

Anemia

Back in the 1950's, numerous television commercials were aimed at improving the dreary and exhausting life of the American housewife by eliminating anemia. The commercial made the assumption that most women had iron deficiency anemia. The before and after shots always portrayed a woman who was so exhausted that she could hardly move and then showed her later dancing with her husband, cooking dinner, playing with the children, and all the while being ever so perky. This amazing recovery was after only a couple of doses of the advertiser's elixir. There is much more to anemia than those old commercials led us to believe, though many Americans continue to perceive it in this limited fashion even though there are a variety of causes and many different types of anemia.

The average adult body contains about 4 grams of iron, approximately two-thirds of which exists in the form of hemoglobin, a protein in the blood that carries oxygen. Another 13 percent exists as a type pigment in our muscles that carries oxygen, called myoglobin. Using iron is one of the many fascinating processes that our bodies have developed. Inorganic iron is actually quite toxic and in order for our bodies to use it they must run it through a complicated system of absorption, transport, storage, assimilation, and elimination.⁽¹⁾

Anemia can be defined as a reduction in red cell mass; or rather, a decline in the number of red blood cells necessary for our blood to be able to carry oxygen to our tissues.⁽²⁾ A diagnosis of anemia means that for some reason, there are not enough red blood cells being manufactured (iron deficiency anemia), there is a loss of red blood cells (anemia associated with acute bleeding), or that there is the presence of some illness in the body (anemia of chronic disease).

Iron deficiency anemia, anemia of chronic disease, and anemias associated with acute bleeding account for roughly 75 percent of all anemias.⁽³⁾ Iron deficiency anemia occurs in approximately 25 percent of those diagnosed with anemia. Common causes include poor diet, poor absorption of iron from the intestines, increased iron demands (as in pregnancy, adolescence, infancy, old age, or during exercise), blood loss, and certain diseases. Dietary deficiencies most frequently result from decreased consumption of animal protein and ascorbic acid,⁽⁴⁾ as a consequence of chronic alcoholism, food faddism, prolonged illness with anorexia, or poor nutrition.

A healthcare practitioner will want to know what type or class of anemia they are working with in a particular patient and there are several different ways that anemia is classified which relates back to the different types of anemias mentioned above. One method is to classify on the basis of the "morphology" (form) of the red blood cells. In studying the morphology of the red blood cell, one would actually be looking at the appearance of that cell in regard to its size and how much hemoglobin (an oxygen carrying protein pigment) it contains. Another way to classify anemia is through studying its etiology, or cause. The third classification refers to what is known as the pathophysiology, or how it actually functions.

Within these various classifications are many types of anemia. Each type has its own name and its own cause. A healthcare professional will label the diagnosis with one of these names after examining the symptoms, performing various lab tests, and determining the cause.

About the Author

Footnotes ^{^1} Sproat TT. Anemias. In: DiPiro JT et al. eds. Pharmacotherapy, A Pathophysiologic Approach 4th ed. Stamford, CT. 1999;1531-1548. ^{^2} Keitt AS. Introduction to the anemias. In: Wyngaarden JB, Smith LH, eds. Cecil's Textbook of Medicine. 17th ed. Philadelphia. WB Saunders. 1985;870-76. ^{^3} Bergin JJ. Evaluation of anemia. Postgrad Med J. 1985;77:253-269. ^{^4} English EC, Finch CA. Iron Deficiency: A systematic approach. Drug Therapy. Apr 1984;19-20,25-27. Powered by NHIONdemand Copyright © 2000-2008 NHIONdemand All rights reserved. www.nhiondemand.com This information is educational in context and is not to be used to diagnose, treat or cure any disease. Please consult your licensed health care practitioner before using this or any medical information.

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