The Lungs

Biology ¾ /Lungs Rough Draft **Stephanie& Nicholas**

Breathing is a mandatory function of human life that we as human beings need to survive. When you breathe, the main operators in charge are your lungs. The lungs transport oxygen into the bloodstream, while eliminating carbon dioxide. There is one left lung and one right lung. The left lung is slightly smaller than the right lung so room is made for your heart. The left lung is divided into two different lobes and your right lung is divided into three.

The lungs are one of the largest organs in the body. They are located in your chest and take up most of the room there. Other organs located in the chest near the lungs are the ribs, the diagram, and the heart.

On the outside lungs appear to be pink, squishy and soft. The inside contains parts of the lung that helps it to function. Your trachea, or windpipe, is located at the bottom your lung. Connected to the trachea are tubes called **bronchi.** One bronchi tube goes to the left lung, and the other goes to the right lung. Each bronchus then departs off where they start to get smaller and smaller. The smallest tubes in the lung are the **bronchi**. At the end of each bronchus, smaller air sacs called **alveoli** are located. Each **alveolus** has tiny blood vessels called **capillaries**.

The lungs are two cone shaped organs that are in each side of the chest. Thousands of alveoli make up the tissue of the lung. The function of the lung(s) starts in the trachea (a tube that connects the pharynx and larynx to the lungs, allowing the passage of air) then divide into two branches called bronchi. One of the bronchi goes to the left lung and another goes to the right. The right lung has three lobes (upper, middle, and lower). The main bronchi branches to each of these lobes. The lobes then are divided into segments, given by a segmented bronchus. Each lobe has thousands of alveoli, where they get oxygen and carbon dioxide. The left lung only has a upper and lower lobe which makes it smaller than the right lung. It performs the same functions as the right lung just with one less lobe.

A healthy lung functions properly, like breathing in and out easy no pains or problems. The functional characteristic that allows lung tissue to expand upon inhalation is called compliance. Elasticity allows lungs to return to their pre-inhalation shape after the air is exhaled. Pulmonary disease's affect this function. So certain pulmonary diseases affect the lungs worse than others. Asthma is a pulmonary is one of the least deadly pulmonary disease's but still deadly none the less, killing 4,000 people a year. Chronic obstructive pulmonary disease is one of the most deadly pulmonary diseases, killing more than 120,000 people a year. This disease causes the lungs to become less elastic which makes a person breathe faster and deeper. The disease gets worse causing scarring and makes the effects become irreversible.

A diseased or non-functioning lung can cause many problems. Two of the most common diseases affecting the lung are Asthma and Pneumonia. Asthma is a disorder that causes the airways of the lungs to swell and narrow, leading to wheezing, shortness of breath, chest tightness, and coughing. Asthma attacks happen when your airways narrow after being irritated. The narrow airways make it hard for you to breathe in air. Pneumonia is an infection of one or both lungs. This dangerous disease makes it harder for your lungs to absorb oxygen from the air you breathe. Other lung diseases include emphysema, tuberculosis and bronchitis.

Scenario: An 11 year old girl living with one 1½ lungs

After birth while still a baby Lena got Pneumonia. She was too young to fight the sickness

of the doctors had to cut off half of her left lung. The procedure could have been fatal by in luck she survived. She spent great amounts of time in the hospital and was put medication while in the hospital.

In this present day Lena is much like other 11 year old girls. She was not diagnosed with any other lung causing diseases, she doesn't take any medication, and she breathes just like everyone else. Looking at her you could not tell she was missing half a lung. We do not know how this may affect her later on in life but as of right now she is a normal healthy child.

Implants

Lung transplantation is surgery to replace one or both diseased lungs with a healthy lung from a donor. The gift of life is a program that helps people get the lungs they need from a donor.

Process: The surgeon makes a cut in the chest and removes the diseased lung. The surgeon then sews the new lung to the main blood vessels and air passage.

Diseases that may need a lung transplant to cure are:

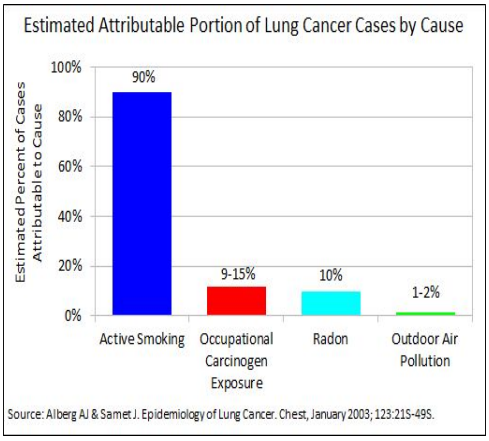
- COPD (chronic obstructive pulmonary disease)
- Cystic fibrosis
- Idiopathic pulmonary fibrosis
- Interstitial lung diseases
- Primary pulmonary hypertension

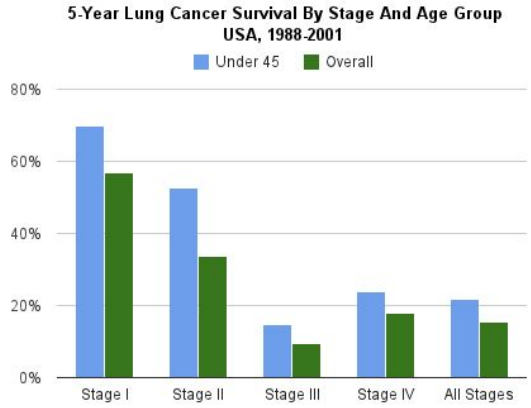
Charts

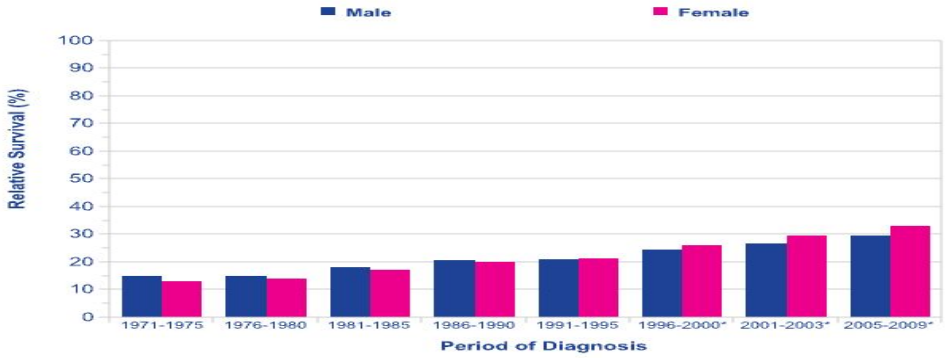
Graph 1: Major Causes of Lung Cancer (2003)

Graph 2: The comparison in age for a 5 Year Lung Cancer Survival (1988-2001)

Graph 3: The difference in survival of lung cancer between men and women (1971-2009)







Conclusion

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References

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