

Glossary

This glossary covers some of the more common terms used in the *White Book*. Terms or diseases that are explained in the text are not included here - please consult the index.

Acute

Having a short, relatively severe course (as opposed to *Chronic*)

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

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 β_2 -agonist prescribed for asthma

Chronic

Having a long duration or frequent recurrence (as opposed to *Acute*)

Cohort study

A type of longitudinal study in which a population group sharing a common characteristic is followed over time to measure a particular outcome

Comorbidity

Conditions that exist alongside another condition, either independently or connectedly

Cross-sectional study

A type of study that looks at a population group at a single point in time, for instance to measure the prevalence of a disease (as opposed to *Longitudinal study*)

DALY (disability-adjusted life-year)

According to the World Health Organization, DALYs represent "the sum of the Years of Life Lost due to premature mortality in the population and the Years Lost due to Disability for incident cases of the health condition". DALYs are used to calculate the total disease burden on society and can be converted to an economic burden by using a standard multiplier

Dyspnoea

The subjective sensation of difficulty in breathing

Eosinophils, eosinophilia

A type of leukocyte ("white blood cell"), involved in allergy and some cases of asthma; eosinophilia is the presence of an abnormally large number of eosinophils in the blood or body tissues (e.g. in the lungs)

Epigenetics

A number of definitions of epigenetics exist, but broadly the term refers to heritable traits that are not encoded in the DNA base sequence

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 insufficient level of oxygen in the blood

Iatrogenic

Describes a disease such as an infection or injury caused by medical treatment

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

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, PM_{2.5}

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

Vital 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

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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Patient organisations

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