



What You Need to Know About Anemia and Chronic Kidney Disease

What is anemia and what causes it?

Anemia occurs when your red blood cells are in short supply. Most people with chronic kidney disease develop anemia. This happens because the diseased kidneys no longer make enough of a hormone called erythropoietin, also called EPO for short. This hormone tells your bone marrow to make more red blood cells. Red blood cells carry oxygen from your lungs to all your organs and tissue, providing energy for your daily activities. Anemia can be caused by other conditions in addition to kidney disease. For example, you can develop anemia if you lose blood from your body due to accidents, surgery, or tumors. Anemia can be caused by too little iron in the body or too little of certain vitamins such as B12 and folic acid.



Red Blood Cell

Why should I be treated for anemia?

Anemia can be serious. If you have chronic kidney disease, you should be checked for anemia. If anemia is found you should be treated to avoid health problems such as heart enlargement.

What are the symptoms of anemia?

The symptoms of anemia vary and can include: pale, tired, low energy, poor appetite, trouble sleeping, not thinking clearly, dizziness, headaches, fast heart beat, shortness of breath, depression.

How do I know if I have anemia?

We will check blood tests to see if you have anemia. Your **hemoglobin level (Hgb)** is the part of red blood cells that carries oxygen. We recommend treating for anemia if the Hgb falls below 11. We will also check for iron deficiency and possibly for B12 and folic acid deficiency. We may ask that you have your stool checked for invisible blood.

How is anemia treated?

Treatment depends on the exact cause of your anemia. If you are low in iron, B12 or folate, we may prescribe supplements (in the form of pills or injections). Patients with anemia due to chronic kidney disease require medications to increase the production of red blood cells. Two of these medications are **Darbepoetin alfa (Aranesp)** and **Epoetin alfa (Procrit)**. These medications are given by injection, usually every two to four weeks. On rare occasions, people require blood transfusions to treat anemia.

IMPORTANT INFORMATION:

If you receive Aranesp or Procrit, we will put you on a monthly schedule to have your blood tests checked. The goal is to keep the Hgb between 11 and 12. The amount of the medication and how often it is given depends on the Hgb *level*. ***It is considered harmful to overcorrect anemia.*** Therefore, we may reduce the dose or even hold the Aranesp or Procrit if the Hgb goes over a certain level. That is why we must have a blood test within the past four weeks in order to know the correct dose of the anemia drug. Procrit and Aranesp can possibly raise the blood pressure and should not be given if the blood pressure is too high.

