



Anemia

Fact:

Several widely different conditions cause anemia.

Fiction:

While spinach provides iron, it's a myth that it's the richest source for Popeye or anyone else.

Prevention:

Some forms of anemia can be prevented.

Treatment:

Treatment ranges from supplements to transfusions.

With anemia, low levels of red blood cells mean that other cells don't get enough oxygen.

Understanding Anemia

Normally, bone marrow produces stem cells that the body uses to create the three types of blood cells. The three are: healthy, disk-shaped red blood cells, which have hemoglobin and carry oxygen in the blood; white blood cells, which fight infection; and platelets, which prevent bleeding. In the blood, red blood cells link with and escort oxygen throughout the body's tissues and organs. The red blood cells circulate for 110 to 120 days, and then are removed by the spleen and liver. Anemia creates an abnormally low level of red blood cells, so the supply of oxygen that gets delivered is inadequate.

With hemolytic anemia (hemo = blood and lytic = destroying) the red blood cells are destroyed prematurely. The red blood cells may be defective and removed by the spleen and liver. In an inherited autoimmune form of this disorder, the body destroys red blood cells by itself. The cells may be destroyed for external reasons, such as the extreme heat from serious burns, or may be injured by dialysis or a defective artificial heart valve. When this condition is present, tests show low levels of red blood cells.

Pernicious anemia is a vitamin B12 deficiency. The bone marrow needs B12, provided by meat, dairy and yeast, to produce healthy red blood cells. Just as red blood cells escort oxygen, a protein secreted by the stomach lining called Intrinsic Factor (IF) escorts vitamin B12 to the intestine for absorption. Lack of vitamin B12 in the diet, problems with creating IF, or surgery such as stomach stapling, can all create pernicious anemia. Tests show red blood cells that are unusually large and look abnormal. Untreated, this condition can lead to permanent nerve cell damage.

With sickle cell anemia, an inherited disorder, the marrow creates abnormal, sickle-shaped red blood cells that clog blood vessels and cut off oxygen to the body. The abnormal cells last less than a tenth as long as normal cells, creating severe anemia. By ages two to four, sickle cell anemia usually destroys the spleen, making it harder for the body to fight infections.

In aplastic anemia, the bone marrow fails to produce enough stem cells so the body lacks enough of all three types of blood cells. Environmental toxins, medical treatment or viral infections can trigger the problem, or the cause may be unclear. Tests show low levels of blood cells that are relatively normal in appearance.

Who Has Anemia?

Anemia is relatively common in the U.S. Two million people carry the sickle cell trait, which can pass on sickle cell anemia, and 72,000 people have full-blown sickle cell anemia.* Between two and six people per million have aplastic anemia.

Symptoms of Anemia

Anemia causes wide-ranging symptoms.*

In addition to changes in the number and quality of blood cells, anemia causes exhaustion, pale skin, weakness, dizziness, rapid pulse, heart murmur and breathlessness. It may cause jaundice (yellowing of skin and eyes), dark, tea-colored urine and an enlarged spleen or liver.

Pernicious anemia can cause a sore tongue, nausea, weight loss and diarrhea, and can lead to nerve cell damage.

With sickle cell anemia, the oxygen deprivation causes severe pain in affected areas. About half these crises also cause fever, swelling, stomach upset, high blood pressure and fast heart rate. Other symptoms include frequent infections, eye problems that can lead to blindness, and strokes. In children, the disease slows growth and delays puberty.

In addition to the anemic symptoms from low red blood cell count, in aplastic anemia the reduced number of white blood cells increases the risk of all kinds of infection. Since platelets induce clotting, the low platelet count can cause bruising and tiny areas of bleeding in the skin and in the gums, nose, vagina or gastrointestinal tract.

Prevention

Anemia prevention includes a range of recommendations:

- Avoid environmental toxins
- Practice safe sex
- Avoid intravenous drugs
- Practice good hand hygiene, especially hand washing
- Avoid contaminated meat, milk and shellfish

Although genetic forms of anemia can't be avoided, those with anemia in the family may wish to consult a genetic counselor and obtain testing before having biological children.

Treatment

A visual exam and blood tests may suggest the required treatment. A doctor may also order a bone marrow biopsy, where a small sample of bone marrow is removed by inserting a needle into the pelvic bone. A hematologist (doctor who specializes in blood disorders) may be consulted.

Patients with anemia should receive regular vaccinations, regular physicals and eye exams, and take recommended vitamin and mineral supplements including iron. Folic acid may prove helpful and transfusions may be needed.

Anemia resulting from pregnancy, poor nutrition or short-term drug therapy may resolve itself without treatment.

Pernicious anemia generally requires B12 shots every one to three months for life. Sickle cell patients in a crisis may benefit from treatment with fluids, oxygen and nonprescription pain relievers.

Aplastic anemia may require immunosuppressive treatments, surgery to remove the spleen or a heart valve replacement.

In the most serious cases, a bone marrow transplant may be done. Generally, this works best for the young if a sibling with a good match is available.

* IntelliHealth

© OnlineBenefits, Inc.

The information presented in these articles is provided for educational purposes only. It is not intended as a substitute for medical advice or treatment. Always seek the advice of your doctor or other medical professional if you have questions about any medical condition, diagnosis or treatment. OnlineBenefits, Inc. will not be liable for any damages arising from the use of this information, and makes no warranties or representations of any kind with respect to the information contained herein.