

# 15. Respiratory Health

## 15.1 Overview

Respiratory health concerns the lungs and airways responsible for breathing and oxygen exchange.

Diseases include **asthma**, **COPD**, **pneumonia**, **tuberculosis**, and **lung cancer**. The **WHO** reports that chronic respiratory diseases are the **third leading cause of death globally**, accounting for over 4 million deaths annually. ([WHO, 2023](#))

## 15.2 Causes / Risk Factors

- Tobacco smoking (primary risk factor).
- Indoor and outdoor air pollution.
- Occupational dust or chemical exposure.
- Genetic factors (e.g., alpha-1 antitrypsin deficiency).
- Repeated respiratory infections during childhood.

## 15.3 Symptoms / Indicators

- Persistent cough, wheezing, shortness of breath.
- Chest tightness or pain.
- Fatigue, frequent respiratory infections.  
Severe symptoms may indicate chronic lung disease or infection.

## 15.4 Prevention / Lifestyle

- **Avoid tobacco and exposure to secondhand smoke.**
- **Improve indoor air quality:** use clean cooking fuels and proper ventilation.
- **Vaccinations:** flu, pneumococcal, and COVID-19 prevent major respiratory infections.

- **Regular exercise:** improves lung capacity and endurance.
- **Mask use** in polluted or crowded areas. ([CDC, 2024](#))

## 15.5 Screening / Diagnosis

- **Spirometry** for lung function measurement.
- **Chest X-ray or CT scan** for structural assessment.
- **Peak flow meter** for asthma control.
- **Sputum test** for infections like tuberculosis.

## 15.6 Management / Public Health Perspective

WHO's **Global Alliance Against Chronic Respiratory Diseases (GARD)** supports prevention and control through tobacco cessation, pollution reduction, and improved access to care.

India's **National TB Elimination Programme** and air quality improvement efforts directly support respiratory health.

Public awareness on clean air and anti-smoking campaigns remain central pillars.

## Summary Points

- Respiratory diseases are largely preventable.
- Avoiding smoking and improving air quality are key measures.
- Early screening and vaccination reduce severe outcomes.