Anemia & Kidney Disease

Anemia is the decrease in the amount of your red blood cells, or red blood cell hemoglobin. Hemoglobin is the protein in red blood cells that carries oxygen. The percentage of your blood that is made up of red blood cells (RBC's) is called your hematocrit. The terms 'hematocrit' and 'hemoglobin' may both be used when discussing anemia.

Anemia is quite common in people who have kidney disease. The chance of developing anemia increases as kidney disease gets worse. A study has shown anemia affected 28% of people with mild kidney disease and 87% of people with severe kidney disease.

CAUSES

Diseased kidneys may not produce enough erythropoietin, a hormone that regulates (controls) red blood cell (RBC) production. Erythropoietin is required for your bone marrow to produce red blood cells. Red blood cells (RBC's) carry hemoglobin that delivers oxygen to your body's organs. If there are not enough RBCs, your body does not get the right amount of oxygen.

Anemia can also be caused by blood loss such as from:

- A major accident.
- An ulcer, or a colon polyp or cancer.
- A lack of iron or certain vitamins in your diet.

You can have more than 1 reason for anemia.

SYMPTOMS

You may not have any symptoms if your anemia is mild or has developed slowly and gradually. Symptoms develop as anemia becomes more severe, or if it develops suddenly Symptoms can include:

- Fatigue.
- Chest pain.
- Trouble breathing.
- Weakness.
- Dizziness.
- A fast heartbeat.
- Pale skin.
- Irritability.
- Headaches.
- Numbness or coldness in your hands and feet.

Studies show that people who have both chronic kidney disease and anemia have an increased risk of heart problems. These can lead to heart attack, stroke, or death. Treatment of the anemia may help improve heart health and decrease hospitalizations for heart failure. Treatment also improves quality of life.

DIAGNOSIS

You or your caregiver may suspect anemia based on the symptoms above. The presence of anemia is confirmed with a blood test. Other studies may be needed to determine that there is no other cause for your anemia other than chronic kidney disease.

TREATMENT

Since anemia in kidney disease is usually caused by erythropoietin deficiency, improvement of hemoglobin and hematocrit levels are often achieved with erythropoietin-type medications. These medicines stimulate red blood cell production. They are usually given as injections, either in your doctor's office or self-administered at home. If your body does not store enough iron, your doctor or caregiver will add iron or supplementation to your treatment plan and correct *vitamin deficiencies* (low levels of vitamins). If your tests indicate that you are loosing blood, that problem must be identified and corrected to treat your anemia. Occasionally, a transfusion of blood is needed to treat anemia, but this is a short-term solution.

HOME CARE INSTRUCTIONS

- Follow your treatment plan carefully. It is important to take medications as prescribed.
- Note that iron pills, if prescribed, may turn your stool grayish-black.
- If you take injections of erythropoietin type medications, be sure you know your dose. The dose varies from person to person.

SEEK MEDICAL CARE IF:

- You develop any signs of bleeding to your caregiver.
- You develop any of the symptoms of anemia as outlined above.

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