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Immune Health Glossary

Although there is extensive science associated with immune health, the terms are often technical and difficult to understand. To end the confusion, what follows are simple definitions adapted from the National Institute of Allergy and Infectious Diseases (NIAID) of the National Institutes of Health (NIH) for some of the more frequently used terms.

Active immunity: Immunity produced by the body in response to stimulation by a disease-causing organism or a vaccine.

Acute: Not lasting a very long time. A cold that lasts only two or three days is considered acute.

Allergen: Any substance that causes an allergy.

Allergy: An inappropriate and harmful response of the immune system to normally harmless substances.

Antibody: A germ fighter. The immune system makes these when it sees a germ get inside the body. After they are made, they go into the blood. Then they find the germs and help kill them.

Antigen: Any substance that, when introduced into the body, is recognized by the immune system.

Appendix: Lymphoid organ in the intestine.

Autoimmune disease: A disease that results when the immune system mistakenly attacks the body's own tissues. Rheumatoid arthritis and lupus are autoimmune diseases.

Bacteria: Bacteria are one kind of microscopic (too small to see) germ. Many types of bacteria can make people sick or cause infections.

B cells: Small white blood cells crucial to the immune defenses. Also known as B lymphocytes, they are derived from bone marrow and develop into plasma cells that are the source of antibodies.

Bone marrow: Soft tissue located in the cavities of the bones. The bone marrow is the source of all blood cells.

Cold Season: The time of year when people are most likely to get a cold or the flu. Cold season starts in late August or early September and lasts until March or April.

Common Cold: An acute viral infection of the upper respiratory tract that affects the nose, throat, sinuses, larynx, and sometimes the lungs.

Communicable: Something, like a germ or virus, that is spread from one carrier or infected person to another.

Complement: A complex series of blood proteins whose action "complements" the work of antibodies. Complement destroys bacteria, produces inflammation, and regulates immune reactions.

Complement cascade: A precise sequence of events usually triggered by an antigen-antibody complex, in which each component of the complement system is activated in turn.

Cytokines: Powerful chemical substances secreted by cells.

Cytotoxic T cells: A subset of T lymphocytes that can kill body cells infected by viruses or transformed by cancer.

Dendritic cells: White blood cells found in the spleen and other lymphoid organs.

DNA (deoxyribonucleic acid): Nucleic acid that is found in the cell nucleus and that is the carrier of genetic information.

Epidemic: An outbreak of infection that spreads rapidly and affects many individuals in a given area or population at the same time.

Enzyme: A protein produced by living cells that promote the chemical processes of life without itself being altered.

Flu: Another name for influenza infection, although it is often mistakenly used in reference to gastrointestinal and other types of clinical illness.

Gene: A unit of genetic material (DNA) that carries the directions a cell uses to perform a specific function, such as making a given protein.

Germ: An informal term for a disease-causing organism.

Immune: To be protected or safe from something. Most people who get chicken pox as children are immune to chicken pox for the rest of their lives. There are also vaccines that can make you immune to certain diseases, like polio.

Immune complex: A cluster of interlocking antigens and antibodies.

Immune response: The reactions of the immune system to foreign substances.

Immune System: A complex network of cells, tissues, and organs in the body that all work together to keep a person healthy by killing viruses, bacteria and other germs.

Immunosuppression: Reduction of the immune responses, for instance by giving drugs to prevent transplant rejection.

Infection: Invasion and multiplication of germs in the body. Infections can occur in any part of the body, and can spread throughout the body. The germs may be bacteria, viruses, yeast, or fungi. They can cause a fever and other problems, depending on where the infection occurs.

Inflammatory response: Redness, warmth, swelling, pain, and loss of function produced in response to infection, as the result of increased blood flow and an influx of immune cells and secretions.

Influenza: A highly contagious, acute respiratory infection of the nose, throat, bronchial tubes, and lungs caused by the influenza virus. It is responsible for severe and potentially fatal clinical illness of epidemic and pandemic proportions.

Interferon: A protein produced by the body's immune cells which triggers the immune system to attack invading pathogens. Interferon signals neighboring cells into action and also interferes with how foreign cells grow and multiply

Interleukins: A major group of cytokines.

Isolate: A pure specimen obtained by culture.

Leukocytes: All white blood cells.

Lymph: A transparent, slightly yellow fluid that carries lymphocytes, bathes the body tissues, and drains into the lymphatic vessels.

Lymphatic vessels: A body-wide network of channels, similar to the blood vessels, which transport lymph to the immune organs and into the bloodstream.

Lymph nodes: Small bean-shaped organs of the immune system, distributed widely throughout the body and linked by lymphatic vessels. Lymph nodes are garrisons of B, T, and other immune cells.

Lymphocytes: Small white blood cells produced in the lymphoid organs and paramount in the immune defenses.

Lymphoid organs: The organs of the immune system, where lymphocytes develop and congregate. They include the bone marrow, thymus, lymph nodes, spleen, and various other clusters of lymphoid tissue. The blood vessels and lymphatic vessels can also be considered lymphoid organs.

Macrophage: A large and versatile immune cell that acts as a microbe-devouring phagocyte, an antigen-presenting cell, and an important source of immune secretions.

Microbes: Minute living organisms, including bacteria, viruses, fungi and protozoa.

Microorganisms: Microscopic plants or animals.

Molecule: The smallest amount of a specific chemical substance that can exist alone.

Monokines: Powerful chemical substances secreted by monocytes and macrophages. These soluble molecules help direct and regulate the immune responses.

Mutation: A permanent, transmissible change in the genetic material of a cell.

Opportunistic infection: An infection in an immunosuppressed person caused by an organism that does not usually trouble people with healthy immune systems.

Organism: An individual living thing.

Parasite: A plant or animal that lives, grows and feeds on or within another living organism.

Plasma cells: Large antibody-producing cells that develop from B cells.

Platelets: Granule-containing cellular fragments critical for blood clotting and sealing off wounds. Platelets also contribute to the immune response.

Proteins: Organic compounds made up of amino acids. Proteins are one of the major constituents of plant and animal cells.

Resistance: The development of strains of a pathogen that are able to withstand the effects of an antimicrobial agent.

Serum: The clear liquid that separates from the blood when it is allowed to clot. This fluid retains any antibodies that were present in the whole blood.

Spleen: A lymphoid organ in the abdominal cavity that is an important center for immune system activities.

Stem cells: Cells from which all blood cells derive. The bone marrow is rich in stem cells.

Strain: A group of organisms within a species or type that share a common quality. For example, currently circulating strains of influenza.

Suppressor T cells: A subset of T cells that turn off antibody production and other immune responses.

T cells: Small white blood cells that orchestrate and/or directly participate in the immune defenses. Also known as T lymphocytes, they are processed in the thymus and secrete lymphokines.

Thymus: A primary lymphoid organ, high in the chest, where T lymphocytes proliferate and mature.

Tonsils and adenoids: Prominent oval masses of lymphoid tissues on either side of the throat.

Toxins: Agents produced by plants and bacteria, normally very damaging to mammalian cells, that can be delivered directly to target cells by linking them to monoclonal antibodies or lymphokines.

Type: A classification of viruses based on characteristic internal proteins.

Vaccine: A weak mixture of a virus (a kind of germ) that is either killed or weakened, so the body can easily defeat it. After the body defeats the virus, it can make antibodies that kill and easily recognize the virus, protecting against subsequent infection by that organism.

Virus: Submicroscopic microbe that causes infectious disease. Viruses can reproduce only in living cells.

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