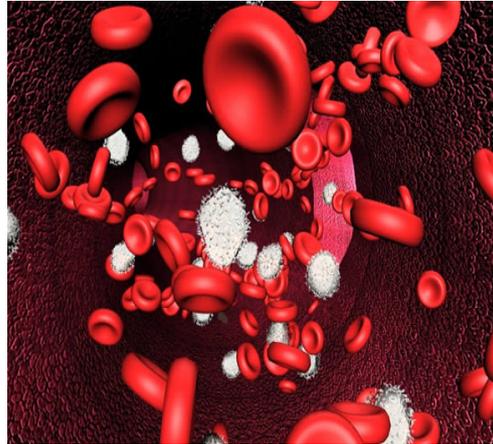


## Anemia

### *What is anemia?*

Anemia develops when there are not enough healthy red blood cells in the body. This condition can be detected when there is a below-normal level of hemoglobin in the blood. Hemoglobin is the iron-rich protein in red blood cells that carries oxygen from the lungs to all parts of the body. If you have anemia, your body doesn't get enough oxygen-rich blood. As a result, you may feel tired or have other symptoms depending on the severity of anemia. People with severe anemia may feel tired, fatigued or experience shortness of breath which can cause problems carrying out routine activities. Anemia can be a temporary condition, a consequence of other health conditions, or it can be a chronic problem. Many mild types of anemia can be easily treated, however, certain types of anemia may be severe, long lasting, and life threatening if not diagnosed and treated.



### *Causes of Anemia*

anemia that is caused by iron deficiency, vitamin B12 deficiency, aging, surgery or by acquired chronic conditions like cancer, diabetes, inflammatory bowel disease, kidney disease, heart disease, hepatitis C, HIV/AIDS, and rheumatoid arthritis. These types of anemia are known as iron deficiency anemia, vitamin deficiency anemia and anemia of chronic disease.

### *Are some types of anemia inherited?*

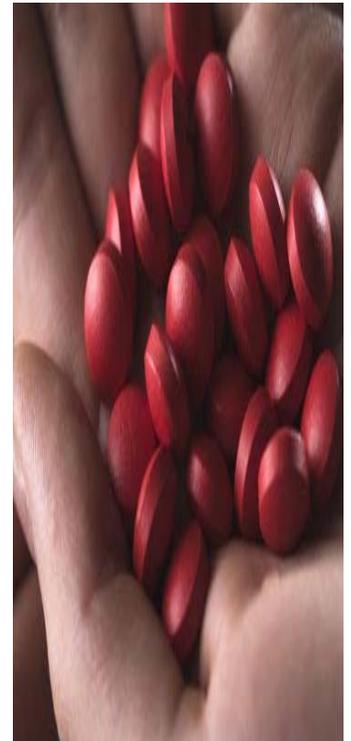
*Certain hereditary variations in a person's genes can lead to incorrect or decreased production of red blood cells.*

### Inside this issue:

- Anemia .
- Elevated Insulin Levels Linked to Breast Cancer

### Special points of interest:

- \* What is anemia.
- \* Causes of anemia.
- \* Types of anemia .
- \* Treatment of anemia.



## Sickle Cell Anemia

Some hereditary types of anemia include *sickle cell anemia*, *thalassemia*, *red cell membrane disorders*, *G6PD deficiency*, and *congenital B12 malabsorption syndromes*.

***Acquired anemia due to chronic use of some drugs***

- NSAIDS
- Corticosteroids
- Aspirin

***What are the symptoms of anemia?***

Anemia can make you feel tired, fatigued, weak, dizzy, irritable, short of breath or depressed. With anemia, you may also have pale skin, brittle nails, chest pain, a coldness in your hands or feet, or an irregular heartbeat. Some people with anemia also have a desire to eat ice or other peculiar things, experience sexual dysfunction, or have trouble concentrating or performing mental tasks.



***Will I always notice symptoms if I have anemia?***

Patients with mild anemia may not experience any symptoms, or the symptoms may be so mild that they are not noticeable. As anemia becomes more severe, symptoms can get worse. For many people, anemia symptoms can also develop slowly because the body adapts to the condition and reduces the effect of the symptoms. As anemia reduces the amount of oxygen blood can transport, the heart pumps harder to distribute enough oxygen throughout the body. Although this increase in pumping by the heart may delay the onset of symptoms, the muscle of the heart wall thickens resulting in left ventricular hypertrophy.



***Which people are at the highest risk for anemia?***

Infants who do not receive an adequate amount of iron in their diet, Women in childbearing years who have an excessive need for iron because of blood loss during menstruation, Pregnant women, in whom the growing fetus creates a high demand for iron, People with renal failure, an ongoing gastrointestinal blood loss, individuals with leukemia or cancer who must receive chemotherapy or radiation to treat their disease as The drugs or radiation used to treat some of these diseases frequently suppress the bone marrow's ability to make red blood cells, white blood cells, and platelets, individuals with chronic inflammatory conditions, such as rheumatoid arthritis or chronic infections, anemia seen in the elderly may be a form of bone marrow suppression from chronic inflammation.

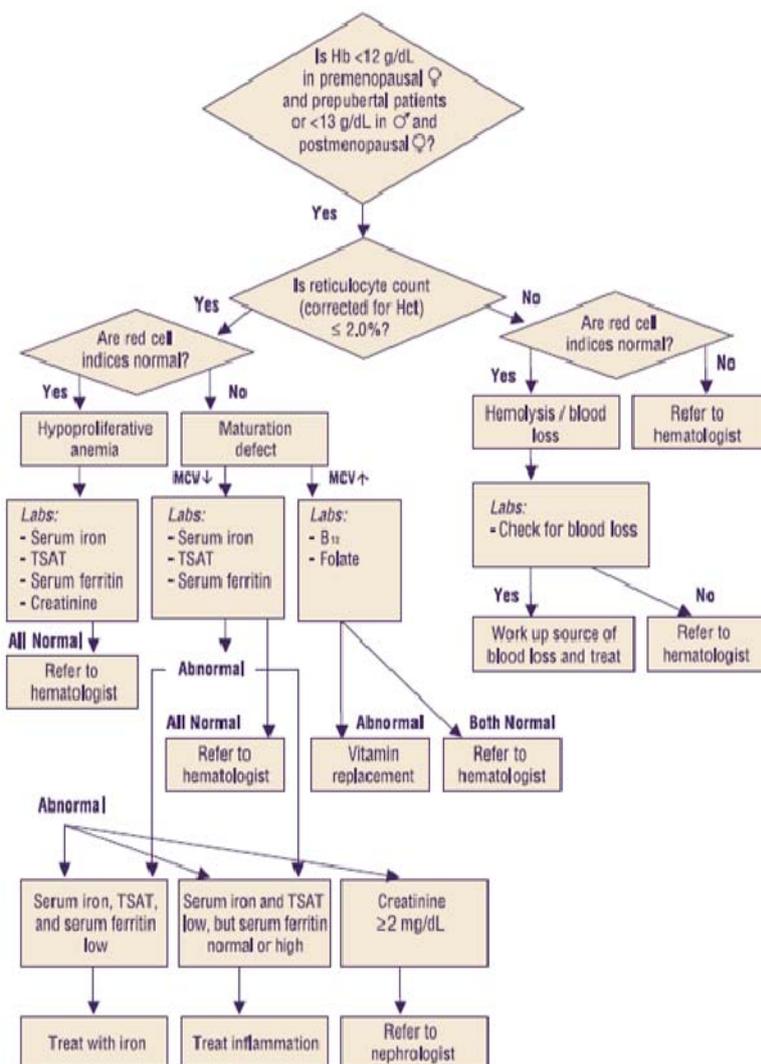
***At what point are people considered anemic?***

doctor can determine if you are anemic by performing a routine blood test called a complete blood count (CBC) test, which provides levels for both hemoglobin and hematocrit (the percentage of red blood cells in a blood sample).

**Anemic Ranges of Hemoglobin and Hematocrit Values**

Age/Sex (yrs)	Hemoglobin (g/dL)	Hematocrit (%)
Children (0.5-4)	< 11.0	< 33
Children (5-12)	< 11.5	< 35
Children (12-15)	< 12.0	< 36
Adult Men	< 13.0	< 39
Non-pregnant Women	< 12.0	< 36
Pregnant Women	< 11.0	< 33

**Treating Anemia**



**Severity of Anemia**

Severity	Hb Range (g/dL)	Symptoms	Medical Attention
Mild	9.5-13.0	Often no signs or symptoms	Commonly remains untreated
Moderate	8.0-9.5	May present with symptoms	Requires management to prevent complications from developing
Severe	< 8.0	Symptoms usually present	May be life threatening and requires prompt management

**What causes anemia in people with diabetes?**

diabetes can affect your kidneys (diabetic nephropathy) and your nerves (diabetic neuropathy). When diabetes affects your kidneys, they may not be able to produce enough erythropoietin, a hormone that controls production of red blood cells. When diabetes affects your nerves, your body may not be able to properly signal the kidneys to produce more erythropoietin in response to anemia.

Many people who take iron supplements experience side effects such as upset stomach, constipation. Iron supplements are absorbed better if taken one hour before meals. However your doctor may tell you to take your iron with food to reduce an upset stomach. Also, starting with half the recommended dose and gradually increasing to the full dose may help minimize these side effects. If iron makes you constipated, consider taking a stool softener such as docusate sodium along with your iron.

*Compounded by Noha Gamal*

**References**

1. [www.anemia.org](http://www.anemia.org) [NAAC - National Anemia Action Council].

## **Elevated Insulin Levels Linked to Breast Cancer**

Postmenopausal women with elevated insulin levels may be at higher risk of developing breast cancer, a new study says, Researchers at Albert Einstein College of Medicine of Yeshiva University in New York City found a strong association between elevated insulin levels in the blood and increased risk of breast cancer. Their findings were published online in the International Journal of Cancer. Up to now, only a few studies have directly investigated whether insulin levels are associated with breast cancer risk," said Geoffrey Kabat, the lead author and senior epidemiologist in the department of epidemiology and population health at Einstein. study involved analyzing repeated measurements of insulin taken over several years which provides a more accurate picture of the possible association between insulin levels and breast cancer risk."Kabat's team examined data on 5,450 women who took part in ,a large study that looked at how various factors influence women's health. The researchers found that women with insulin levels in the highest third were twice as likely to develop breast cancer as women in the bottom third. The team also discovered that the link between elevated insulin levels and breast cancer was stronger for thin women than for obese women, who tend to have higher insulin levels.

**SOURCE** Albert Einstein College of Medicine of Yeshiva University, news release,

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**Address :** M.U.S.T, 6 October City -  
Almutamayez district.

**Fax / Phone:** 02/38377643

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