



Why Hemoglobin Levels of Men Are High? - Amazing Facts

Maithili A Athavale*

Assistant General Manager (R&D), Cancer Biology Lab, (A Unit of Godavari Biorefineries Ltd.), MIDC Mahape, Navi Mumbai, India

***Corresponding Author:** Maithili A Athavale, Assistant General Manager (R&D), Cancer Biology Lab, (A Unit of Godavari Biorefineries Ltd.), MIDC Mahape, Navi Mumbai, India.

Received: June 12, 2024

Published: July 01, 2024

© All rights are reserved by **Maithili A Athavale.**

There is around 5 liters of blood in human body. Every week around half a liter of new blood is produced and old and damaged Red Blood Cells (R.B.C's) are replaced. For the production of this, nutrients like amino acids and an iron rich protein called Hemoglobin is needed. Several endocrine glands like the Thyroid gland influence the production of R.B.C's. Other substances needed in small amounts to catalyze this reaction are the Vitamins like B12, Riboflavin and Folic acid. The process of R.B.C production is called Erythropoiesis. The rate of Erythropoiesis is controlled by a hormone called erythropoietin, which is largely produced in the Kidney.

So, why do men have higher hemoglobin levels than females?

Male sex hormone, testosterone directly stimulates erythropoietin and therefore Hemoglobin levels of males are higher than females.

And, why do the persons living in higher altitude have higher red cell count than those who live at sea level?

The rate of R.B.C production is sensitive to the oxygen tension of the arterial blood. When oxygen tension falls, more red cells are produced and the red cell count rises.

When a person who lived at higher altitude moves to the sea level, production of erythropoietin is suppressed, the rate of red cell production is declined and the red cell count falls until a normal sea level value is achieved.

What happens when there is a loss of blood?

Erythropoietin mechanism is activated due to loss of blood due to injury, blood donation etc. and the red cell production is enhanced and within a few weeks the number of red cells are restored to the normal value.

Human body manufactures around 17 million red blood cells per second. R.B.C's are The most busy cells carrying oxygen from lungs to other parts of the body and keeping us live and healthy.

Thank you R.B.C'S for this tough task.