

## ANEMIA AND CHRONIC KIDNEY DISEASE (CKD)

Anemia is a condition that occurs when there are not enough healthy red blood cells to carry the oxygen your body needs. Iron deficiency anemia is a type of anemia that occurs when your body doesn't have enough iron to make hemoglobin, a protein needed for red blood cells to carry oxygen from your lungs throughout your body.

Anemia is very common in people with CKD. It can happen in the early stages of CKD and can get worse as kidney function declines.

## WHAT CAN CAUSE ANEMIA IN PATIENTS WITH CKD?

**To make red blood cells, your body needs iron and erythropoietin (EPO)**

- 1. Iron:** In CKD, anemia is often caused by not having enough iron in your body, or iron deficiency. Not having enough iron can happen if your body isn't able to absorb iron from food, or if you are losing iron from blood loss.
- 2. EPO:** EPO is a hormone made by the kidneys, which tells your body to make red blood cells. As kidney function declines, the amount of EPO your kidneys make decreases.

## WHAT ARE SOME OF THE SYMPTOMS OF IRON DEFICIENCY?

**When anemia is not treated properly, you can experience symptoms like:**



**Decreased energy**



**Dizziness or headaches**



**Trouble thinking clearly**



**Feeling tired**



**Feeling cold**



**Fast heartbeat**

### SYMPTOMS SOUND FAMILIAR?

Circle the ones that you may be experiencing and talk to your healthcare provider at your next appointment about any concerns you may have.

Please note, many of the symptoms described above may have multiple causes.

# HOW DO I KNOW IF I HAVE IRON DEFICIENCY ANEMIA?

A few of the blood tests your doctor may order to help determine if you have iron deficiency anemia include:



- Hemoglobin
- Transferrin saturation, or TSAT (a test used to measure the amount of iron in your body readily available to make red blood cells)
- Ferritin (a test used to evaluate the total amount of iron stored in the body)

## WHAT DO HEALTH GUIDELINES RECOMMEND?

Health guidelines indicate you may have anemia if your hemoglobin levels are:



- Less than 13 g/dL for males
- Less than 12 g/dL for females

There are several factors that will influence your treatment, but your healthcare provider may recommend starting anemia treatment if your levels are:



- TSAT: Less than or equal to 30%
- Ferritin: Less than or equal to 500 ng/mL

## WHAT ARE POSSIBLE TREATMENT OPTIONS?

Setting goals is important. Work with your healthcare provider to set a goal for a hemoglobin range that is most appropriate for you, with options such as:



- oral iron (prescription or over the counter)



- intravenous (or IV) iron, which is administered directly into your veins