapy :
    1. Exercise training
    2. Nutritional counseling
    3. Education
- 

- Pharmacological therapy ;
    1. Bronchodilators
    2. Glucocorticoids
    3. Other pharmacological agents
    4. O<sub>2</sub> therapy
    5. Surgical therapy
- 

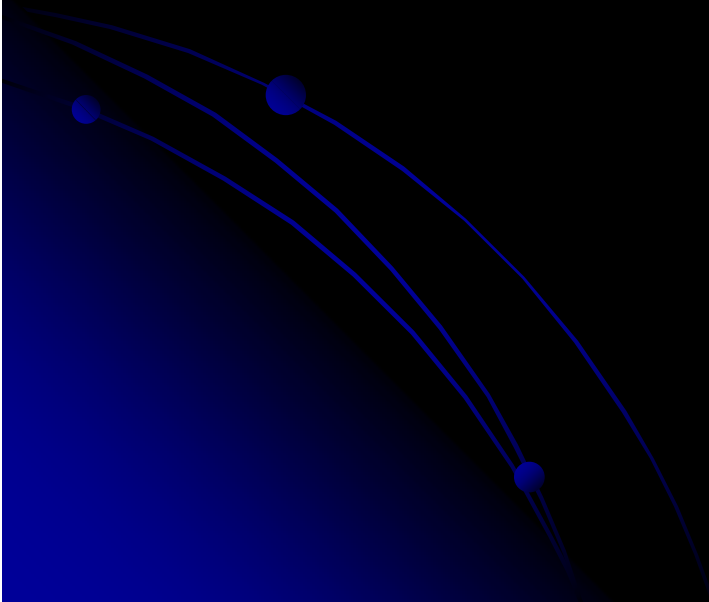
# How Can COPD Be Prevented?

- you can take steps to prevent complications and slow the progress of the disease.



# Living With COPD

- Avoid lung irritants
- Get ongoing care
- Manage the disease and its symptoms
- Prepare for emergencies





# Pengkajian

- **Sudah berapa lama pasien mengalami kesulitan pernapasan?**
- **Apakah aktivitas meningkatkan dispnea?**
- **Berapa jauh batasan pasien terhadap toleransi aktivitas?**
- **Kapan pasien mengeluh paling letih dan sesak napas?**

- **Apakah kebiasaan makan dan tidur terpengaruh?**
- **Riwayat merokok?**
- **Obat yang dipakai setiap hari?**
- **Obat yang dipakai pada serangan akut?**
- **Apa yang diketahui pasien tentang kondisi dan penyakitnya?**

# Data tambahan yang dikumpulkan melalui observasi dan pemeriksaan

- Frekuensi nadi dan pernapasan pasien?
- Apakah pernapasan sama tanpa upaya?
- Apakah ada kontraksi otot-otot abdomen selama inspirasi?
- Apakah ada penggunaan otot-otot aksesori pernapasan selama pernapasan?
- Barrel chest?
- Apakah tampak sianosis?

- Apakah ada batuk?
- Apakah ada edema perifer?
- Apakah vena leher tampak membesar?
- Apa warna, jumlah dan konsistensi sputum pasien?
- Bagaimana status sensorium pasien?
- Apakah terdapat peningkatan stupor?  
Kegelisahan?

- Palpasi:

Palpasi pengurangan pengembangan dada?

Adakah fremitus taktil menurun?

- Perkusi:

Adakah hiperesonansi pada perkusi?

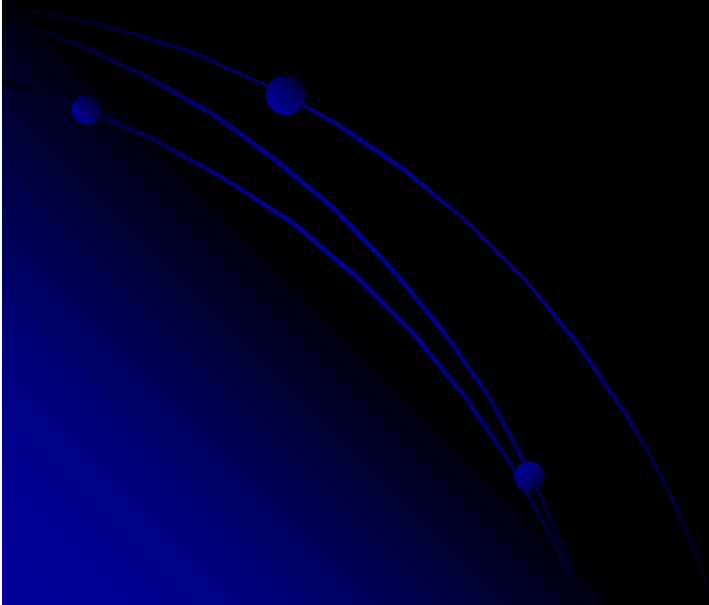
Diafragma bergerak hanya sedikit?

- Auskultasi:

Adakah suara wheezing yang nyaring?

Adakah suara ronkhi?

Vokal fremitus normal atau menurun



# Diagnosa Keperawatan

- Bersihan jalan napas tidak efektif berhubungan dengan bronkokonstriksi, peningkatan produksi sputum, batuk tidak efektif, kelelahan/berkurangnya tenaga dan infeksi bronkopulmonal.
- Pola napas tidak efektif berhubungan dengan napas pendek, mucus, bronkokonstriksi dan iritan jalan napas.
- Gangguan pertukaran gas berhubungan dengan ketidaksamaan ventilasi perfusi
- Intoleransi aktivitas berhubungan dengan ketidakseimbangan antara suplai dengan kebutuhan oksigen.

- Risiko perubahan nutrisi kurang dari kebutuhan tubuh berhubungan dengan anoreksia.
- Ganggua pola tidur berhubungan dengan ketidaknyamanan, pengaturan posisi.
- Kurang perawatan diri berhubungan dengan kelelahan sekunder akibat peningkatan upaya pernapasan dan insufisiensi ventilasi dan oksigenasi.
- Ansietas berhubungan dengan ancaman terhadap konsep diri, ancaman terhadap kematian, keperluan yang tidak terpenuhi.



- individu tidak efektif berhubungan dengan kurang sosialisasi, ansietas, depresi, tingkat aktivitas rendah dan ketidakmampuan untuk bekerja.
- Kurang pengetahuan berhubungan dengan kurangnya informasi, tidak mengetahui sumber informasi.

# Masalah kolaboratif/Potensial komplikasi yang dapat terjadi

- Gagal/insufisiensi pernapasan
- Hipoksemia
- Atelektasis
- Pneumonia
- Pneumotoraks
- Hipertensi paru
- Gagal jantung kanan

Thanks  
so much



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