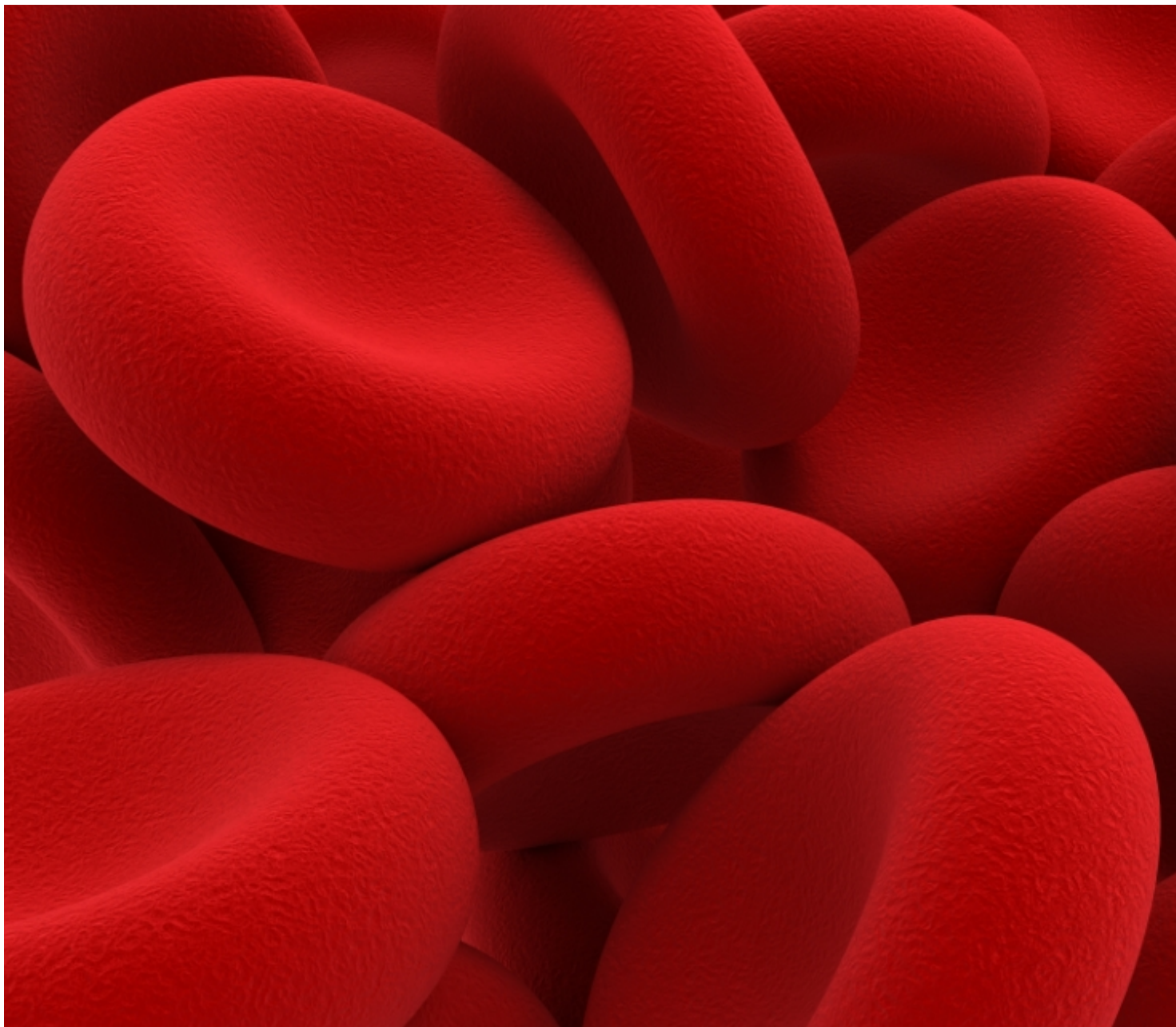


## Anemia and Women <sup>[1]</sup>

Submitted on May 15, 2017



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## What Is Anemia?

Anemia is a medical condition that occurs when you have a reduced ability to carry oxygen in your blood. Anemia can happen if you have fewer than normal red blood cells (RBCs) in your body. It can also happen if the hemoglobin (HGB) level in your red blood cells is below normal.

HGB is a protein that uses iron to carry oxygen. Hemoglobin is found in red blood cells and gives blood its red color. HGB carries oxygen from the lungs to the rest of the body. Oxygen is necessary for the body to make energy and carry out all its functions. If you have anemia, your body does not carry enough oxygen in your blood.

Anemia can be mild, moderate, or severe. 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 identified and treated.

At first, anemia can be so mild that it goes unnoticed. Symptoms usually appear and get worse as the anemia gets worse. Symptoms can include:

- Fatigue (tiredness; can be mild to severe)
- Difficulty breathing; being short of breath
- Rapid heart rate
- Pale skin
- Decreased pinkness of the lips, gums, lining of the eyelids, nail beds, and palms
- Feeling cold
- Confusion or loss of concentration
- Dizziness or fainting
- Sadness or [depression](#) [2]

## What Causes Anemia?

There are many possible causes of anemia, including:

- A shortage of iron, which is most commonly due to blood loss from heavy or long menstrual periods, frequent nosebleeds, or internal bleeding; referred to as 'iron deficiency anemia'
- A shortage of B [vitamins](#) [3]: a shortage of the vitamin B12 is referred to as 'pernicious anemia'; a shortage of the B vitamin folic acid (folate) can also cause anemia
- HIV itself

- Many opportunistic infections <sup>[4]</sup> (OIs) related to HIV disease
- Kidney or bone marrow damage
- Some thyroid conditions
- Some drugs that are commonly used to treat HIV and related infections

## Anemia and HIV

Anemia has been a long-standing problem for people living with HIV (HIV+). Although serious anemia has become less common since people started using combinations of HIV drugs, anemia continues to affect people living with HIV, especially those with lower CD4 counts (<200). On average, anemia occurs in eight out of ten people diagnosed with AIDS. Factors that are linked to a greater likelihood of anemia in people living with HIV include:

- Being a woman
- Being African-American
- Having lower CD4 cell <sup>[5]</sup> counts
- Having a higher viral load <sup>[6]</sup>
- Poor nutrition: not eating enough of the right foods, or not taking in the nutrients of the foods eaten (malabsorption) (for more information, see our fact sheet on Nutrition and HIV <sup>[7]</sup>)
- Taking Retrovir (zidovudine, AZT)
- Certain hepatitis C <sup>[8]</sup> 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. According to the US Centers for Disease Control and Prevention (CDC), close to six million women between 15 and 49 years old are iron deficient, and almost half of these women will develop iron deficiency anemia. Globally, iron deficiency is the most common nutritional deficiency and has negative effects on both women and children.

Women are especially likely to develop iron deficiency 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 that bleed slowly, or from bleeding caused by using certain intrauterine devices (IUDs) for birth control <sup>[9]</sup>.

Second, women need extra iron during pregnancy <sup>[10]</sup> 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 <sup>[11]</sup> to have their iron levels checked and bring any symptoms of anemia to their health care providers' attention. Prenatal vitamins contain iron and can help to 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 <sup>[12]</sup> (CBC). A CBC should be done as part of your regular health exams.

- 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 the 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, as they often are in women, 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 levels. Talk to your health care provider before taking 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 (e.g., 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, it may be necessary to stop taking that drug. However, it is important not to stop taking a drug without first consulting your health care provider.
- When advanced HIV 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 the injectable drug erythropoietin or EPO (brand names Epogen and Procrit). Some people with severe anemia may need a blood transfusion (getting blood directly into your blood vessels). However, transfusions are a last resort.

Good communication with your health care provider will help determine the best treatment for you based on what is causing the anemia.

## **Taking Care of Yourself**

Anemia is a common condition in people living with HIV, especially 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 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 so, your health care provider will look for the cause and suggest treatment options. Treating anemia improves the health and survival of people living with HIV.

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## Additional Resources

Select the links below for additional material related to anemia.

[Anemia Fact Sheet \(womenshealth.gov\)](#) [31]

[Anemia \(Lab Tests Online\)](#) [32]

[Anemia \(MedlinePlus\)](#) [33]

[Anemia \(includes video\) \(American Society of Hematology\)](#) [34]

[Feeling Tired \(Fatigue & Anemia\) \(POZ\)](#) [35]

[Iron Deficiency Anemia \(American Society of Hematology\)](#) [36]

[Micronutrient Deficiencies: Iron Deficiency Anaemia \(World Health Organization\)](#) [37]

[Iron: Dietary Supplement Fact Sheet \(U.S. National Institutes of Health\)](#) [38]

[Vitamin B12: A Vegan Nutrition Primer \(The Vegan R.D.\)](#) [39]

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- [33] <http://www.nlm.nih.gov/medlineplus/anemia.html>
- [34] <http://www.hematology.org/Patients/Anemia/>
- [35] [http://www.aidsmeds.com/articles/Fatigue\\_4828.shtml](http://www.aidsmeds.com/articles/Fatigue_4828.shtml)

[36] <http://www.hematology.org/Patients/Anemia/Iron-Deficiency.aspx>

[37] <http://www.who.int/nutrition/topics/ida/en/>

[38] <http://ods.od.nih.gov/factsheets/Iron-HealthProfessional/>

[39] <http://www.theveganrd.com/vegan-nutrition-primers/vitamin-b12-a-vegan-nutrition-primer>