



About anaemia of chronic kidney disease

Anaemia of CKD & Me is a series of guides for people with chronic kidney disease (CKD). They have been created with patient organisations and a renal anaemia nurse to make sure they cover information that may be important to you. People diagnosed with chronic kidney disease or kidney failure should be aware of anaemia as it is a common complication of these conditions. This guide tells you about anaemia, which affects about 1 in 5 people living with CKD. The information in this series can help you talk about anaemia with your doctor or nurse if you want to.

What is anaemia?

Red blood cells carry oxygen around the body to give you energy. If you do not have enough red blood cells, your body gets less oxygen than it needs. Anaemia, or being anaemic, means that you do not have enough healthy red blood cells. This can make you feel cold, tired and weak and everyday activities like climbing stairs or walking to the shops more difficult.

What causes anaemia?

There are many reasons why people have anaemia. Here are some possible causes:



Losing a lot of blood –

this could be because of an accident, surgery, childbirth, internal bleeding such as gastrointestinal ulcers, or heavy periods (menstruation).



Damaged red blood cells –

this could be because of an infection, an autoimmune disease, or a genetic blood disorder.



Not making enough red blood cells –

this could be because of a diet low in certain nutrients (like iron, vitamin B12 or folate), or chronic inflammatory diseases or blood disorders. It can also be because of other causes like a shortage of certain hormones. People who have kidney disease are at risk of anaemia, because when the kidneys are damaged they can't make enough of the hormone that stimulates the bone marrow to produce red blood cells. As a result, the bone marrow makes fewer red blood cells.

If you have been diagnosed with anaemia you should ask your doctor what has caused it, because how it is managed and treated will be different for each type of anaemia.

Why do people with CKD get anaemia?

Not making enough red blood cells is the most common cause of anaemia for people with CKD. There are two main reasons for this:

Iron deficiency – the most common cause of anaemia (even for people without CKD) is not having enough iron available to make healthy red blood cells. This is called ‘iron deficiency’. The body gets iron from food but CKD makes it harder for the body to absorb iron from foods. Moreover, inflammation related to CKD can prevent your body from releasing iron that it stores. Without iron the body cannot make haemoglobin (Hb), which is the part of a red blood cell that carries oxygen around the body.

A low level of EPO – anaemia can develop if the body has a low level of a hormone called erythropoietin (EPO). When your kidneys are not working well, they make less EPO. Without enough EPO, the body doesn’t make enough red blood cells.

People with CKD are more likely to get anaemia, due to iron deficiency or low levels of EPO, as their CKD gets worse. It is possible for people with CKD to have anaemia because of both iron deficiency and low levels of EPO.

How do I know if I have anaemia of CKD?

If you have CKD, you should get tested if you are showing signs and symptoms of anaemia (read our symptoms checker for the list). If you have CKD and have not been diagnosed with anaemia, it is recommended that you get regular haemoglobin (Hb) tests to check for anaemia. How often this should happen depends on how severe your CKD is and whether you are receiving dialysis.

Ask your healthcare professional if you are not sure if you have been tested.



Ask your doctor or nurse these questions:

- When did I last have a blood test to check for anaemia?
- What were the results of the blood test?
- When is my next blood test to check for anaemia?



The other guides in the Anaemia of CKD & Me series are:

- Symptoms of anaemia and chronic kidney disease
- Who anaemia of chronic kidney disease affects
- Getting tested for anaemia of chronic kidney disease
- Managing anaemia of chronic kidney disease
- Anaemia of chronic kidney disease and your body and mind
- Symptoms checker for anaemia and chronic kidney disease

Word checker

Red blood cells:	One of the types of cells that make up your blood. They carry oxygen from your lungs to the rest of your body.
Haemoglobin (Hb):	A protein found inside red blood cells that allows them to carry oxygen. Your body needs iron to make Hb.
Iron:	Iron is a metal, and in very small amounts it is also an essential mineral your body needs to function. The body gets iron from the food that you eat and by recycling dead red blood cells in your body.
Iron deficiency:	Is when the body isn't getting enough iron to make healthy red blood cells, which leads to anaemia.
Erythropoietin (EPO):	A hormone that your kidneys make that tells your bone marrow to make red blood cells.
Low EPO:	When the body isn't making enough EPO to make enough healthy red blood cells. When your kidneys are damaged they make less EPO, which can lead to anaemia.

For more information visit the Astellas website at:
www.astellas.com/eu/patient-focus/patient-partnerships.

Please contact us at eupatientpartners-sm@astellas.com if you need this document in an alternative format. References are also available upon request.

www.astellas.com/eu/patient-focus/patient-partnerships

This resource has been developed based on insights from an Astellas advisory board with kidney patient organisations. We would like to thank Juan Carlos Julian (European Kidney Patients' Federation), Laurie Cuthbert (Kidney Care UK) and Bintu Bangura (Renal Anaemia Clinical Nurse Specialist) for their role in creating this guide for the patient community.

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