TEXAS ONCOLOGY
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Anemia

Anemia is a blood condition in which there is a decrease in the percentage of oxygen-transporting red blood cells in the bloodstream. 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. 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.

Statistics

- At initial cancer diagnosis, 22.7% to 63% of patients have anemia. This rises to 89% for those receiving chemotherapy during treatment.
- **12%** of pregnant women in the United States were anemic in 2019 (latest available data).
- About **6,021 deaths** in the U.S. occurred attributed to anemia in 2022 (latest available data).
- Approximately **800,000 emergency department visits** in the U.S. were due to anemia in 2022 (latest data available).
- About **6%** of U.S. children under five years old had anemia in 2019 (latest available data).
- 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 such as B12, folic acid and iron
- Serious illnesses including cancer, heart failure, lung disease, inflammatory bowel disease, kidney disease, liver disease, rheumatoid arthritis, thyroid disease, and other autoimmune diseases
- Bone marrow disorders, which become more common with age
- Treatment for cancer, including radiation and chemotherapy
- Chronic bleeding disorders, such as von Willebrand disease or hemophilia
- History of bariatric surgery, with malabsorption of certain nutrients

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
- Trouble breathing with exertion
- Pounding or whooshing sound in ears
- Headache
- Cold hands or feet
- Paleness of the skin, nails, mouth, and gums
- Pounding sensation in ears
- Chewing or craving ice (pica)
- Lightheadedness when standing up

Treatments

Treatments for anemia can be directed at reducing blood loss, increasing the survival of red blood cells in the body, or replenishing missing nutrients or hormones to improve production of red blood cells in the bone marrow. It is important to consult with a physician to determine the cause of the anemia and appropriate treatment before starting a medication or supplement. For example, taking iron if one is not iron deficient can cause iron overload in the body. The exact treatment depends on the cause and severity of the anemia, but can include:

- Dietary and nutritional changes or supplements, including B12, folic acid, and iron. Iron can be replenished through foods including fish, meat, poultry, beans, leafy green vegetables, tofu, dried fruits, enriched bread, cereal, and pasta. B12 can be replenished through foods like eggs, fish, meat, poultry, and dairy products. Folic acid is found or enriched in many common foods and is also available as a supplement.
- Medication, such as vitamin B12 injections, intravenous iron, steroid medications, or recombinant erythropoietin.
- Procedures such as blood transfusions.
- Treatment for the underlying condition, such as bone marrow disorders.

About Texas Oncology

With more than 530 physicians and 280 locations, Texas Oncology is an independent private practice, a member of The US Oncology Network, that sees more than 71,000 new cancer patients each year. Founded in 1986, Texas Oncology provides comprehensive, multi-disciplinary care, and includes Texas Center for Proton Therapy, Texas Breast Specialists, Texas Colon & Rectal Specialists, Texas Oncology Surgical Specialists, Texas Urology Specialists and Texas Infusion and Imaging Center. Texas Oncology's robust community-based clinical trials and research program has contributed to the development of more than 100 FDA-approved cancer therapies. Learn more at TexasOncology.com.

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 Institute of Health, Sickle Cell Disease Association of America, and The World Bank

Updated: 8/19/2024