

How to increase red blood cell count in humans and its functional lifetime

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ABSTRACT

A low red blood count, or anemia, can cause feelings of fatigue and weakness. When a person has a lower red blood count than is normal, their body has to work harder to get enough oxygen to the cells. A low red blood cell (RBC) count can cause a variety of symptoms and health complications. There are several diet and lifestyle changes people can make to help the body increase its RBC count. However, if symptoms continue, it is important to see a doctor. RBCs are the most common component of human blood. The

cells contain hemoglobin, which is a protein that carries oxygen around the body. Hemoglobin is also responsible for blood's red color. RBCs circulate the body for an average of 115 days. After this, they go to the liver, where they break down. The body recycles their nutrients back into the cells. The bone marrow continuously produces RBCs. If the body does not receive a regular supply of necessary nutrients, the RBCs may become malformed or die off at a faster rate than the body can replace them. A low RBC count usually occurs when a person does not eat enough essential nutrients. Eating more nutrient-dense foods can give the body the necessary tools to create functional RBCs.

Key Words: Blood cell, Anemia, Materials, Hemoglobin

INTRODUCTION

People can also take these essential vitamins and minerals as supplements, although it is best to get nutrients from healthful foods in the diet if possible. It is best to consume foods that provide the following nutrients: Vitamin B-12 is important for brain function. Trusted Source and creating new RBCs [1]. Low vitamin B-12 levels can prevent RBCs from fully maturing. A B-12 deficiency can trigger the development of abnormal RBCs called megaloblasts, which may lead to a condition doctors call megaloblastic anemia. Vitamin B-12 binds to protein in food and naturally occurs in red meat, fish, and shellfish. Dairy products, such as milk and cheese, also contain vitamin B-12. Manufacturers often fortify breakfast cereals, milk substitutes, and nutritional yeast with vitamin B-12. Eating these foods can supplement a person's daily intake, particularly if they do not eat meat or dairy [2].

In common, the typical run for a ruddy blood cell number is 4.5 to 5.5 million cells/mm³ on the off chance that you're male and 4 to 5 million cells/mm³ on the off chance that you're female. For white blood cell tally, the typical extend is 5,000 to 10,000 cells/mm³, and for platelets, the ordinary run is 140,000 to 400,000/mm³. A white blood cell check of less than 4,000 cells per microliter of blood is considered low. The foremost genuine complications of low blood cell checks incorporate: Disease. With a low white blood cell tally and, in specific, a low level of neutrophils, you're at higher hazard of creating an contamination. And on the off chance that you develop a disease once you have a low white blood cell count, your body can't ensure itself. What may be a great ruddy blood cell count? An ordinary RBC tally would be: men – 4.7 to 6.1 million cells per microlitre (cells/mcL) ladies – 4.2 to 5.4 million cells/mcL.

The color of red blood cells is due to the heme group of hemoglobin. The blood plasma alone is straw-colored, but the red blood cells change color depending on the state of the hemoglobin: when combined with oxygen the resulting oxyhemoglobin is scarlet, and when oxygen has been released

the resulting deoxyhemoglobin is of a dark red burgundy color. However, blood can appear bluish when seen through the vessel wall and skin [3]. Pulse oximetry takes advantage of the hemoglobin color change to directly measure the arterial blood oxygen saturation using colorimetric techniques. Hemoglobin also has a very high affinity for carbon monoxide, forming carboxyhemoglobin which is a very bright red in color. Flushed, confused patients with a saturation reading of 100% on pulse oximetry are sometimes found to be suffering from carbon monoxide poisoning.

Red blood cells in mammals are unique amongst vertebrates as they do not have nuclei when mature. They do have nuclei during early phases of erythropoiesis, but extrude them during development as they mature; this provides more space for hemoglobin. The red blood cells without nuclei, called reticulocytes, subsequently lose all other cellular organelles such as their mitochondria, Golgi apparatus and endoplasmic reticulum [4]. The spleen acts as a reservoir of red blood cells, but this effect is somewhat limited in humans. In some other mammals such as dogs and horses, the spleen sequesters large numbers of red blood cells, which are dumped into the blood during times of exertion stress, yielding a higher oxygen transport capacity.

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