



## The Fundamental Importance of Eosinophilia and its Characteristics

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### DESCRIPTION

Eosinophilia is a medical condition characterized by an abnormal increase in the number of eosinophils, a type of white blood cell, in the bloodstream. Eosinophils are a type of granulocyte, a class of white blood cells that play a role in the body's immune response to allergens, parasites, and certain infections. In normal conditions, eosinophils make up 1%-6% of the total white blood cell count, but in cases of eosinophilia, the number of eosinophils can be as high as 15%.

Eosinophilia can be classified as either primary or secondary. Primary eosinophilia is a rare disorder in which the body produces too many eosinophils without any underlying cause. Secondary eosinophilia, on the other hand, is caused by an underlying condition, such as an allergic reaction, a parasitic infection, or certain types of cancer.

Some of the common causes of secondary eosinophilia include allergies, such as hay fever and asthma, parasitic infections, such as roundworm and hookworm, certain types of skin conditions, such as eczema and hives, and certain types of cancer, such as Hodgkin's lymphoma and certain types of leukemia.

Symptoms of eosinophilia can vary depending on the underlying cause, but some common symptoms include:

- Itching and rashes
- Shortness of breath
- Fatigue
- Weight loss

The diagnosis of eosinophilia is made by measuring the number of eosinophils in the blood. A Complete Blood Count (CBC) test is usually performed to determine the number of white blood cells in the bloodstream, and if the number of eosinophils is higher than normal, a diagnosis of eosinophilia is made. Other tests that may be used to diagnose eosinophilia include:

- Blood cultures to check for bacterial or fungal infections

- Imaging tests such as x-rays or CT scans to look for signs of lung or sinus problems
- Skin tests to check for allergies

Treatment for eosinophilia depends on the underlying cause of the condition. In cases of secondary eosinophilia, treatment is aimed at addressing the underlying condition. For example, in cases of parasitic infections, treatment may involve taking antiparasitic medication, and in cases of allergies, treatment may involve taking antihistamines or corticosteroids.

In cases of primary eosinophilia, treatment is aimed at reducing the number of eosinophils in the bloodstream. This may involve taking medications such as interferon-alpha or imatinib, which can help to reduce the number of eosinophils in the bloodstream. In some cases, corticosteroids, such as prednisone, may also be used to reduce inflammation and decrease the number of eosinophils in the blood.

Eosinophilia can also be treated with immunomodulatory therapy which alters the way the immune system responds to allergens and parasites. It is also important for individuals with eosinophilia to be monitored closely by their healthcare provider to ensure that their condition does not progress to a more serious stage. Close monitoring of the patient's blood counts and clinical symptoms is crucial for the management of eosinophilia.

### Medical professionals deal with eosinophilia

The underlying ailment or problem that is causing high eosinophil counts is treated by healthcare professionals. For instance, doctor can recommend steroids or other drugs if we have eosinophilic esophagitis. If we have chronic sinusitis or allergies that are the cause of high eosinophil levels, doctor may advise allergy testing to identify the allergens that caused the allergic reaction that led to the elevated levels of eosinophils. Healthcare professional would typically advise stopping or avoiding a medicine if it is contributing to eosinophilia.

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