

## Asthma Terms and Definitions

**Acute:** Sudden

**Adverse:** Undesirable

**Allergen:** A substance (such as a food or pollen) that your body perceives as dangerous and that can cause an allergic reaction

**Allergy:** An exaggerated response to a substance or condition produced by the release of histamine or histamine-like substances in affected cells

**Alveoli:** Small, thin-walled sacs located at the end of the smallest airways in the lungs. The exchange of oxygen and carbon dioxide takes place in the alveoli.

**Antibiotic:** Medicine used to treat infection caused by bacteria. Antibiotics do not protect against viruses and do not prevent the common cold.

**Anticholinergics:** A medicine that opens the airways by relaxing the muscle bands that tighten around the airways. They may also help reduce the amount of mucus in the airways of the lungs. Anticholinergics do not provide immediate relief, but can be used to help quick relief medicines during an asthma episode. Examples are Ipratropium Bromide (Atrovent) and Tiotropium Bromide (Spiriva) or in combination drugs such as Combivent or DuoNeb.

**Antihistamine:** Medicine that stops the action of histamine, which causes symptoms of allergy such as sneezing, itching and swelling

**Anti-inflammatory:** Medicine that reduces inflammation (swelling in the airway and mucus production).

**Asthma:** A disease of the airways or branches of the lungs (bronchial tubes). Asthma causes the airways to narrow, the lining of the airways to swell, and the cells that line the airways to produce more mucus. These changes make breathing difficult and cause a feeling of not getting enough air into the lungs. Common symptoms include but are not limited to: cough, shortness of breath, wheezing, chest tightness, and excess mucus production.

**Bacteria:** Infectious organisms that might cause sinusitis, bronchitis, or pneumonia.

**Beta<sub>2</sub> agonists:** Also known as a- bronchodilator or quick-relief medication; a medication that opens the airways of the lung by relaxing the muscles around the airways that have tightened (bronchospasm). These medicines might be short-acting (quick relief) or long-acting (control) medicines. Short-acting beta<sub>2</sub> agonists are the medicines used to relieve asthma symptoms when they occur and are considered "rescue" medicines.

**Breath sounds:** Lung sounds heard through a stethoscope.

**Breathing rate:** The number of breaths per minute (bpm).

**Bronchial tubes:** Airways in the lung that branch from the trachea (windpipe).

**Bronchioles:** The smallest branches of the airways in the lungs; bronchioles connect to the alveoli (air sacs).

**Bronchodilator:** A medicine that opens the airways by relaxing the muscle bands that tighten around the airways. Bronchodilators also help clear mucus from the lungs.

**Bronchospasm:** The tightening of the muscle bands that surround the airways, causing the airways to narrow.

**Carbon dioxide:** A colorless, odorless gas that is formed in the tissues and is delivered to the lungs to be exhaled out of the body.

**Chronic disease:** A disease that can be controlled but not cured.

**Cilia:** Hair-like structures that line the airways in the lungs and help to clean out the airways.

**Clinical trials:** Research programs conducted with patients to evaluate a new medical treatment, drug, or device. The purpose of clinical trials is to find new and improved methods of treating different diseases and special conditions.

**Contraindication:** A reason not to use a course of treatment or a medicine

**Control medicine:** A medicine that must be taken every day to control asthma or other chronic lung disease symptoms; not used for quick relief; examples are inhaled steroids, and combination inhaled medications such as Advair and Symbicort

**Dander, animal:** Tiny scales shed from animal skin or hair. Dander floats in the air, settles on surfaces, and is a major part of household dust. Cat dander (and saliva) is a classic cause of allergic reactions.

**Diaphragm:** The major muscle of breathing, located at the base of the lungs

**Dry powder inhaler (DPI):** A device for inhaling breathing medicines that come in powder form; the device may be self-contained or may require "loading" a capsule or pill in the device to use and to take inhaled medication

**Dust mites:** Tiny insects, unable to be seen without a microscope, that are present in carpet, stuffed animals, upholstered furniture, and bedding including pillows, mattresses, quilts, and other bed covers. Dust mites are one of the most common allergens and, therefore, a common asthma trigger. They grow best in areas with high humidity.

**Dyspnea:** Shortness of breath

**Exacerbation:** Worsening

**Exercise-induced asthma (EIA):** Asthma that is made worse when exercising

**Exhalation:** Breathing air out of the lungs

**Gastroesophageal reflux (acid reflux):** A disease that causes heartburn when acid from the stomach flows up into the throat. Acid reflux can trigger asthma and make it harder to treat.

**High- efficiency particulate filter (HEPA):** A filter that removes particles in the air by forcing it through screens containing microscopic pores

**Histamine:** A naturally occurring substance in the body that causes allergic reactions (redness, itching, and swelling) of the nose and eyes. This reaction can also occur in the lung, causing the airways to narrow and swell.

**Holding chamber:** See "spacer."

**Humidification:** The act of moisturizing the air with molecules of water

**Hyperventilation:** Excessive rate and depth of breathing

**Immune system:** The body's defense system that protects against infections and foreign substances

**Indication:** Reason to use

**Inflammation:** A response in the body that includes swelling and redness

**Inhaler:** See "metered dose inhaler (MDI)" or "dry powder inhaler (DPI)."

**Inhalation:** Breathing air into the lungs

**Irritants:** Things that bother the nose, throat, or airways when they are inhaled; irritants do not include allergens

**Leukotriene modifier:** Medicine that blocks chemicals called leukotrienes in the airways. Leukotrienes occur naturally in the body, and cause tightening of airway muscles, and production of excess mucus and fluid.

**Medical history:** A list of a person's previous illnesses, present conditions, symptoms, medicines, and health risk factors

**Metered dose inhaler (MDI):** A small aerosol canister in a plastic container that releases a specific measured mist of medicine when pressed down from the top. This medicine can be breathed into the airway. Many asthma and other chronic lung disease medicines are taken using an MDI. MDI's contain a set amount of medication; typically 200 metered doses (read the packaging insert or consult your pharmacist, respiratory therapist or doctor for information). Some MDI's have a "counter" to record or countdown how many "puffs" or doses are left; if not record how many doses are taken in a daily journal. All MDI's require "priming" of the drug canister – read the packaging insert or consult your pharmacist, respiratory therapist or doctor for more information.

**Mold:** A fungus. Molds are plants that make spores instead of seeds; these spores float in the air and are a common trigger for allergies. Molds are found in damp areas, such as the basement or bathroom, as well as in the outdoor environment in the soil/dirt, grass, leaf piles, hay, and mulch.

**Monitoring:** Keeping track of

**Mucus:** A material produced by glands in the airways, nose, and sinuses

**Nasal spray:** Medicine used to prevent and treat nasal allergy symptoms. It is available by prescription or over-the-counter in decongestant, corticosteroid, or salt-water solution form.

**Nebulizer:** A machine that changes liquid medicine into fine droplets (in aerosol or mist form) that are inhaled through a mouthpiece or mask. Nebulizers can be used to deliver bronchodilator (airway-opening) medicines such as albuterol, as well as anti-inflammatory medicines/inhaled steroids (Pulmicort Respules®). A nebulizer might be used instead of a metered dose inhaler (MDI). It is powered by a compressed air machine and plugs into an electrical outlet.

**Non-steroidal:** Anti-inflammatory medicine that is not a steroid; such as cromolyn sodium (Intal)

**Oxygen:** The essential element in the respiration process to sustain life. This colorless, odorless gas makes up about 21 percent of the air.

**Oral medicines:** Medicines in pill or liquid form that are swallowed

**Peak expiratory flow rate (PEF):** A test used to measure how fast air can be exhaled from the lungs

**Peak flow meter:** A small hand-held device that measures how fast air comes out of the lungs when a person exhales forcefully — This measurement is called a peak expiratory flow (PEF), or simply peak flow (PF), and is measured in liters per minute (lpm). A person's PEF might drop hours or even days before asthma symptoms are noticeable. Readings from the meter can help the patient recognize early changes that might be signs of worsening asthma. A peak flow meter can also help the patient learn what triggers his or her symptoms and understand what symptoms indicate that emergency care is needed. Peak flow readings also help the doctor decide when to stop or add medicines.

**Personal best peak expiratory flow:** The highest peak flow number a person can achieve when symptoms are under good control. The personal best PEF is the number to which all other peak flow readings will be compared. In children, peak expiratory flow rates are based on how tall the child is. Therefore, the personal best peak expiratory flow will change as growth occurs. A child's personal best peak expiratory flow should be re-determined approximately every six months or when a growth spurt has occurred.

**Pneumonia:** An infection of the lung; may be located in only one area

**Pollen:** A fine, powdery substance released by plants and trees; an allergen

**Pollen and mold counts:** A measure of the amount of allergens in the air. The counts are usually reported for mold spores and three types of pollen: grasses, trees, and weeds. The count is reported as grains per cubic meter of air and is translated into a corresponding level: absent, low, medium, or high.

**Priming an inhaler/MDI:** preparing the device for use; For example: shake inhaler canister for several seconds, depress the canister 1-4 times (as instructed in the packaging insert) without inhaling the medication – this “priming” contains only the propellant and little medication.

**Productive cough:** A "wet" cough that might result in coughing up mucus

**Puffer:** Another term for inhaler or metered dose inhaler

**Pulmonary function tests (PFTs):** A test or series of tests that measure many aspects of lung function and capacity; also referred to as lung function tests.

**Pulse oximetry:** A device that clips on the finger, ear or forehead that measures the oxygen level in the blood with an infrared light

**Pursed Lip Breathing:** simplest way to control shortness of breath; It provides a quick and easy way to slow your pace of breathing, making each breath more effective; Use this technique during any activity, such as bending, lifting, stair climbing, and afterwards to slow and control your breathing; HOW TO PERFORM Pursed Lip Breathing: First, RELAX; then, breathe in **slowly** through your nose, keeping your mouth closed; Pucker or “purse” your lips (as if to whistle) and breathe out **slowly** and gently through your pursed lips.

**Quick-relief medicine:** A medicine taken by MDI or Nebulizer that opens the airways right away to relieve symptoms of asthma or shortness of breath. Quick relief medicines are usually used only when symptoms occur or prior to exercise for those individuals who have Exercise Induced Asthma. Examples are Albuterol and Levalbuterol (Xopenex)

**Sinuses:** Air pockets inside the head

**Spacer:** A chamber that is used with a metered dose inhaler to help the medicine get into the airways better. Spacers also make metered dose inhalers easier to use. Spacers are sometimes called "holding chambers."

**Spirometry:** A basic lung function test that measures how fast and how much air can be breathed out of the lungs

**Sputum:** Mucus or phlegm

**Steroid (also called corticosteroid):** Medicine that reduces swelling and inflammation; it comes in pill and inhaled forms

**Symptom:** A sign of disease

**Theophylline:** A long-term control medicine that opens the airways to relieve and prevent bronchospasms (pill or intravenous form only)

**Trachea:** The main airway (windpipe) supplying both lungs

**Triggers:** Things that cause asthma or breathing symptoms to start or become worse

**Vaccine:** A shot that protects the body from a specific disease or illness

**Wheezing:** The high-pitched whistling sound of air moving through narrowed or blocked airways

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