Bronchoconstriction
Constriction of the airways due to contraction of the smooth muscle in the airway wall.

Bronchodilatation
Dilatation (expanding or stretching) of the airways due to relaxation of the smooth muscle in the airway wall, for instance in response to a bronchodilator such as a β2-agonist prescribed for asthma.

Aetiology
The underlying origin or cause(s) of a disease or disorder.

Age-standardised
(or -adjusted) rate
See chapter 1.

Airway (or bronchial) hyperresponsiveness
Unusually easily triggered or excessive contraction of the airways in response to a stimulus.

Airway (or bronchial) hyperreactivity
An unusually large contraction of the airway for a given increase in stimulus; a mechanism of Airway hyperresponsiveness.

Alveoli
Tiny sacs in the lungs at the furthest end of the airways, where exchange of oxygen and carbon dioxide between air and blood takes place.

Anti-proteases
Enzymes that inhibit the activity of proteases, thereby preventing the proteases from breaking down proteins.

Apnoea
Absence of breathing. In the context of sleep apnoea brief periods of apnoea occur during sleep, caused by either by an anatomical obstruction in the upper airway or by a failure of respiratory drive.

Bacteraemia
The presence of living bacteria in the bloodstream.

Barotrauma
Injury to a part of the body caused by changes in air pressure; in the pulmonary context this is usually related to mechanical ventilation settings (see also Volutrauma).

Bronchiolitis
Inflammation of the bronchioles (the smallest airways); this occurs most commonly in young children and is associated with viral infection.

An insuffi cient level of oxygen in the blood.

Hypoxaemia
An insufficient level of oxygen in the blood.

Idiopathic
A disease that occurs without a known cause.

Incidence
See chapter 1.

Latency, latent period
The period between infection (or exposure to another disease-causing agent) and the appearance of symptoms or disease.

Exacerbation
A temporary increase in the severity of a disease or symptoms.

Extrapulmonary
Outside or not related to the lungs.

Fibrosis
The formation of fibrous ("scar") tissue where this would not normally occur, often in response to an insult or as part of a repair process.

Forced expiratory volume in 1 second (FEV1)
The maximum amount of air a subject can exhale in the first second of forceful expiration following an inspiration to total lung capacity.

Forced vital capacity (FVC)
The maximum volume of air a subject can exhale in total following an inspiration to total lung capacity.

Haemoptysis
Blood or blood-staining in expectorated (coughed up) sputum.

Herd effect, herd immunity, community immunity
The effect whereby vaccination of a significant proportion of individuals in a population has a protective effect on even non-vaccinated individuals because they are less likely to come into contact with an infected person.

Histone
Proteins associated with DNA strands in the cell nucleus; they are involved in "packaging" the DNA.

Hypopnoea
Shallower breathing than normal.

Hypoxaemia
An insuffi cient level of oxygen in the blood.

Idiopathic
A disease such as an infection or injury caused by medical treatment.
Longitudinal study
A type of study that tracks the progress of individuals over time, for instance to look for predictive factors for a given disease (as opposed to Cross-sectional study)

Mainstream smoke
The smoke exhaled by a cigarette smoker

Methylation
A chemical modification of DNA bases (usually cytosine), associated with gene silencing

Morbidity
A diseased state

Mortality
See chapter 1

Myalgia
Muscle pain

Neoplasm
A new, abnormal growth of tissue usually forming a benign or malignant/cancerous tumour

Obstructive disease
A lung disease in which air flow is limited due to damage to the airways or excessive secretions; asthma and chronic obstructive pulmonary disease (COPD) are obstructive lung diseases

Oedema
An abnormal accumulation of fluid in tissue

Pack-year
A measure of how much someone has smoked during their lifetime; 1 pack-year is equivalent to an average of 1 pack of 20 cigarettes per day for 1 year, i.e. 7305 cigarettes; despite its name, the pack-year is independent of time; the 7305 cigarettes can be smoked across any period

Palliative care
Medical care aimed at alleviating symptoms but not curing disease; the term is often used in relation to end-of-life care

Particulate matter
A mixture of solid and liquid particles present as pollution in the atmosphere, resulting from processes such as combustion or friction; they are subclassified by size in μm, e.g. PM10, PM2.5

Pertussis
Also known as whooping cough; an infectious disease caused by the bacterium Bordetella pertussis; most common in children, it is now widely vaccinated against

Pharynx
The part of the respiratory and digestive tracts that connects the nose and mouth to the trachea (via the larynx) and oesophagus

Phenotypes
Observable characteristics (physical, biochemical, etc.) produced by the interaction of genetics and environment

Pneumothorax
Air in the pleural space between the lungs and the chest wall

Prevalence
See chapter 1

Proteases
Enzymes that catalyse the breakdown of proteins by hydrolysing the bonds between amino acids

QALY (quality-adjusted life-year)
A similar concept to DALY, but expressed in terms of quality of life gained following an intervention, rather than lost to disease or disability

Resection
Removal of all or part of an organ or tissue structure by surgery

Restrictive disease
A respiratory disease in which the lungs cannot be expanded normally, due either to disease of the lungs themselves (e.g. interstitial lung diseases) or of the chest wall (e.g. chest deformity or neuromuscular diseases)

Rhinovirus
Viruses that commonly cause upper respiratory tract infections, the common cold

Sensitisation
The development of hypersensitivity, provoked by exposure to an allergen

Sensitivity
Used to describe a diagnostic test; it refers to the proportion of cases (people with a disease) that will be detected by the test

Sidestream smoke
Smoke emitted from a smouldering cigarette between puffs

Single-nucleotide polymorphisms
The commonest type of genetic variation; a single-base difference in the DNA sequence

Specificity
Used to describe a diagnostic test; it refers to the proportion of people without the disease who will have a negative test

Spirometry
A method of testing lung function by using a spirometer to measure the flow rate and volume of air exhaled over time and using the information to calculate various indices such as FEV1 and FVC

Stridor
A monophonic, low-pitched sound accompanying breathing; if heard during inspiration, its presence suggests significant narrowing of the upper airway (larynx or extrathoracic trachea)

Surfactant
A mixture of protein and lipid that reduces the surface tension of fluids in the lung and thereby prevents the collapse of the airways

Thrombosis
Clotting of blood within a blood vessel, potentially causing infarction (tissue death)

Total lung capacity
The maximum volume of air that can be expired in a single breath after full inspiration (or inspired after full expiration), irrespective of the time taken

Vital capacity
The volume of gas in the lungs after a subject has inhaled as far as he or she is able

Volutrauma
Injury to the lung caused by excessive distension (see also Barotrauma)

Wheeze
A musical, polyphonic, high-pitched sound which indicates narrowing of the airways, heard most commonly during expiration, e.g. in individuals with asthma or COPD
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