

Anemia and Chronic Kidney Disease



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What is Anemia?

Red cells are the most common cells in your blood. The red cells carry oxygen from the lungs to the body's tissues where it is used as energy. Anemia means that the red cells in the blood are at a low level. Hemoglobin is a measure of the total red cell content of blood.

Normal hemoglobin levels are different in men and women. Levels below 120 g/L in healthy women and below 130 g/L in healthy men are considered low and could mean you have anemia. The target hemoglobin level for people with chronic kidney disease is 100 – 110 g/L. Speak to your doctor about the target that's right for you.



Model(s) are a depiction of people with kidney disease and anemia.

How Do You Know If You Have Anemia?

The effects of anemia depend on how severe it is. As anemia becomes severe, it may lead to low energy, tiredness, shortness of breath, and sometimes, increased sensitivity to cold. The only real way to know if you have anemia is to have a blood test. The blood test will check your red blood cells and your hemoglobin.

What Is the Link Between Anemia and Chronic Kidney Disease?

Most people in later stages of kidney disease (Stage 4-5) develop anemia. This is because the kidneys normally make the chemical messenger (hormone), called erythropoietin (or EPO for short). EPO tells the bone marrow to make more red blood cells. When the kidneys are not working well, they don't produce enough EPO so the bone marrow does not get the message to make red blood cells. Over time, there are fewer blood cells produced and people become anemic.

What Treatments Are Available for Anemia?

If you think you might have anemia, see your doctor. Your treatment will depend on the exact cause of your anemia. Treatment options include:

Dietary Changes

A diet low in essential vitamins and minerals such as iron, Vitamin B12, or folic acid may contribute to anemia.

Each person has different nutritional needs based on their age, medical history, and kidney function. A registered dietitian will work with you to design an individual daily eating plan that's right for you.

Vitamin or Mineral Supplements

Your doctor may recommend vitamin or mineral supplements. The most common supplement is iron. Iron deficiency (shortage) can be treated with pills or by an injection into a vein (intravenous, or IV). Vitamin B12 deficiency can be treated with pills or by an injection into a muscle (intramuscular, or IM). Extra folic acid can be taken in pill form.

Prescription Medications

Your doctor may prescribe medications to increase the number of red blood cells your body produces. These medications are synthetic hormones that work just like natural erythropoietin to increase red blood cell production.

The medications may be given by injection under the skin or into a vein. You and your doctor can decide which method is best for you.

Blood Transfusions

Sometimes, when anemia is very severe or must be treated rapidly, blood transfusions are used. With a blood transfusion, red blood cells from a volunteer donor are given through an intravenous line to increase the hemoglobin in your blood.

Why Is It Important to Treat Anemia?

If left untreated, anemia can cause serious health problems. A low level of red blood cells in your body can make your heart work harder. This can lead to a thickening of the left side of the heart; a serious condition called left ventricular hypertrophy or LVH.

Treating anemia can increase your energy and help you feel better. It may improve your thinking ability, as well as your physical, social, and sexual functioning.



OUR VISION

The Kidney Foundation of Canada is committed to achieving excellent kidney health, optimal quality of life, and a cure for kidney disease.

OUR MISSION

The Kidney Foundation of Canada is the national volunteer organization committed to eliminating the burden of kidney disease through:

- Funding and stimulating innovative research for better treatments and a cure;
- Providing education and support to prevent kidney disease in those at risk and empower those with kidney disease to optimize their health status;
- Advocating for improved access to high quality healthcare;
- Increasing public awareness and commitment to advancing kidney health and organ donation.

For further information, or to help us in our efforts, please contact The Kidney Foundation office in your area. You can also visit our website at kidney.ca.

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This material is available in accessible formats upon request by contacting info@kidney.ca or calling 1-800-361-7494.