

Today's Agenda: 11/13/14

1. Students will take Edmodo quiz over chemicals in tobacco products.
2. **TO: What physiological effects does tobacco have on our body?**
 1. **Short term**
 2. **Long term**



How Tobacco Affects the Body:

Short-Term Effects of Tobacco Use:



**Changes in Brain
Chemistry**

**Increased Respiration and
Heart Rate**

**Dulled Taste Buds and
Reduced Appetite**

**Bad Breath and Smelly Hair,
Clothes, and Skin**



How Tobacco Affects the Body

Long-Term Effects of Tobacco Use:



Chronic Bronchitis

Emphysema

Lung Cancer

**Coronary Heart Disease
and Stroke**



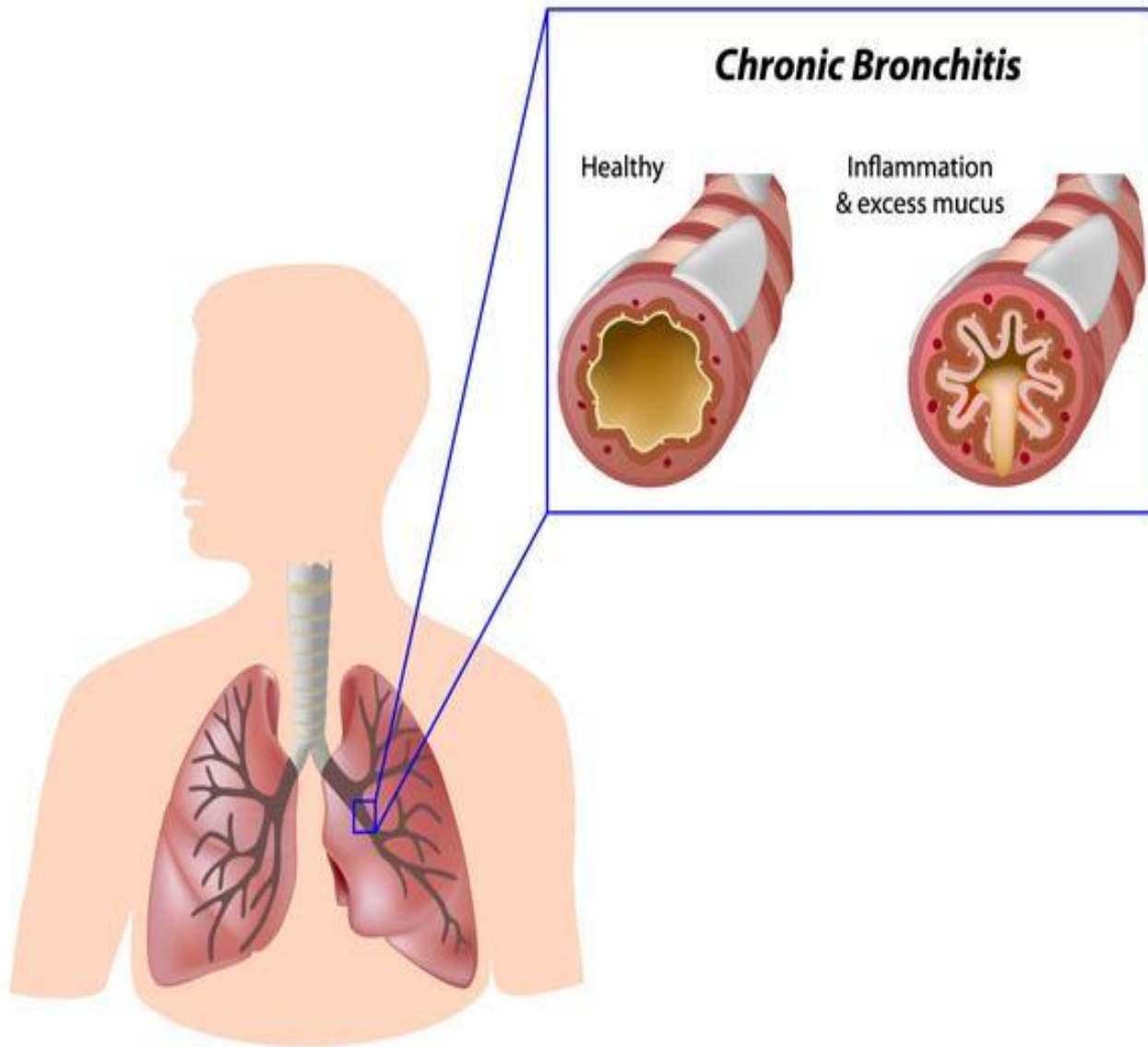
1. Chronic Bronchitis



- Repeated tobacco use can damage the cilia in the bronchi until the cilia no longer function.
- This leads to a buildup of tar in the lungs, causing chronic coughing and excessive mucus secretion.







2. Emphysema



- This is a disease that destroys the tiny air sacs in the lungs.
- The air sacs become less elastic, making it more difficult for the lungs to absorb oxygen.
- A person with advanced emphysema uses up to 80 percent of his or her energy just to breathe.

COPD

CHRONIC AIRFLOW LIMITATION
"EMPHYSEMA AND CHRONIC BRONCHITIS"

- Easily Fatigued
- Frequent Respiratory Infections
- Use of Accessory Muscles to Breathe
- Orthopneic



- Wheezing
- Pursed-Lip Breathing
- Chronic Cough
- Barrel Chest
- Dyspnea
- Prolonged Expiratory Time
- Bronchitis - Increased Sputum
- Digital Clubbing

• Cor Pulmonale
(Late in Disease)

• Thin in
Appearance





cm 1 2 3 4 5 6
SPECIMEN A-75-309 DATE _____

3. Lung Cancer



- When the cilia in the bronchi are destroyed, extra mucus cannot be expelled.
- Cancerous cells can grow in these conditions, block the bronchi, and move to the lungs.
- Unless detected early, lung cancer causes death.



Lung Cancer

Lung Cancer starts in the lungs as a growth of abnormal cells and often metastasizes, spreading to other organs in the body. It is the leading cause of cancer-related deaths. Here are the main risk factors, types, detection methods and treatments.

LUNG CANCER MOST COMMONLY SPREADS TO:

-  Brain
-  Lymph nodes/lymphatic system
-  Adrenal glands
-  Liver
-  Bones

MAIN ENVIRONMENTAL/EXTERNAL RISK FACTORS

Veterans are at higher risk for lung cancer because of cumulative exposures to tobacco smoke, asbestos, beryllium, radon, Agent Orange and other air pollutants incurred during their military and post-military careers.



SMALL CELL LUNG CANCER

- 13% of cases
- Spreads quickly

STAGES

- ▶ **Limited stage:** Only occurs in one lung.
- ▶ **Extensive stage:** Has metastasized outside lung tissue or in distant organs.

EARLY DETECTION SAVES LIVES!



• X-ray



• CT-Scan



• Diagnosis

Tumors can be detected on x-rays or CT scans. Veterans are encouraged to monitor their health regularly so that if lung cancer does develop, it can be diagnosed early when it can be treated and potentially cured.

TREATMENTS

Treatment depends on the type and stage, and could include any of these therapies, or a combination. Some patients choose to take part in clinical trials to test new drugs or other treatments.



Radiation
Radiation beams can target a specific area of the lung, killing the cancer cells

Chemotherapy
Chemotherapy drugs kill cancer cells

Targeted therapy
Targeted therapy involves drugs that block the growth and spread of cancer cells



Surgery
Surgery entails cutting out part or all of the lung

NON-SMALL CELL LUNG CANCER

- 87% of cases
- Spreads slowly

STAGES

- ▶ **Occult:** Cancer cells in sputum but no tumors in lung.
- ▶ **Stage 0:** Cancer cells in innermost lining of lung.
- ▶ **Stages IA/IB:** Tumor is isolated in the lung, or cancer has spread to the lung's main airways or inner lining.
- ▶ **Stages IIA/IIB:** Cancer has spread to nearby lymph nodes, chest wall, diaphragm, membrane around the heart, lining between the lungs or the main airway.
- ▶ **Stages IIIA/IIIB:** Cancer has spread to additional lymph nodes, further spread to chest wall, diaphragm, membrane around the heart, lining between the lungs or the main airway. It may have spread to the aorta, heart, trachea, sternum or esophagus for the first time, or lung may have collapsed or become inflamed.
- ▶ **Stage IV:** Malignant growths in more than one lobe of one lung, in both lungs, or cancer has spread to other organs.

LUNG CANCER FACTS

- Lung cancer is the #1 cause of cancer-related deaths in the U.S.
- Veterans have a **25% higher risk** than the general population of developing lung cancer and of dying from the disease.
- Late stage lung cancer is **twice as costly to treat** as early stage cancer. Conservative estimates place the annual cost to the VA at **\$1 billion**.
- New Compensation Trust Funds, with an initial funding of \$30 billion, are available to compensate people with lung cancer.

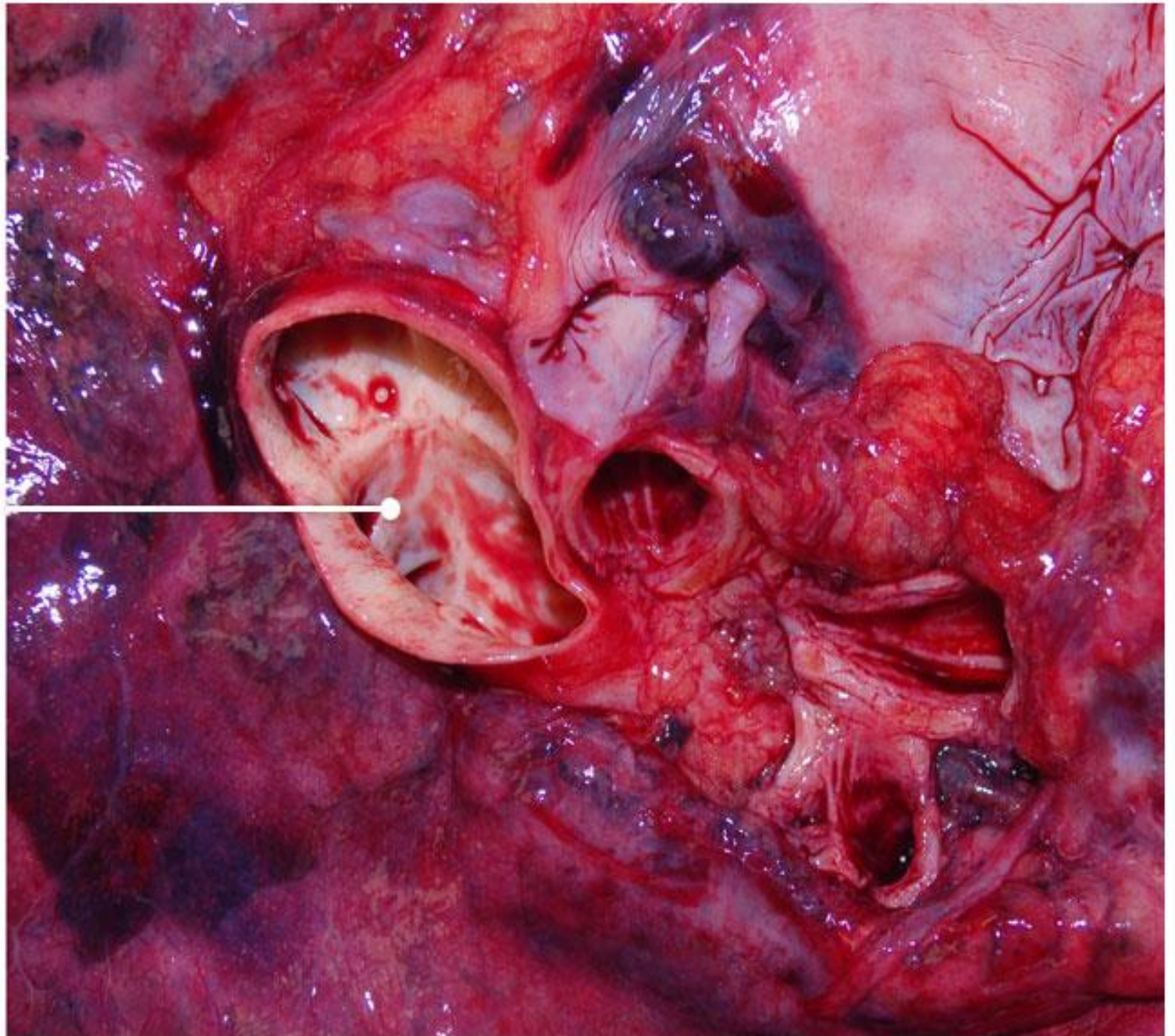
The David Law Firm
The Woodlands, TX
(Greater Houston Area)
1-800-998-9729
www.lung-cancer.com

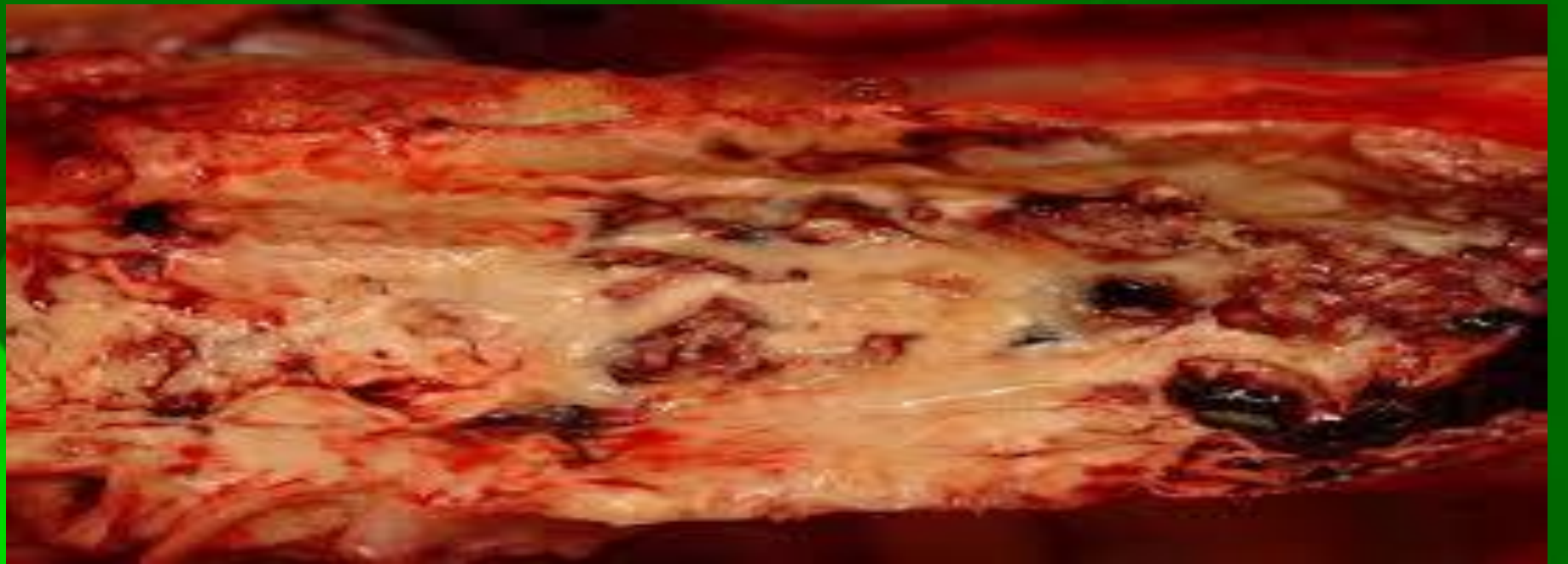
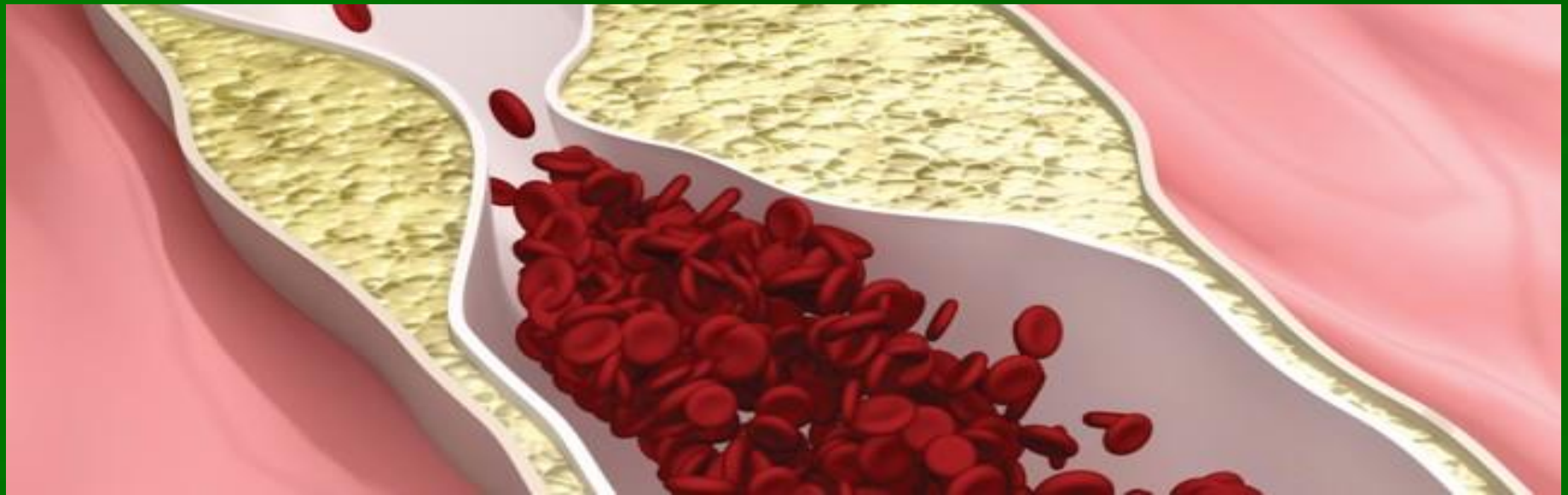
4. Coronary Heart Disease and Stroke



- Nicotine constricts blood vessels, which cuts down on circulation, or blood flow.
- Nicotine also contributes to plaque buildup in the blood vessels, which can lead to hardened arteries, a condition called arteriosclerosis.
- Arteries may become clogged, increasing the risk of heart attack and stroke.

healthy
pulmonary
artery





Serious Consequences for Teens



- **Legal consequences:** Schools prohibit the use of tobacco products on school property, and a student may be suspended or expelled for breaking these rules.
- **Social consequences:** Many people find secondhand smoke and the smell of tobacco offensive, so tobacco users may be excluded from social gatherings.
- **Financial consequences:** Someone who smokes a pack of cigarettes a day can spend more than \$2,000 each year just on cigarettes.

