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White blood cells (WBCs) are defensive cells of the body and are also called as leukocytes. They are part of the immune system and are responsible for protecting the body against foreign invaders and infectious particles. WBCs are produced in the bone marrow from the multipotent cells called as hematopoietic cells. There are five different types of WBCs; neutrophils, lymphocytes, monocytes, eosinophils and basophils. The average amount of WBCs produced in the blood range from 4000 to 11,000 cells per microliter (Territo, 2018). The WBCs related disorders occur due to under or over production of cells or issues with the functions of the cells. Common disorders related to the excesses and deficiencies of WBCs are as follows;

* Leukocytosis: It occurs due to the increase in number of WBCs in the blood. The increase in the production of these cells can be due to response of the immune system to infections, drugs such as corticosteroids, leukemia and production of immature or abnormal WBCS. It can be divided into two different types;
  + Neutrophilic leukocytosis: increase in the amount of neutrophils in response to infections, injuries, inflammation, and bone marrow cancer. Myelogenous leukemia are a common cause of excess production of immature neutrophils.
  + Lymphocytic leukocytosis: increase in the amounts of B cells, T cells and natural killer cells in response to cancer and viral or bacterial infections, however, the most common cause is the viral infections such as mononucleosis (Territo, 2018).
* Neutropenia: it occurs due to the decrease in the number of neutrophils in the blood. It is mainly a side effect of chemo and radiotherapies. Chronic neutropenia may last for several month to years. It is further classified into different types such as;
  + Autoimmune neutropenia: it occurs in response to attack of antibodies on neutrophils.
  + Severe congenital neutropenia: it occurs due to a genetic mutation or recurrent bacterial infections.
  + Cyclic neutropenia: it also occurs due to a genetic mutation, however, neutropenia occurs in cycles of 21 days instead of on daily basis (Yates, 2019).

**References**

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