Platelets and Platelet Count Encyclopedia Article

Platelets and Platelet Count

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.



Contents

Platelets and Platelet Count Encyclopedia Article.....1

Contents.....2

Platelets and Platelet Count.....3

Platelets and Platelet Count

Platelets, also called thrombocytes, are small disk-shaped cytoplasmic fragments produced in the bone marrow and involved in the process of **blood** clotting. Platelets are not true cells because they do not contain nuclei. When a blood vessel is injured, platelets first adhere to the site of the injury. Then, during the activation phase of clotting, the platelets bind to each other. Platelets react with a protein in the blood called fibrinogen to form fibrin, a thread-like substance that helps create a web-like structure of blood cells and platelets at the injury site, ultimately forming a clot to stop the bleeding. There are normally between 150,000-450,000 platelets in each microliter of blood. Low platelet counts or abnormally shaped platelets are associated with bleeding disorders. High platelet counts sometimes indicate disorders of the bone marrow.

A platelet count is a diagnostic test that determines the number of platelets in the patient's blood. The primary functions of a platelet count are to assist in the diagnosis of bleeding disorders and to monitor patients who are being treated for any disease involving bone marrow failure. Patients who have **leukemia**, polycythemia vera, or aplastic anemia are given periodic platelet count tests to monitor their health.

An abnormally low platelet level (thrombocytopenia) is a condition that may result from increased destruction of platelets, decreased production, or increased usage of platelets. In idiopathic thrombocytopenic purpura (ITP), platelets are destroyed at abnormally high rates. Hypersplenism is characterized by the collection (sequestration) of platelets in the spleen. Disseminated intravascular coagulation (DIC) is a condition in which blood clots occur within blood vessels in a number of tissues. All of these diseases produce reduced platelet counts.

Abnormally high platelet levels (thrombocytosis) may indicate either a benign reaction to an **infection**, surgery, or certain medications; or a disease like polycythemia vera, in which the bone marrow produces too many platelets too quickly.