

# IRIDOLOGY

## BREATHING

Compiled by

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### Introduction

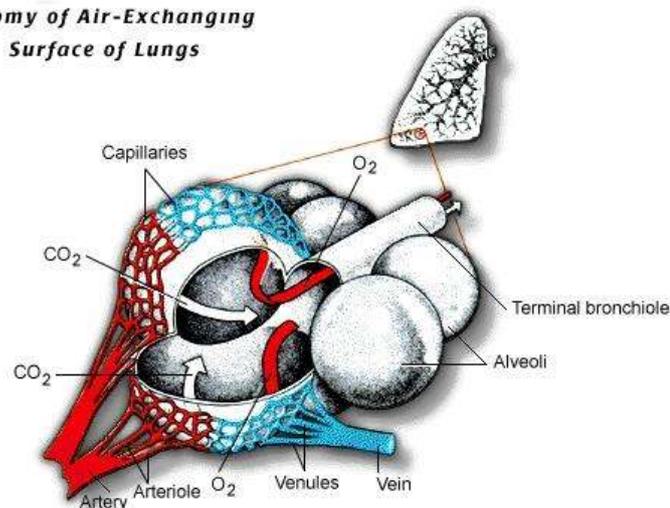
The respiratory tract, which is also called respiratory system, is the complex of organs and structures that transfers oxygen and carbon dioxide between the air outside and the blood flowing through the lungs. It also warms the air passing into the body. The speech function is helped by giving air for the throat (larynx) and the vocal cords. Every 24 hours about 500 cubic feet of air passes through the breathing tract of the average adult, who breathes in and out between 12 and 18 times a minute. The respiratory tract is divided into two parts, the upper and the lower respiratory tracts:

### Upper respiratory tract

The upper respiratory tract consists of the nose, the nasal cavity, the ethmoidal air cells, the frontal sinuses, the sphenoidal sinuses, the maxillary sinus, the larynx, and the trachea. The upper respiratory tract moves air to and from the lungs and filters, moistens, and warms the air. Infection and irritation of the upper tract are common and often spread to the lower respiratory tract, where they may cause serious complications.

### Lower respiratory tract

*Anatomy of Air-Exchanging  
Surface of Lungs*

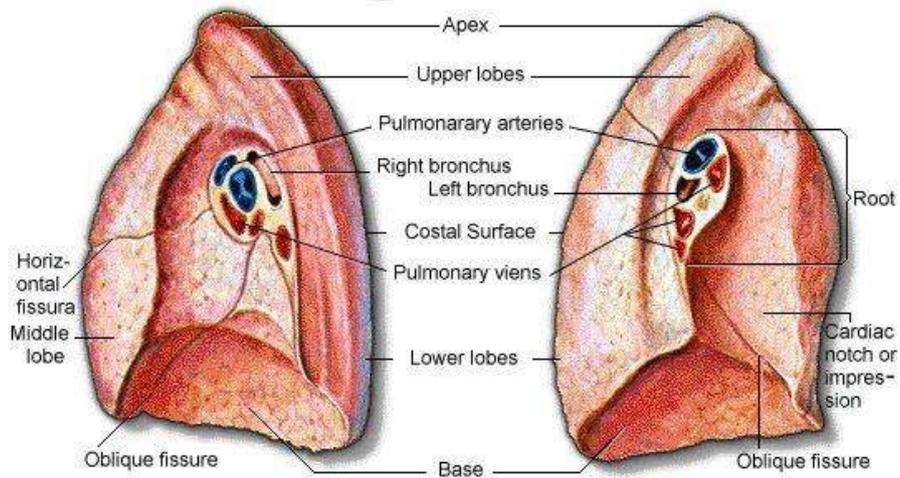


The lower respiratory tract includes the left and right bronchi, and the alveoli where the exchange of oxygen and carbon dioxide occurs during the breathing cycle. The bronchi, which are branches of the

trachea, or windpipe, divide into smaller bronchioles in the lung tissue; the bronchioles divide into alveolar ducts; the ducts into alveolar sacs; and the sacs into alveoli. The alveolar sacs and the alveoli present a total lung surface of about 850 square feet for the exchange of oxygen and carbon dioxide. The exchange occurs between the cells lining the alveoli and the tiny capillaries in the alveolar walls. The lower respiratory tract is a common site of infections, obstructive conditions, and lung cancer.

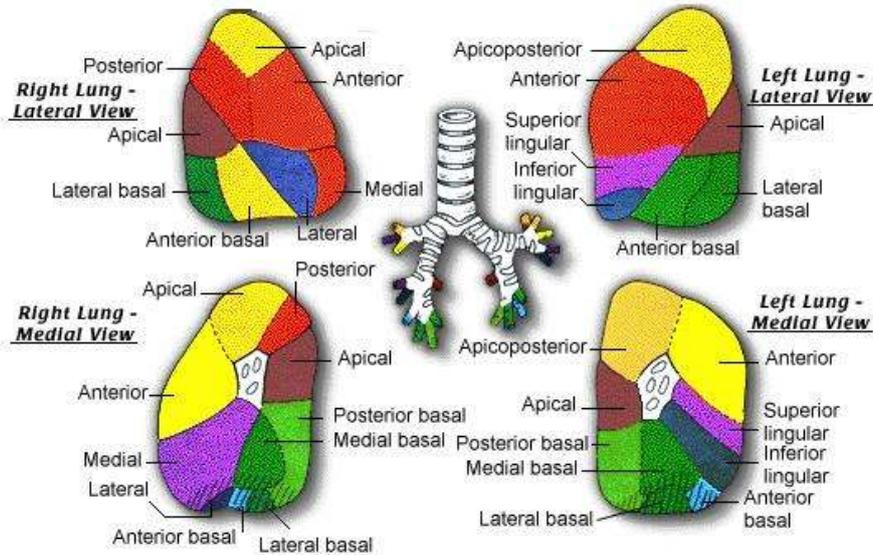
## Lungs

**Lungs Viewed from Medial Aspect**



The lungs are of a pair of light, spongy organs in the chest. They are highly elastic, and the lungs form the main part of the body's breathing system. They provide the mechanisms for inhaling air from which oxygen is extracted and for exhaling carbon dioxide, a waste product of the body. The lungs are served by two artery systems. The pulmonary arteries bring deoxygenated blood to the lungs where the oxygen is replaced. The bronchial arteries supply blood to nourish the lung tissues. Most of the blood brought to the lungs by the two artery systems returns to the heart through the pulmonary veins.

### **Bronchopulmonary Segments**



The surfaces of the lungs cradle the heart. Each lung is cone-shaped and has a peak, a base, three borders, and two surfaces. The peak is rounded and it extends into the root of the neck, about 4cm above the first rib. The base of the lung is broad and curved, rests on the surface of the diaphragm, and moves with the diaphragm, down during inhaling and up during exhaling. Thus, the mechanics of breathing is achieved.

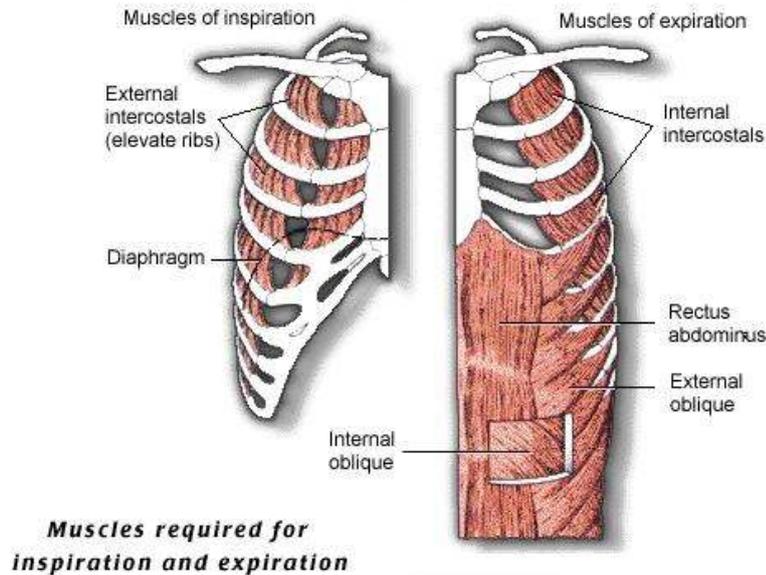
The quantity of air that can be exhaled from the lungs after the deepest breath averages 3,700cc. The lungs are composed of lobes that are smooth and shiny on their surface. The right lung contains three lobes, and the left lung contains two lobes. Each lung is covered with a thin, moist (pleural) membrane. An inner coat contains many elastic fibres that line the entire surface of the organ. Within this fibrous layer are secondary small lobes (lobules) divided into primary lobules, each of which consists of blood vessels, lymph vessels, nerves, and a duct (alveolar) connecting with air spaces. The colour of the lungs at birth is a pinkish-white, and this darkens in later life. This colouring comes from carbon granules that are inhaled from the atmosphere. The carbon deposits increase with age, and they are more abundant in men than in women. Moreover, the lungs of men are usually heavier and have a greater capacity than the lungs of women.

### **Respiratory Assessment**

Respiratory assessment is an evaluation of a patient's breathing system. The patient is asked about coughs, wheezes, shortness of breath, becoming tired easily, having chest or stomach pain, chills, fever, heavy sweating, dizziness, or swelling of the feet and hands. Further, signs of confusion, worry, restlessness, wide nostrils, bluish lips, gums, earlobes, or nails, swelling (clubbing) of the fingers, fever, loss of appetite, and sitting upright are noted.

The patient's breathing is closely watched for slow, rapid, irregular, shallow, or waxing and waning (Cheyne-Stokes) breathing. The patient is also watched for long breathing-out phases, or times without breathing. Rapid, slow, or abnormal heart beats, or signs of congestive heart failure, as abnormal breathing sounds, fluid build-up, swollen spleen and liver, bloated stomach, or pain are also recorded.

## Mechanics of Respiration



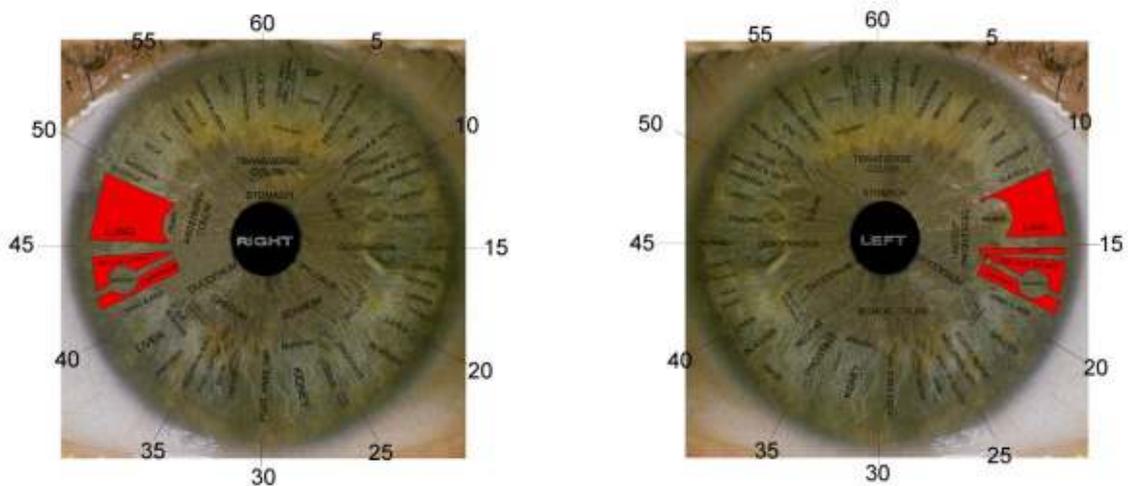
The cage of bone surrounding the lungs (including ribs, spinal bones, and shoulder bones) is checked for defects. Tapping the chest (percussion) is done to check for drum-like sounds (tympans), dull or flat sounds, wheezing, friction rubs, or the carrying of spoken words through the chest wall. Also checked are lowered or absent breath sounds.

Data important for the test may be allergies, recent exposure to infection, vaccinations, exposure to irritants, prior breathing disorders and operations, long-term conditions, current drugs, smoking habits, and a family history of breathing disorders. Tests are chest x-ray films, complete blood count, a heart rate test (electrocardiogram - ECG), and lung tests.

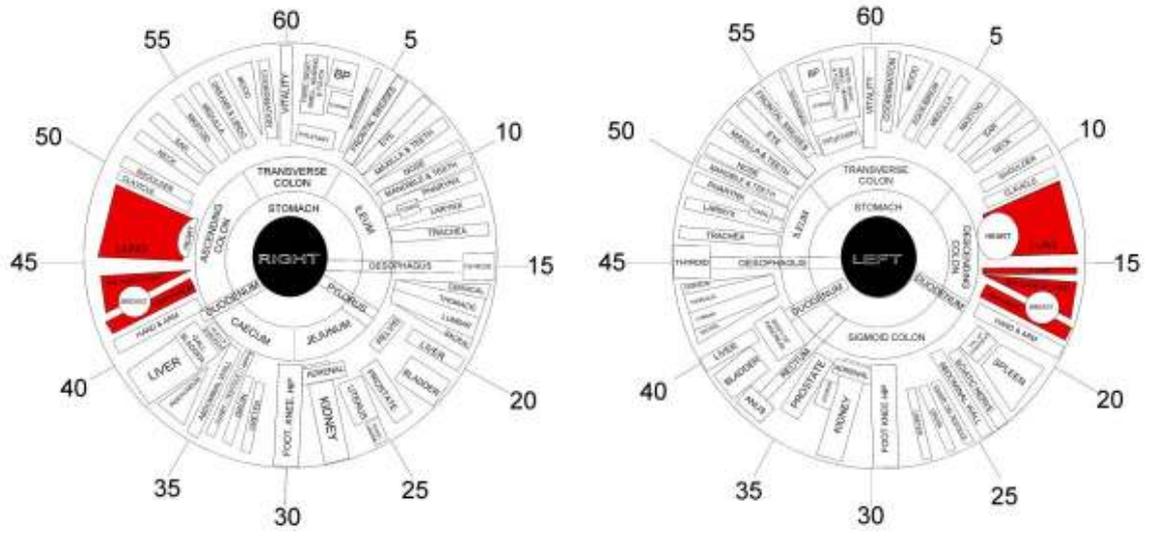
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### Indications of Problems with Breathing

For indications of problems with breathing, the iridologist would look in the eye area(s) as indicated in red on the following diagrams (I have included areas related to the lungs and to the mechanics of breathing):



Breathing Elements: Right Eye, Seg 42-49 (approx.); Left Eye, Seg 11-19 (approx.)



End

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