HEALTH BASICS

Respiratory

Respiratory means relating to breathing and the airways and lungs that support it.

WHAT IT IS
A term for breathing and the organs involved

WHERE IT COMES UP
Medical records, test names, diagnoses, and health advice

WHY IT MATTERS
Breathing supplies oxygen and removes carbon dioxide

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
A primary care clinician or respiratory specialist

HOW IT IS CHECKED
Breathing measurements, lung tests, imaging, or blood tests

Overview

"Respiratory" means related to breathing. It can describe the respiratory system, a symptom, a test, a treatment, or a medical condition. The word by itself is not a disease or diagnosis.

The respiratory system includes the nose, mouth, throat, voice box, windpipe, airways, and lungs. It works with the muscles used for breathing and with the heart and blood vessels.

You may see the word in terms such as respiratory rate, respiratory infection, respiratory therapist, or respiratory failure. In each case, it identifies a connection with breathing. It does not explain the full medical situation on its own.

Doctors often divide the respiratory tract into two parts. The upper respiratory tract includes the nose, sinuses, and throat. The lower respiratory tract includes the windpipe, branching airways, and lungs. The exact dividing point may differ slightly between medical sources.

How it works

When you breathe in, air usually enters through your nose or mouth. It travels down the windpipe, also called the trachea, and into two main airways called bronchi. These divide into

smaller tubes throughout the lungs.

At the ends of the smallest airways are millions of tiny air sacs called alveoli. Oxygen passes from these sacs into nearby blood vessels. At the same time, carbon dioxide passes from the blood into the air sacs so that you can breathe it out.

Oxygen helps the body's cells release energy from food. Carbon dioxide is a waste gas produced by normal cell activity. The respiratory and circulatory systems work together to move these gases.

The diaphragm is the main breathing muscle. It sits beneath the lungs. When it tightens, the chest cavity expands and air moves into the lungs. When it relaxes, air moves out. Muscles between the ribs also assist.

The brain normally controls breathing without conscious effort. It adjusts the rate and depth of breathing in response to activity, sleep, altitude, and the levels of oxygen and carbon dioxide in the blood.

The respiratory system also helps protect the body. Nasal hairs and mucus trap some particles. Tiny moving structures called cilia help carry mucus and trapped material out of the airways. Coughing and sneezing can clear irritants, although they can also spread infections.

Why it matters for your health

Every organ relies on a steady oxygen supply. Breathing must also remove enough carbon dioxide to keep the blood's chemistry within a healthy range.

"Respiratory" can appear on a medical record for many reasons. A clinician may be recording your respiratory rate, which is the number of breaths taken in a minute. They may be describing where an infection is located or ordering a test of lung function.

A respiratory assessment may include listening to your chest, observing how you breathe, and checking oxygen saturation. Oxygen saturation estimates how much oxygen is being carried in the blood. A small device called a pulse oximeter can estimate it through a finger, but the result has limitations and must be considered alongside your symptoms and other findings.

Lung function tests measure different parts of breathing. Spirometry measures how much air you can breathe out and how quickly you can move it. Other tests can measure lung volume or how well gases pass from the lungs into the blood.

Chest X-rays and CT scans show lung structure rather than breathing ability. Blood tests may measure oxygen, carbon dioxide, infection markers, or other factors. Nose or throat swabs can identify some respiratory viruses and bacteria.

There is no single test for whether something is "respiratory." The appropriate test is chosen according to the specific question.

What can go wrong

Many conditions can affect the respiratory system. Some are brief, while others require ongoing care.

Upper respiratory infections include the common cold, influenza, and other viral infections involving the nose or throat. Lower respiratory infections include bronchitis and pneumonia, which affect the larger airways or lung tissue.

Asthma causes episodes of airway narrowing and inflammation. Chronic obstructive pulmonary disease, or COPD, causes persistent airflow limitation, often involving chronic bronchitis or emphysema.

Interstitial lung diseases, including pulmonary fibrosis, affect the tissue around the air sacs. This can make it harder for oxygen to enter the blood.

A pulmonary embolism is a blood clot blocking an artery in the lungs. A pneumothorax is air trapped between a lung and the chest wall, which can cause the lung to partly or fully collapse. Both can require urgent assessment.

Obstructive sleep apnea causes repeated blockage of the upper airway during sleep. It affects breathing at night and may lead to poor-quality sleep and daytime tiredness.

Respiratory failure means the lungs cannot provide enough oxygen, remove enough carbon dioxide, or both. It is a serious medical condition, not another name for ordinary shortness of breath.

Breathing problems do not always begin in the lungs. Heart conditions, severe anemia, anxiety, muscle weakness, and other problems may also affect breathing. Similar experiences can have different causes, so a medical assessment may be needed.

What you can do

You do not need to do anything simply because the word "respiratory" appears in a document. Ask what the full term means and why it applies to you.

If breathing concerns are being assessed, it can help to record:

Ask which test is being considered and what question it is intended to answer. For example, spirometry checks airflow, while an X-ray looks at chest structures. One test cannot answer

every respiratory question.

Arrange routine medical follow-up for breathing changes that persist, return repeatedly, interrupt sleep, limit usual activity, or occur with repeated infections. A clinician can decide whether an examination or testing is appropriate.

Seek urgent medical advice for a sudden or significant change in breathing, especially with fever, worsening chest discomfort, or coughing up blood.

Call emergency services for severe difficulty breathing, blue or grey lips or face, new confusion, fainting, severe chest pain, or an inability to speak normally because of breathlessness. Skin colour changes may be easier to see in the lips, gums, or around the eyes on some skin tones.

- When the problem occurs and what you are doing at the time
- Possible triggers, such as exercise, smoke, cold air, or allergens
- Cough, wheeze, fever, chest discomfort, or mucus
- Relevant home readings, if a clinician asked you to take them
- Medicines, inhalers, tobacco exposure, and workplace exposures

Common questions

Does "respiratory" mean a lung disease?

No. It is a descriptive word meaning related to breathing. The full phrase is needed to understand what it refers to.

Are the lungs the whole respiratory system?

No. The system also includes the nose, throat, windpipe, airways, breathing muscles, and structures involved in gas exchange.

What is a respiratory rate?

It is the number of breaths taken in one minute. Clinicians interpret it using age, activity, health history, other measurements, and the circumstances in which it was counted.

Can a pulse oximeter check overall lung health?

No. It estimates blood oxygen saturation at that moment. It does not identify the cause of a problem or rule out every serious condition. Movement, poor circulation, nail products, device quality, and skin pigmentation can affect accuracy.

What is a respiratory specialist?

A pulmonologist is a doctor who specialises in lung and breathing conditions. Respiratory therapists are trained professionals who provide breathing tests and treatments in many healthcare settings.

Sources

- National Cancer Institute - Definition of respiratory system
- National Heart, Lung, and Blood Institute - How the lungs work
- National Heart, Lung, and Blood Institute - Respiratory failure
- MedlinePlus - Lung function tests
- Centers for Disease Control and Prevention - Respiratory illnesses
- U.S. Food and Drug Administration - Pulse oximeter accuracy and limitations