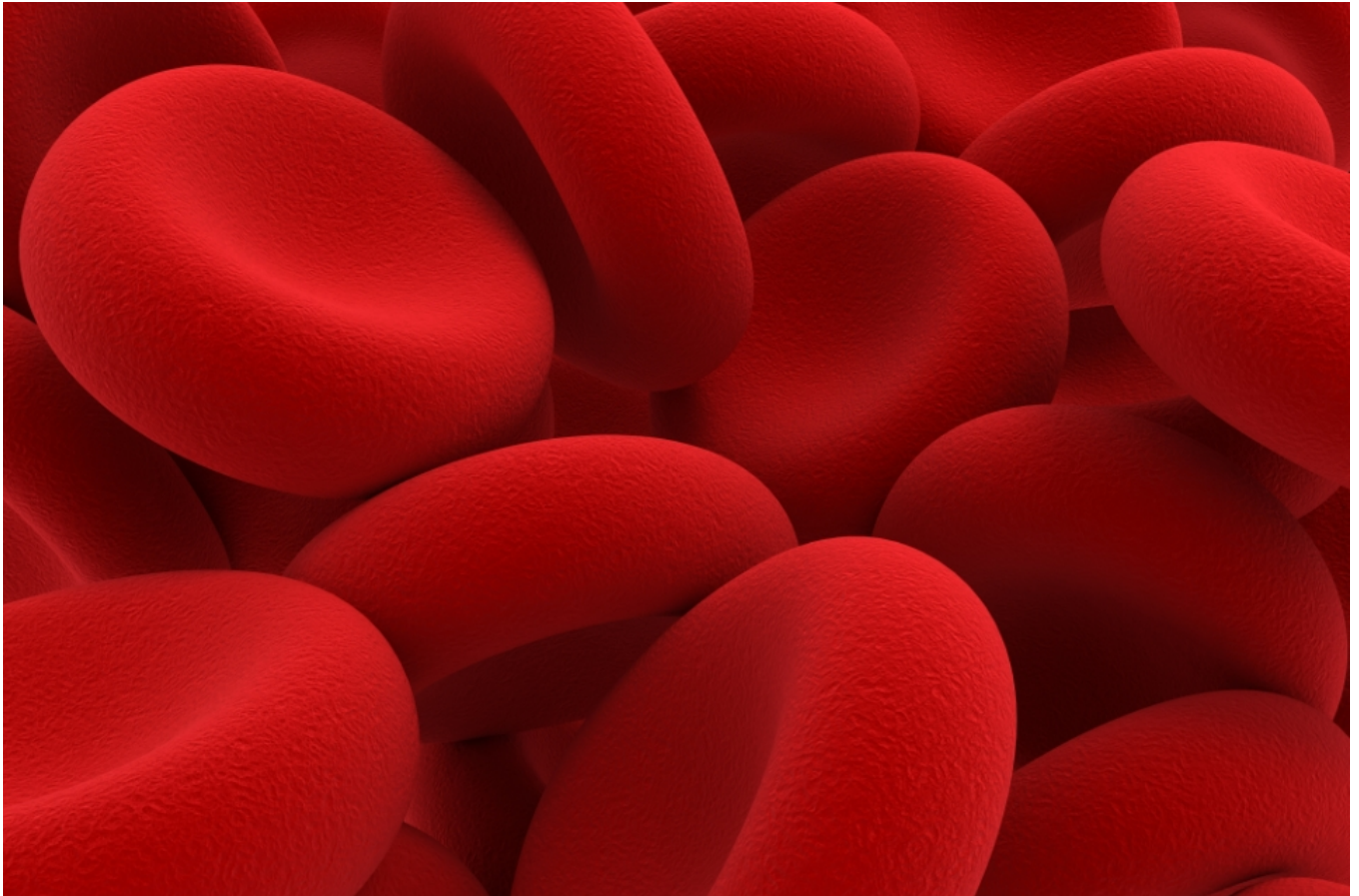


## Anemia and Women

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## What Is Anemia?

Anemia is a condition that occurs when your body has too few healthy red blood cells or not enough hemoglobin (see below). Anemia has long been a concern for people living with HIV. Since people

started taking combinations of HIV drugs, serious anemia has become less common. However, anemia continues to affect people living with HIV, especially those with lower CD4 counts (less than 200 cells/mm<sup>3</sup>). The cause of anemia may also be unrelated to HIV, and some people living with HIV may be vulnerable to anemia due to these other causes. Many people living with HIV may have anemia (be anemic) at some point, so it is important to know what anemia is, how to recognize it, and how to manage it.

Your blood has red and white blood cells. The red cells carry oxygen, and the white cells fight infections. Anemia can happen if you have too few red blood cells (RBCs) or if the hemoglobin (HGB) level in your red blood cells is below normal.

HGB is a protein that uses iron to carry oxygen. It is found in red blood cells and gives blood its red color. HGB carries oxygen from the lungs to the rest of the body. The body needs oxygen to make energy and carry out all its functions.

Anemia can be mild, moderate, or severe (very bad). It can also be temporary or a longer-lasting problem. With severe or long-lasting anemia, the lack of oxygen in the blood can damage the heart, brain, and other organs of the body. Very severe anemia can even cause death. The good news is anemia can be diagnosed and treated.

At first, anemia can be so mild that you do not notice it. Symptoms usually appear and get worse as anemia gets worse. Symptoms can include:

- Fatigue (extreme tiredness; can be mild to severe)
- Difficulty breathing; being short of breath
- Rapid heart rate (fast heartbeat, even if you are sitting still)
- Pale (lighter than normal colored) skin
- Lips, gums, lining of the eyelids, nail beds, and palms are less pink than usual
- Feeling cold
- Confusion or loss of concentration
- Dizziness or fainting

## What Causes Anemia?

There are many possible causes of anemia, including:

- Too little iron. This most often happens because a woman loses too much blood during heavy or long menstrual periods, has frequent nosebleeds, or bleeding from the bowels; referred to as "iron deficiency anemia"
- Not enough B [vitamins](#): too little of the B vitamin folic acid (folate) can cause anemia; when your body is not getting enough vitamin B12, it is called "pernicious anemia"
- HIV itself can prevent the production of red blood cells in bone marrow (soft substance inside bones)
- Many [opportunistic infections](#) (OIs) related to HIV
- Damage to the kidneys or to bone marrow
- Some thyroid conditions (problems with a hormone that helps regulate weight)
- Some drugs that are commonly used to treat HIV and related infections

## Anemia and HIV

Anemia is more likely in people living with HIV who:

- Are women
- Are African American

- Have lower [CD4 cell](#) counts
- Have higher [viral loads](#)
- Have poor nutrition (do not eat enough of the right kinds of food, or their bodies do not take in the nutrients in the food they eat [malabsorption]). For more information, see our fact sheet on [Nutrition and HIV](#).
- Take Retrovir (zidovudine, AZT)
- Take certain [hepatitis C](#) drugs (especially ribavirin)

Anemia is a common condition for women living with HIV, and it is often overlooked.

## Women and Anemia

The most common type of anemia worldwide is iron deficiency anemia, which is caused by a shortage of iron. Women are especially likely to develop this type of anemia for several reasons. First, women aged 12 to 49 lose blood approximately once a month during their periods. Iron is needed to make the new blood that replaces the blood lost with each [menstrual period](#). The risk of anemia is higher among women with periods that are especially long or include very heavy bleeding. Some women also lose iron from uterine fibroids (non-cancerous growths in the womb) that bleed slowly, or from bleeding caused by using certain intrauterine devices (IUDs) for [birth control](#).

Second, women need extra iron during [pregnancy](#) for the proper development of their babies. In fact, pregnant women need 50 percent more iron than usual (27 mg per day instead of the usual 18 mg per day). Women also lose blood during childbirth. It is important for women who are pregnant or [plan to become pregnant](#) to have their iron levels checked and to tell their health care providers about any symptoms of anemia. Prenatal vitamins contain iron and can help prevent low iron levels and pregnancy-related anemia.

## Diagnosis and Treatment

With diagnosis and treatment, the effects of anemia can be greatly reduced. Anemia is usually diagnosed by measuring hemoglobin and hematocrit (HCT). HCT is the percentage of red blood cells in the blood. Hemoglobin and hematocrit are measured as part of a routine blood test called a [complete blood count](#) (CBC). A CBC should be done as part of your regular health exams (checkups).

- HGB levels for women should be about 12 grams per deciliter (g/dL) – a HGB level of less than 6.5 g/dL is very dangerous and could be life-threatening
- HCT levels for women should be 35 percent to 46 percent

The treatment for anemia depends on its cause:

- If bleeding is the cause of the problem, it is important to find and control the source of the bleeding
- If iron levels are low, your health care provider will suggest ways to increase the amount of iron in your blood. You may be able to change your diet to include foods with a lot of iron. Iron is found in dark, leafy greens (collards, spinach, kale, chard), red meat, beans (chickpeas, lentils, soybeans), seafood (mollusks such as oysters, clams, scallops), and fortified bread and cereals. Taking iron tablets can also raise iron levels. Talk to your health care provider before taking any extra iron.
- If your folic acid levels are low, you may be able to add foods that contain folic acid to your diet. Folic acid is found in dark, leafy greens, asparagus, beans (lima beans, black beans, chickpeas, lentils), citrus fruits (oranges, grapefruits, tangerines, lemons, limes), and beef liver. You can also take folic acid tablets. Folic acid is especially important for pregnant women; having appropriate levels of folic acid (recommended: 400 micrograms/day) can help prevent birth defects in a baby's brain and spinal cord.

- If your vitamin B12 levels are low, you may need B12 injections (shots) or a form of B12 you put under your tongue, no matter how much you get in your diet. This is because some people cannot absorb this vitamin from food or tablets. If you are a vegan or strict vegetarian, you may have low vitamin B12 levels and may need to take liquid B12 under your tongue.
- If a drug you are taking is causing anemia, you may need to stop taking that drug. However, it is important not to stop taking a drug without first talking to your health care provider.
- When advanced HIV disease is the cause of anemia, HIV treatment may improve symptoms

There are also medications that help your body make more red blood cells. These medications include erythropoietin or EPO (brand names Epogen and Procrit), which is injected (you get a shot of the drug). Some people with severe anemia may need a blood transfusion (getting blood directly into your blood vessels). However, transfusions are only done if the blood is needed urgently or if nothing else helps.

Speaking with your health care provider will help him or her determine the best treatment for you based on what is causing your anemia.

## Taking Care of Yourself

Anemia is a common condition in people living with HIV, especially in women. It can cause feelings of fatigue, lower your quality of life, and increase the chances that your HIV disease will get worse.

If you are feeling tired for unexplained reasons or are experiencing any of the other symptoms listed above, talk to your health care provider. He or she can run tests to determine if anemia is the problem. If it is, your health care provider will look for the cause of the anemia and suggest treatment options. Treating anemia improves the health and survival of people living with HIV.

## Additional Resources

Select the links below for additional material related to anemia.

- [Anemia \(Mayo Clinic\)](#)
- [Iron-Deficiency Anemia \(Office on Women's Health\)](#)
- [Anemia \(American Society of Hematology; includes video\)](#)
- [Blood Problems and HIV \(aidsmap\)](#)
- [Fatigue \(Extreme Tiredness\) \(POZ\)](#)
- [Anemia Testing \(Testing.com\)](#)
- [Anemia \(MedlinePlus\)](#)
- [Iron-Deficiency Anemia \(American Society of Hematology\)](#)
- [Iron: Fact Sheet for Consumers \(U.S. National Institutes of Health\)](#)
- [What Is Vitamin B12 Deficiency Anemia? \(WebMD\)](#)
- [Vitamin B12: A Vegan Nutrition Primer \(The Vegan RD\)](#)
- [Anemia and Pregnancy \(University of California-San Francisco\)](#)
- [Anemia, Fatigue, and HIV \(The Body.com\)](#)

