

# Anemia

## What is anemia?

Anemia is a blood problem. It can be either:

- Not having enough red blood cells (RBCs), or
- Not having enough hemoglobin

Hemoglobin is the part of red blood cells that carries oxygen. If you have too little hemoglobin or your hemoglobin is not working properly, you cannot get enough oxygen to your cells. This also happens when you just don't have enough red blood cells.

Some different kinds of anemia are:

- Iron deficiency anemia
- Hemolytic anemia
- Vitamin B12 deficiency anemia
- Folic acid deficiency anemia
- Anemia caused by inherited blood diseases, like sickle cell anemia
- Anemia caused by chronic (ongoing) disease

## What is the cause?

There are different causes for the different types of anemia.

### Iron deficiency anemia

This is the most common form of anemia. It happens when there is not enough iron in the blood. Your blood cells need iron to make hemoglobin. Iron deficiency anemia may happen when there is not enough iron in your diet. It may also happen if you lose a lot of blood. For example, women lose blood during their menstrual periods. Another cause of blood loss may be internal bleeding in the stomach or in the intestine. Pregnant women may have anemia because the baby uses iron to make red blood cells and to grow.

### Hemolytic anemia

This kind of anemia happens when red blood cells are destroyed or damaged by infection, drugs, or inherited conditions.

### Vitamin B12 deficiency anemia

This type of anemia happens when the bowels have trouble absorbing vitamin B12. For example, an immune system disorder called pernicious anemia makes it hard for your intestines to absorb B12. Stomach or intestinal illness, some medicines, and some inherited problems are other possible causes. Some vegetarians may not get enough B12 from the foods they eat.

Besides causing anemia, a lack of B12 affects the nervous system. It may cause numbness, tingling, balance problems, depression, or memory problems.

## **Folic acid deficiency anemia**

This anemia is similar to vitamin B12 anemia. It can happen when there is not enough folic acid in your diet. It can cause depression. Not enough folic acid during early pregnancy can cause birth defects, such as spina bifida. This type of anemia is common in:

- Pregnant women
- People who have problems absorbing nutrients from food
- People who use certain medicines every day
- Alcoholics

## **Anemia caused by inherited problems with red blood cells**

Two common types of inherited problems cause abnormal red blood cells.

- **Sickle cell anemia** is caused by abnormal hemoglobin. It causes abnormal, sickle-shaped red blood cells. Sickle cell disease is most common among people who are African, African American, Mediterranean (Italian or Greek), Middle Eastern, East Indian, Caribbean, and Central or South American. The abnormal blood cells are damaged or destroyed as they flow through the bloodstream. The anemia causes many symptoms. It can cause a condition called sickle cell crisis. A crisis may happen under certain conditions such as altitude or pressure changes, low oxygen, or some illnesses. In sickle cell crisis the red blood cells get even more deformed. The deformed cells block tiny blood vessels. This causes severe pain and other problems.
- **Thalassemia** is also caused by abnormal hemoglobin. Thalassemia most often affects people of Mediterranean descent. Some types also affect peoples of Africa, Asia, India, and the South Pacific. Most forms of thalassemia are mild, but some are life threatening for children.

## **Anemia caused by disease**

Some of the ongoing (chronic) diseases that may cause anemia are:

- Cancer
- Immune system diseases, such as rheumatoid arthritis and lupus
- Infection
- Kidney disease

## **What are the symptoms?**

Mild anemia usually does not cause symptoms.

Symptoms of more severe anemia may include:

- Weakness
- Tiredness
- Pale skin, gums, and nail beds

Symptoms of worsening anemia include:

- Lightheadedness, especially when you change positions--for example, when you stand up

- Fast heartbeat
- Shortness of breath
- Fainting
- Chest pain

Jaundice (yellow skin and eyes) may be a symptom of hemolytic anemia.

## How is it diagnosed?

Your healthcare provider will review your symptoms and examine you. You will have a complete blood count. This includes measuring how many red blood cells and how much hemoglobin you have. This blood test can show how severe the anemia is. You may need other tests to see what type of anemia you have.

## How is it treated?

Treatment depends on the type of anemia

- To treat **iron deficiency anemia**, your healthcare provider may simply prescribe iron supplements or a diet of foods rich in iron. Depending on your age and health, your provider may need to look for causes of blood loss, such as an ulcer or cancer.
- **Vitamin B12 deficiency anemia** may be treated with shots of vitamin B12. In some cases your healthcare provider may prescribe a tablet.
- **Folic acid deficiency anemia** is treated with daily oral folic acid or folate tablets.
- Some medicines may be used to try to prevent **sickle cell anemia** crises. When crises do occur, they are treated with IV (intravenous) fluids, rest, and pain medicine. If too many red blood cells are destroyed, a blood transfusion may be needed.
- Treatment of **thalassemia** depends on how severe it is and your age. Sometimes it needs to be treated with a blood transfusion. People who have thalassemia **must not take iron tablets**.
- Fortunately, the effects of **anemia caused by chronic disease** usually tend to be mild. In some cases, your healthcare provider may prescribe medicine that causes your body to make more red blood cells.

You will have follow-up visits with your provider to check your blood count and the effects of your treatment.

## How long will the effects last?

How long the effects last depends on the type of anemia. For example:

- The symptoms of iron deficiency anemia get better quickly with treatment.
- The symptoms of chronic anemia, such as sickle cell anemia, come and go.
- Anemia caused by a chronic disease usually gets better or worse as the disease gets better or worse.

## **How can I take care of myself?**

Follow your healthcare provider's instructions. Change your diet or take your medicine or supplements as prescribed.

Ask your provider:

- How and when you will hear your test results
- How long it will take to recover
- What activities you should avoid and when you can return to your normal activities
- How to take care of yourself at home
- What symptoms or problems you should watch for and what to do if you have them

Make sure you know when you should come back for a checkup.

## **How can I help prevent anemia and the problems it causes?**

The prevention of anemia depends on the cause. For example:

- If your anemia was caused by your diet, eating more foods rich in the missing nutrient will help keep it from coming back.
- Genetic counseling is important for families with inherited anemia who would like to avoid passing it on to their children.

Developed by RelayHealth.

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