



Factors Affecting White Blood Cells Count in Immune Disorders

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DESCRIPTION

White blood cells, also known as leukocytes, are a type of blood cell that play a crucial role in the body's immune system. They help to fight off infections, viruses, and other foreign invaders, as well as to remove damaged or abnormal cells from the body.

There are several different types of white blood cells, each with unique functions and characteristics. The five main types of white blood cells are neutrophils, lymphocytes, monocytes, eosinophils, and basophils.

Neutrophils are the most abundant type of white blood cell, making up about 60-70% of all white blood cells. They are responsible for fighting bacterial infections and other types of infections caused by foreign invaders. They do this by engulfing and destroying the invading cells using a process called phagocytosis.

Lymphocytes are another important type of white blood cell, making up about 20-30% of all white blood cells. They are responsible for the adaptive immune response, which means that they help to identify and remember specific invaders so that the body can respond more effectively if the same invader is encountered in the future.

Monocytes are a type of white blood cell that makes up about 2-8% of all white blood cells. They are responsible for engulfing and removing dead cells and debris from the body, as well as for producing cytokines, which are chemical messengers that help to regulate the immune response. Eosinophils are a type of white blood cell that makes up about 1-4% of all white blood cells. They play a role in the body's response to allergens and parasites, as well as in the repair of damaged tissues.

Basophils are a type of white blood cell that makes up less than 1% of all white blood cells. They play a role in the body's response to allergens, by releasing histamine and other chemicals that cause the symptoms of an allergic reaction. Each type of white blood cell is produced in the bone marrow, and then enters the bloodstream where they can travel to different parts of

the body. They are able to migrate through the walls of blood vessels and into surrounding tissues, where they can carry out their specific functions.

White blood cells are vital to maintaining the body's health and fighting off infections and other foreign invaders. However, too many or too few white blood cells can indicate a problem. High numbers of white blood cells can be a sign of an infection or cancer, while low numbers can indicate a bone marrow disorder or other medical condition.

Difficulties with white blood cells

Many factors can cause a low white blood cell count. This can happen when the body can't make new cells to replace those that are being destroyed or after the bone marrow is no longer able to produce enough white blood cells to keep healthy. Every illness or infection puts at a high risk of having a low white blood cell count, which could develop into a significant health danger.

To check the white blood cell count is normal, our healthcare professional can do a blood test. A white blood cell problem could exist if the count is abnormally low or high.

Illnesses and disorders influencing white blood cell counts

Immune system weakness: This is frequently a result of cancer treatment or diseases like Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome (HIV/AIDS). White blood cells can be destroyed by cancer therapies like chemotherapy and radiation, putting risk for infection.

Infection: Having an infection is typically indicated by a higher-than-normal white blood cell count. White blood cells are growing in number to eradicate the bacterium or virus.

Blood cancer: Cancers such as leukemia and lymphoma can spur unchecked production of an aberrant subset of blood cells in the bone marrow. As a result, the risk of infection or significant bleeding is considerably raised.

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In conclusion, white blood cells, also known as leukocytes, are an essential part of the body's immune system. They are responsible for fighting off infections, removing damaged or abnormal cells, and maintaining the body's health. The five

main types of white blood cells are neutrophils, lymphocytes, monocytes, eosinophils, and basophils, each with unique functions and characteristics. Abnormalities of white blood cell count can indicate a underlying medical condition.