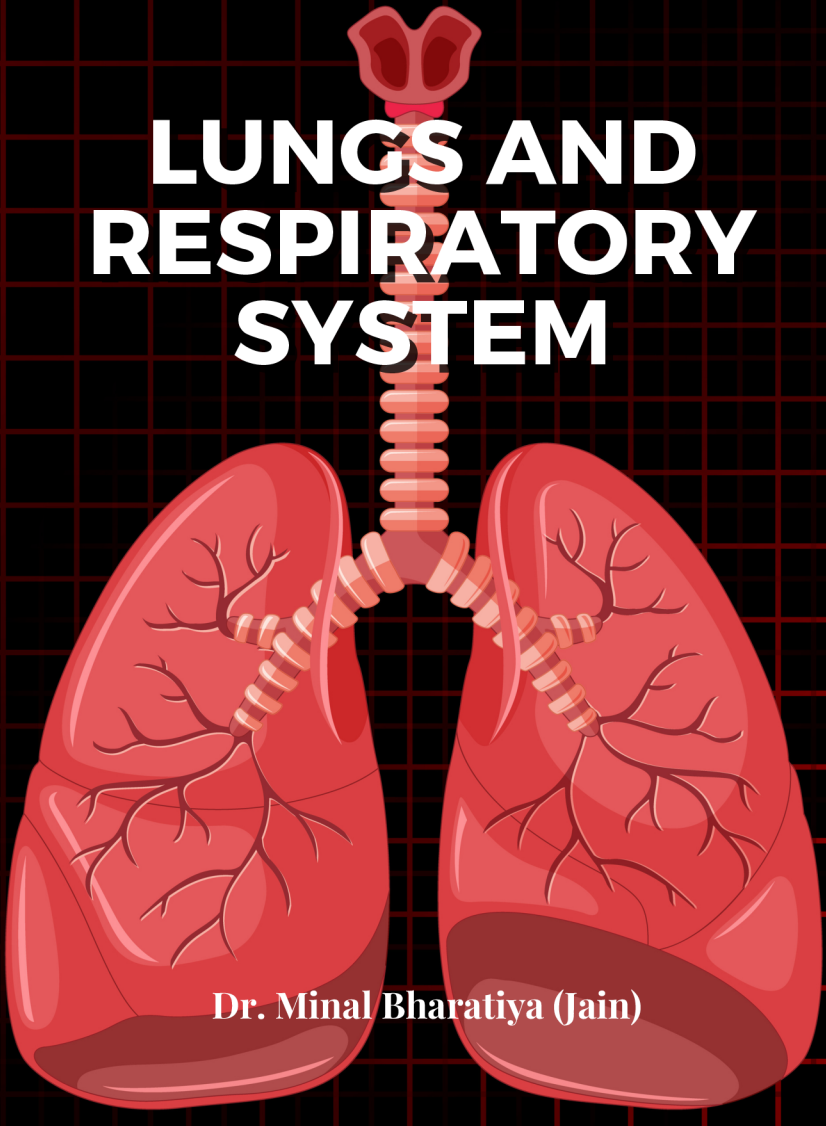
E-Divine Souls®
Journey to Eternal Happiness

Integrated Therapeutic Life Balancing Research Gurukulam

LUNGS AND RESPIRATORY SYSTEM



Dr. Minal Bharatiya (Jain)

LUNGS AND RESPIRATORY SYSTEM

DR. MINAL BHARATIYA (JAIN)

INTEGRATED HEALTH SCIENCES CONSULTING

Cognitive Neuro-Psycho Treatments (Research) | vis medicatrix naturae | IAYT for Diseases | Lifestyle with Nadi Tarangini | Therapeutic Healing & Counselling

Published by

E-Divine Souls®
Journey to Eternal Happiness
Integrated Therapeutic Life Balancing Research Gurukulam

Address:
Head Office:
The ONE, B-Block 104-105, 1st Floor, RNT Marg, Opp. DAVV, Indore - 452001 (M.P.) BHARAT

Ph.: +91-9522921531 | +91-9301490259
edivinesouls@gmail.com | www.edivinesouls.com

First Edition 2025
M.R.P.: Rs.59/-

Our Obeisance to
eternal Divine Souls

Let's pray for Mother Earth and all her beings,
for showers of
Divine
Infinite bliss of
Vitality.
Let Innovative Ideas come to
Nurture
Englightened
Serenity
We bow our
Obeisance to the
Union of all the
Liberated
Souls, by total
extinction of all our flaws.

About Us

eDivineSouls, Integrated Life Balancing Research Gurukulam, central BHARAT's 1st of its kind centre. The centre works an ICMR approved research based Integrated Therapeutic Health Sciences Model suiting current and future problems with patient centric approach. Our online Gurukulam has an amalgamation of ancient foundation, sharing wealth of knowledge Ganges, rich healthy living Life style management with lead by example and mentoring to living a life of significance. We deliver knowledge on best food for body, mind and soul as per basic constitution for each individual for fostering a balanced approach to holistic health care.

The institution's commitment to enhancing well-being extends to various programs, courses and consultation services. In essence, eDivineSouls stands as a sanctuary for comprehensive well-being by applying Sages of SIVANAS wisdom and practices with learning varied skills, tech-know-how, psychology, neuro and allied sciences, impact of social media & gadgets on future of human race – an inside out journey. This infusion creates a unique blend of science and spirituality.

Extends our services to address the intricacies of modern life, offering solutions for Work-Life and Parenting issues overcoming emotional, mental and psychological health challenges. Self Help Portfolio for Life (SHPLife) based on her learnings and experiences from world class organizations and an outcome of Dr. Jain doctorate degree. This is a framework solution for all four stages (as ashrams) of personal and professional well-being.

About Founder, CEO

Dr Minal Bhartiya (Jain)

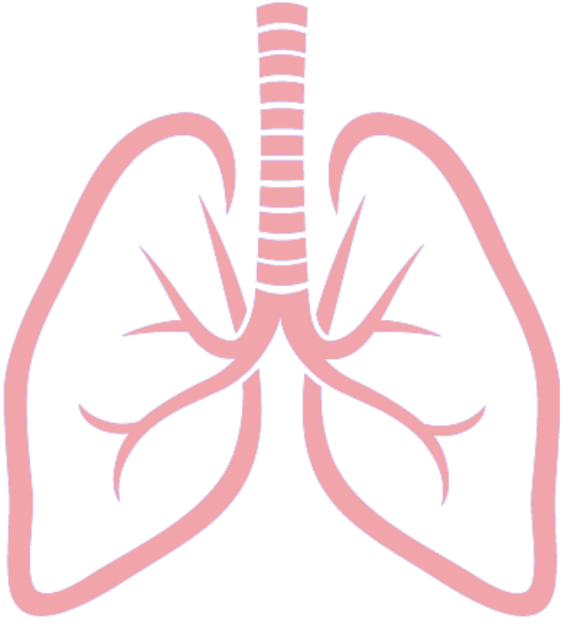
A daughter of Bharat, she embodies cultural and ethical values, a doctorate in Work-Life Balance. Pursued her career in varied Health Sciences. Realized the integral relationship among them.
She blends best of ancient healing health systems wisdom with modern relevance. Continual research on Integrated Therapeutic Life Balancing Solutions.

Since 2011, she has been on a transformative journey shaped by unwavering faith and the metaphysics of Scientific Spirituality, which she continues to explore through a 12-year degree program. Rooted in true scriptural knowledge and ascetic practices, her path reflects a deep connection to divine wisdom and an enduring commitment to holistic well-being.

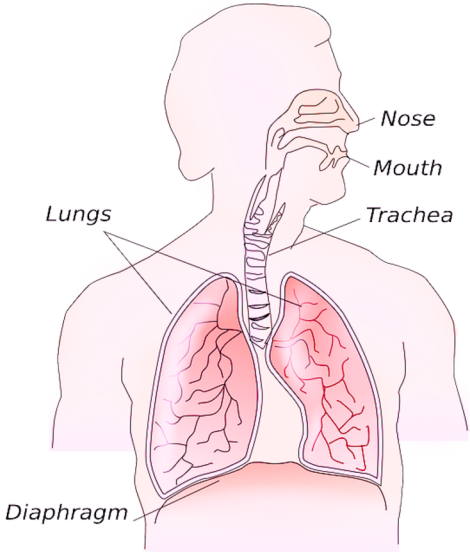
Her empathetic nature and love for Mother Earth have driven her to explore diverse healing modalities and advocate for sustainable, sattvic living. With studies in Astrology, Occult Sciences, and Vastu, she addresses life and health challenges at their roots. Her professional journey includes roles as a visiting faculty at Devi Ahilya University and World class IT corporations as TCS, IBM and Ericsson, showcasing her versatile expertise and dedication to empowering others.

Whether you're wide awake while prepping for that big date or asleep during your most snooze-worthy afternoon class, you don't have to think about breathing. It's so important to life that it happens automatically.

Each day you breathe about 25,000 times, and by the time you're 70 years old, you'll have taken at least 600 million breaths. If you didn't breathe, you couldn't live. It's one of the most important functions your body performs.



What Are the Lungs and Respiratory System and What Do They Do?



All of this breathing couldn't happen without help from the respiratory system, which includes the nose, throat, voice box, windpipe, and lungs. With each breath, you take in air through your nostrils and mouth, and your lungs fill up and empty out. As air is inhaled, the mucous membranes of the nose and mouth warm and humidify the air.

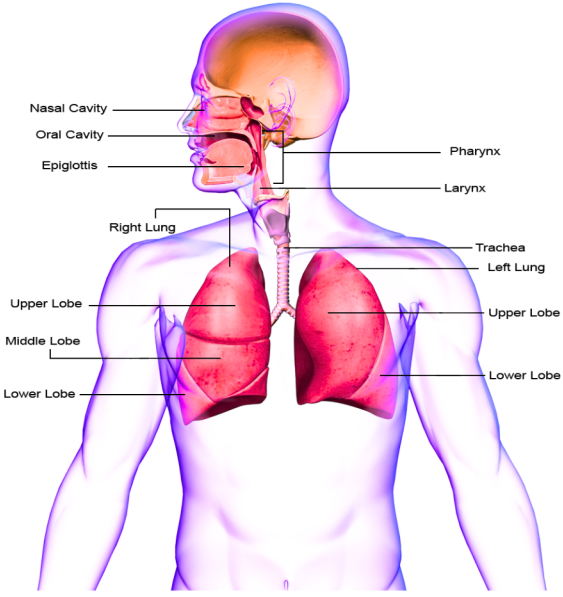
Although we can't see it, the air we breathe is made up of several gases. Oxygen is the most important for keeping us alive because body cells need it for energy and growth. Without oxygen, the body's cells would die.

Respiration is the term for the exchange of oxygen from the environment for carbon dioxide from the body's cells. The process of taking air into the lungs is called inhalation or inspiration, and the process of breathing it out is called exhalation or expiration.

Even if the air you breathe is dirty or polluted, your respiratory system filters out foreign matter and organisms that enter through the nose and mouth. Pollutants are breathed or coughed out, destroyed by digestive juices, or eaten by macrophages, a type of blood cell that patrols the body looking for germs to destroy.

Tiny hairs called cilia (pronounced: sihlee-uh) protect the nasal passageways and other parts of the respiratory tract, filtering out dust and other particles that enter the nose with the breathed air.

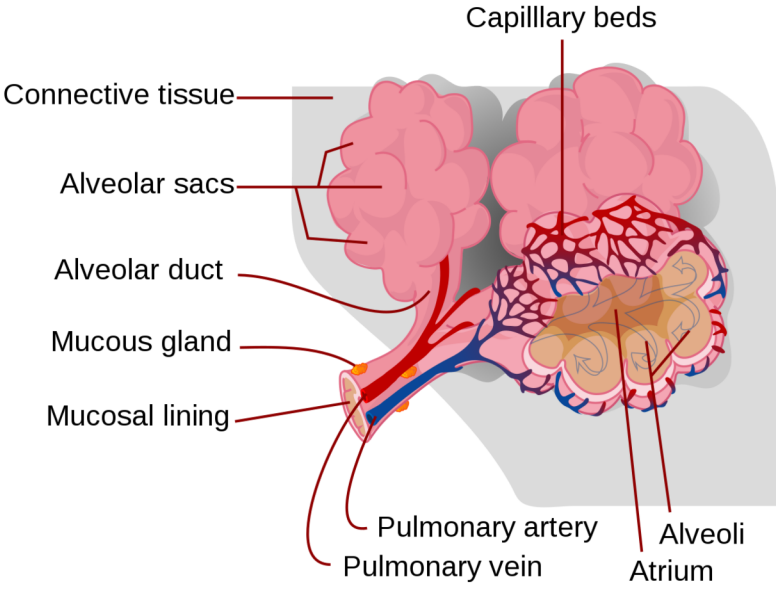
as air is inhaled, the cilia move back and forth, pushing any foreign matter (like dust) either toward the nostrils, where it is blown out, or toward the pharynx, where it travels through the digestive system and out with the rest of the body's waste.



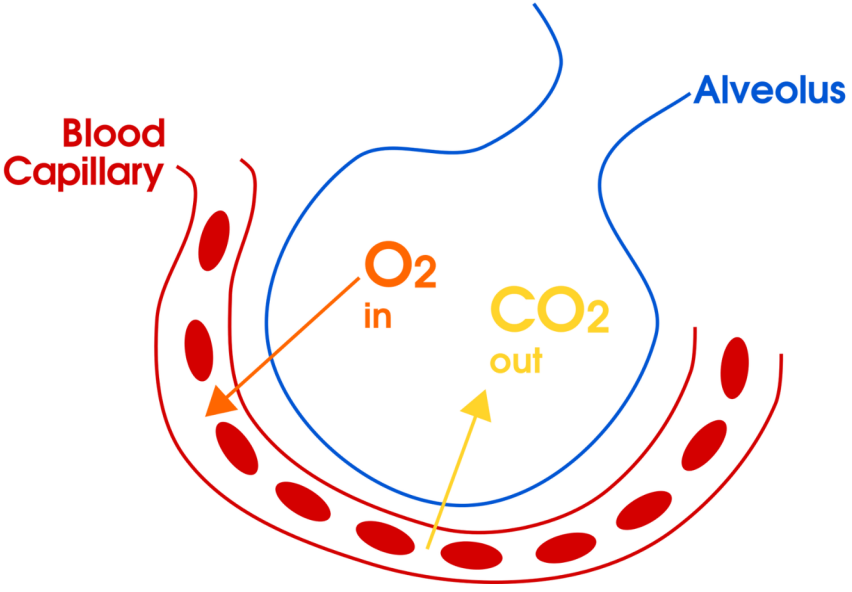
The two openings of the airway (the nasal cavity and the mouth) meet at the pharynx (pronounced: far-inks), or throat, at the back of the nose and mouth. The pharynx is part of the digestive system as well as the respiratory system because it carries both food and air.

At the bottom of the pharynx, the pathway for both food and air divides in two. One passageway is exclusively for food (the oesophagus, pronounced: ih-sah-fuh-gus, which leads to the stomach) and the other for air. The epiglottis (pronounced: eh-pih-glah-tus), a small flap of tissue, covers the air-only passage when we swallow, keeping food and liquid from going into our lungs.

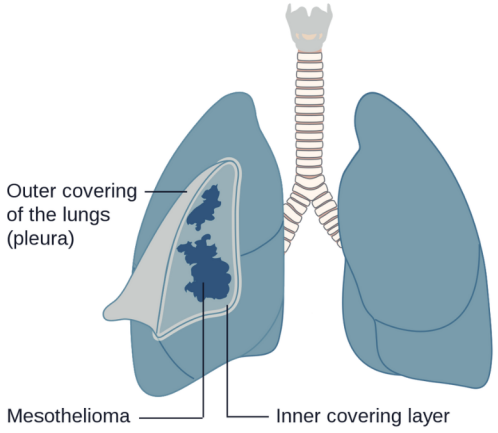
- The larynx (pronounced: lar-inks), or voice box, is the uppermost part of the air-only passage.
- This short tube contains a pair of vocal cords, which vibrate to make sounds. The trachea (pronounced: tray-kee-uh), or windpipe, extends downward from the base of the larynx.
- It lies partly in the neck and partly in the chest cavity.
- The walls of the trachea are strengthened by stiff rings of cartilage to keep it open so air can flow through on its way to the lungs.
- The trachea is also lined with cilia, which sweep fluids and foreign particles out of the airway so that they stay out of the lungs.
- At its bottom end, the trachea divides into left and right air tubes called bronchi (pronounced: brahn-ky), which connect to the lungs.
- Within the lungs, the bronchi branch into smaller bronchi and even smaller tubes called bronchioles (pronounced: brahn keeolz).
- Bronchioles, which are as thin as a strand of hair, end in tiny air sacs called alveoli (pronounced: al-vee-oh-lie), where the exchange of oxygen and carbon dioxide actually takes place.
- Each lung houses about 300 to 400 million alveoli.



- With each inhalation, air fills a large portion of the millions of alveoli.
- In a process called diffusion (pronounced: dihfyoo-zhun), oxygen moves from the alveoli to the blood through the capillaries (tiny blood vessels, pronounced: kah-puh-lereez) that line the alveolar walls.
- Once in the bloodstream, oxygen gets picked up by a molecule called haemoglobin (pronounced: hee-muh-glo-bun) in the red blood cells.
- This oxygen-rich blood then flows back to the heart, which pumps it through the arteries to oxygen-hungry tissues throughout the body.

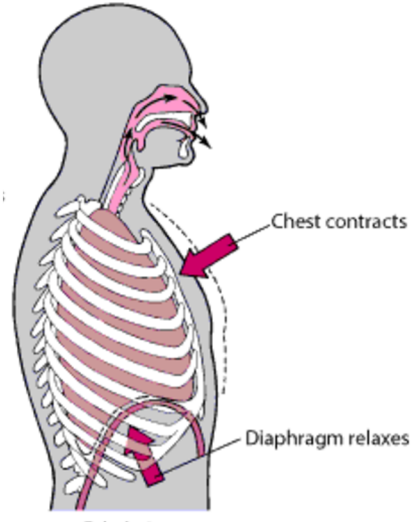


- In the tiny capillaries of the body tissues, oxygen is freed from the haemoglobin and moves into the cells.
- Carbon dioxide, which is produced during the process of diffusion, moves out of these cells into the capillaries, where most of it is dissolved in the plasma of the blood.
- Blood rich in carbon dioxide then returns to the heart via the veins.
- From the heart, this blood is pumped to the lungs, where carbon dioxide passes into the alveoli to be exhaled.



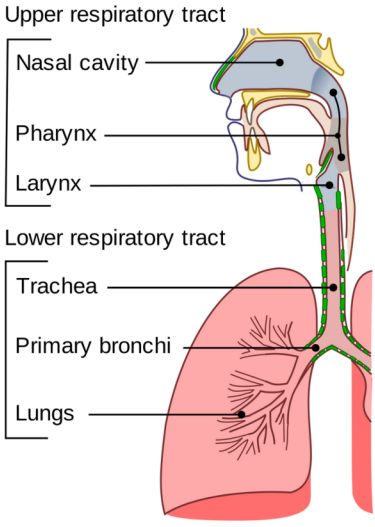
- The lungs also contain elastic tissues that allow them to inflate and deflate without losing shape and are encased by a thin lining called the pleura (pronounced: plur-uh).
- This network of alveoli, bronchioles, and bronchi is known as the bronchial tree.
- The chest cavity, or thorax (pronounced: thor-aks), is the airtight box that houses the bronchial tree, lungs, heart, and other structures.
- The top and sides of the thorax are formed by the ribs and attached muscles, and the bottom by a large muscle called the diaphragm.
- The chest walls form a protective cage around the lungs and other contents of the chest cavity.

- The diaphragm (pronounced: dye-uh-fram), which separates the chest from the abdomen, plays a lead role in breathing.
- When we breathe out, the diaphragm moves upward, forcing the chest cavity to get smaller and pushing the gases in the lungs up and out of the nose and mouth.
- When we breathe in, the diaphragm moves downward toward the abdomen, and the rib muscles pull the ribs upward and outward, enlarging the chest cavity and pulling air in through the nose or mouth.
- Air pressure in the chest cavity and lungs is reduced, and because gas flows from high pressure to low, air from the environment flows through the nose or mouth into the lungs.



Exhalation

- As we exhale, the diaphragm moves upward and the chest wall muscles relax, causing the chest cavity to contract.
- Air pressure in the lungs rises, so air flows from the lungs and up and out of respiratory system through the nose or mouth.



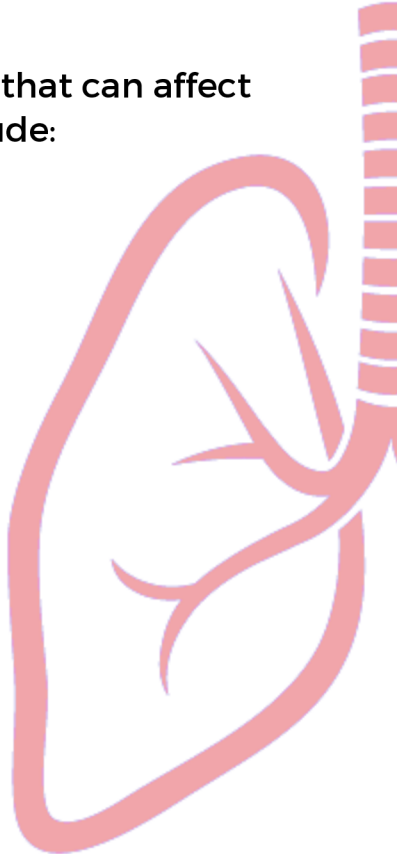
- The respiratory system can easily be divided into two main divisions.
- The part described above conducts the air (Conduction Zone) and as a corollary of this action produces the voice.
- Its main parts are the nose, Pharynx, Larynx, Trachea and the Bronchial tree.
- The second part of the respiratory system (Respiratory Zone) receives air and exchanges gases.
- This action mainly occurs through Alveoli that are contained within the spongy structure of the lungs that occupy the major part of the Thoracic cavity.
- The lungs are two voluminous, sponge-like organs in the Thoracic cavity.

- A delicate membrane, the Pleura, covers both lungs. Along with the heart and its great blood vessels, these two lungs completely fill the chest cavity.
- The lungs are cone-shaped and the apex lies above while the base rests on the floor of theThoracic cavity, the diaphragm.
- Each lung is divided into numerous lobes by vertical and horizontal fissures. The right lung has three lobes whereas the left has two.
- Each lobe is composed of a number of lobules. A small Bronchial tube enters each lobule, conducting air into the dilated sacs and removing Carbon-di-oxide.Lung tissue is elastic, porous and spongy.
- There are ten Bronchopulmonary segments in each lung that are distinct anatomical and functional units of the lung.

Things That Can Go Wrong With the Lungs and Respiratory System

Many factors - including genetics, pollutants and irritants, and infectious diseases - can affect the health of your lungs and respiratory system and cause respiratory problems.

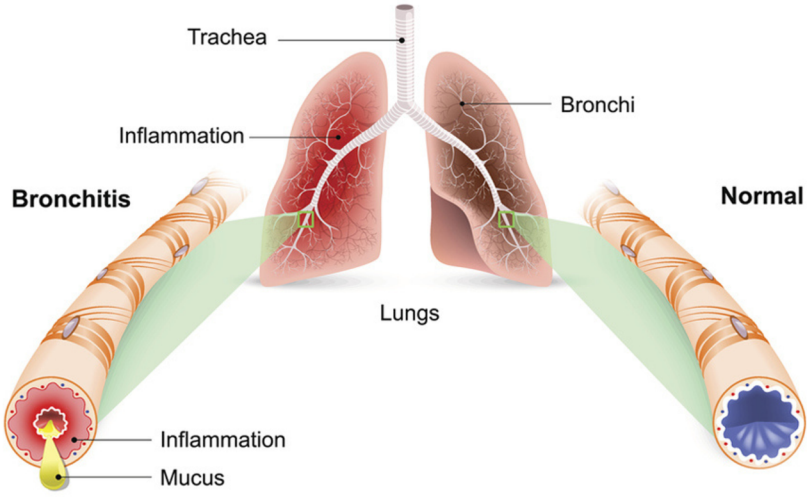
Problems of the respiratory system that can affect people during their teen years include:



Asthma

- Over 20 million people have asthma (pronounced: az-muh) in the United States, and it's the number-one reason that kids and teens chronically miss school.

- Asthma is a long-term, inflammatory lung disease that causes airways to tighten and narrow when a person with the condition comes into contact with irritants such as cigarette smoke, dust, or pet dander.



Bronchitis

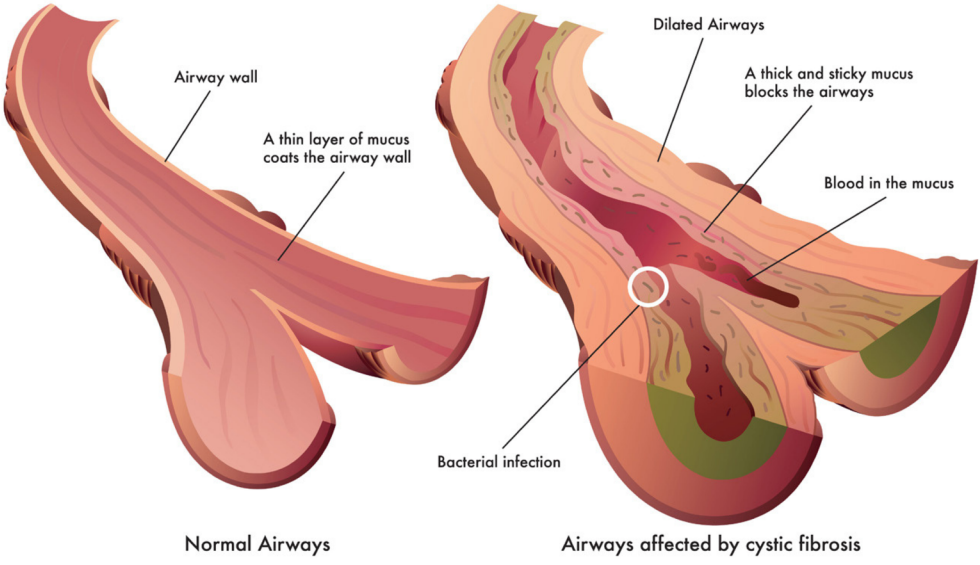
- Although bronchitis doesn't affect most teens, it can affect those who smoke.
- In bronchitis, the membranes lining the larger bronchial tubes become inflamed and an excessive amount of mucus is produced.
- The person with bronchitis develops a bad cough to get rid of the mucus.

Common Cold

- Colds are caused by over 200 different viruses that cause inflammation in the upper respiratory tract.
- The common cold is the most common respiratory infection.
- Symptoms may include a mild fever, cough, headache, runny nose, sneezing, and sore throat.

Cough

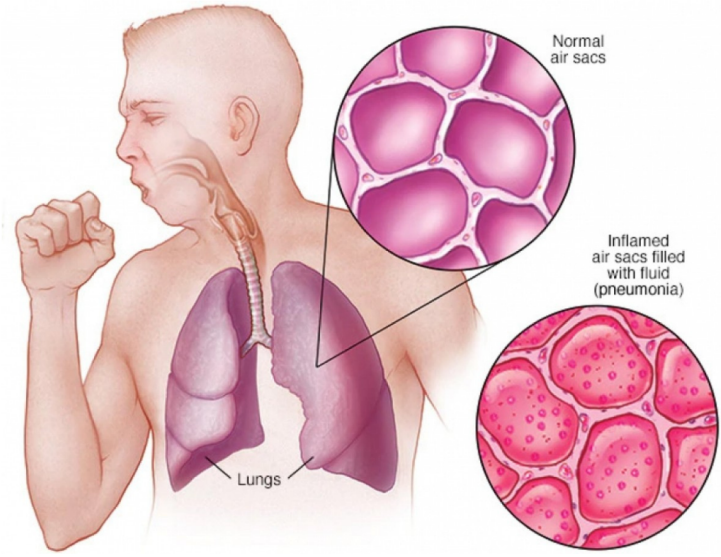
- A cough is a symptom of an illness, not an illness itself.
- There are many different types of cough and many different causes, ranging from not-so-serious to life threatening.
- Some of the more common causes affecting kids and teens are the common cold, asthma, sinusitis, seasonal allergies, and pneumonia.



Cystic Fibrosis (CF)

- CF is an inherited disease affecting the lungs. CF causes mucus in the body to be abnormally thick and sticky.

- The mucus can clog the airways in the lungs and make a person more likely to get bacterial infections.



Pneumonia

- Pneumonia is an inflammation of the lungs, which usually occurs because of infection with a bacteria or virus.

- Pneumonia causes fever, inflammation of lung tissue, and makes breathing difficult because the lungs have to work harder to transfer oxygen into the bloodstream and remove carbon dioxide from the blood.

- Common causes of pneumonia are influenza and infection with the bacterium Streptococcus pneumoniae.

Although some respiratory diseases like asthma or cystic fibrosis can't be prevented, you can prevent many chronic lung and respiratory illnesses by avoiding smoking, staying away from pollutants and irritants, washing your hands often to avoid infection, and getting regular medical checkups.

E-Divine Souls®
Journey to Eternal Happiness
Integrated Therapeutic Life Balancing Research Gurukulam

Affiliated By
VYASA
Vivekananda Yoga Anusandhana Samsthana, Bangalore

Our Accreditations

HEAD OFFICE:
The ONE, B-Block 104-105, 1st Floor, RNT Marg, Opp. DAVV, Indore - 452001 (M.P.) BHARAT

Ph.: +91-9522921531 | +91-9301490259
edivinesouls@gmail.com | www.edivinesouls.com