

Anemia

Anemia is a blood cell condition in which there is a drop in the percentage of oxygen-rich red blood cells. A low level of hemoglobin, the iron-rich protein that carries the oxygen in red blood cells, is an indicator of the condition. Anemia can be chronic or it can be a temporary condition caused by other health issues, including bleeding, cancer or treatments for cancer, kidney disease, infections, autoimmune diseases, and vitamin or mineral deficiency. Anemia frequently remains undiagnosed because it is an underlying condition of other health issues. The most common type of anemia results from iron deficiency from blood loss. There are other, less common types of anemia. For example, aplastic anemia is a bone marrow condition in which the body does not produce enough red and white blood cells and platelets. Sickle cell anemia and thalassemia are inherited blood disorders affecting red blood cells.

At-risk groups include people with the following conditions or patient groups:

- Heart disease or rheumatoid arthritis
- Cancer
- Chronic kidney disease
- Inflammatory bowel disease
- Intestinal disorders
- A low-iron diet
- Older and elderly adults
- Autoimmune disease
- Liver or thyroid disease
- Chronic health conditions
- Infections
- Pre-menopausal women
- Women with heavy menses
- Pregnant women
- Infants and young children with inadequate amounts of iron

Statistics

- Up to nine in 10 chemotherapy patients will have anemia during treatment.
- Sixteen percent of pregnant women in the United States are anemic.
- About 5,382 deaths in the U.S. occurred due to anemia in 2017 (latest available data).
- Approximately 526,000 emergency department visits in the U.S. were due to anemia in 2017 (latest data available).
- About 9 percent of U.S. children under 5 years old have anemia.
- Between 600 and 900 U.S. adults are diagnosed with aplastic anemia each year.

Risk Factors

- Menstruation in women
- Loss of blood from disease, injuries, or surgery
- Infections
- Family history, including sickle cell anemia and thalassemia
- Low iron and folic acid during pregnancy
- Low production or destruction of red blood cells
- Deficiency of certain vitamins and minerals in diet
- Serious illnesses, including cancer, heart failure, lung disease, inflammatory bowel disease, kidney disease, liver disease, rheumatoid arthritis, thyroid disease, and autoimmune disease
- Low amounts of iron caused by an iron-deficient diet
- Treatment for cancer, including radiation and chemotherapy
- Von Willebrand disease
- Carriers of hemophilia gene

Symptoms

- Fatigue is the main symptom of most types of anemia
- Swelling of hands or feet
- Weakness or dizziness
- Rapid or irregular heartbeat
- Chest pain
- Shortness of breath
- Headache
- Cold hands and feet
- Paleness of the skin, nails, mouth, and gums
- Pounding sensation in ears

Treatments

Anemia treatment can reduce blood loss or increase the survival or production of red blood cells, and increase the amount of oxygen in the blood. The exact treatment depends on the severity, cause, and type of the disorder, but can include:

- Dietary and nutritional changes or supplements, including intake of B12, folic acid, iron, and vitamin C. Iron can be replenished through foods including fish, meat, poultry, beans, green-leafy vegetables, sweet potatoes, dried fruits, and enriched bread, cereal, and pasta. B12 can be replenished through foods like eggs, fish, meat, poultry, and dairy products.
- Medication, such as vitamin B12 injections, folic acid pills, intravenous iron or oral iron pills, antibiotics, or hormones.
- Procedures such as blood transfusions, or surgery.

Sources: American Cancer Society, American Society of Hematology, Aplastic Anemia and MDS International Foundation, Centers for Disease Control and Prevention, National Center for Biotechnology Information, National Heart, Lung and Blood Institute, National Institutes of Health, Sickle Cell Disease Association, The World Bank