Chronic Renal Insufficiency

Chronic renal insufficiency (also called kidney failure) occurs when there is kidney damage done. The damage prevents the kidneys from working like they should.
The kidneys do many important things. They:

- Filter waste out of the blood.
- Regulate the amount of water and various salts in the blood stream.
- Produce chemicals that:
  - Prompt the bone marrow to make red blood cells.
  - Regulate blood pressure.
  - Keep calcium in balance throughout the bones and the body.

When the kidneys are damaged, they can no longer filter waste products out of the blood. These substances build up in the blood, causing illness.

CAUSES

- Diabetes.
- High blood pressure.
- Glomerular diseases: Conditions that damage the tiny blood vessels (*glomeruli*) within the kidneys, such as:
  - Membranous nephropathy.
  - IgA nephropathy.
  - Focal segmental glomerulosclerosis.
- Poisons (such as overdoses or misuse of acetaminophen or NSAIDS, or exposure to other toxic substances).
- Kidney injuries.
- Kidney cancer or cancer that spreads to the kidney.
- Medications such as NSAIDs. These problems are rare.
- Kidney stones.
- Alport disease.
- Polycystic kidneys.

SYMPTOMS

Most people do not notice symptoms of kidney failure until their kidney function drops below about 30-40% of normal. Symptoms can include:

- Weakness.
- Tiredness.
- Frequent urination.
- Intense need to urinate.
- Excess bruising.
- Low urine production.
- Blood in the urine.
- Pain in the kidney area.
- Feeling sick to your stomach (*nausea*).
- Vomiting.
- Unusual bleeding.
- Numbness in hands and feet.
- Swelling in legs, arms and face.
- Confusion.

DIAGNOSIS

Your caregiver will look for signs of kidney failure. Tests to diagnose kidney failure may include:

- Urine tests: May reveal the presence of blood, protein or sugar.
- Blood tests: May show low red blood cell count (*anemia*) or high levels of waste products (BUN and creatinine) that are normally filtered out of the bloodstream by the kidneys.
- Imaging tests – These are tests that create pictures of the organs inside the abdomen, such as the kidneys. They may reveal masses growing in the kidneys or blockages to the flow of urine. Possible imaging tests may include:
  - Ultrasound.
  - CT scan.
  - MRI.
  - Intravenous pyelogram or IVP. This is a test that involves injecting dye into the bloodstream and then taking a series of x-rays of the kidneys. This allows the kidneys and other parts of the urinary system to be viewed more clearly.
- Kidney biopsy – A small sample of kidney is removed using a special needle. The sample is examined for abnormalities under a microscope.

TREATMENT

Chronic kidney failure cannot usually be cured. The various symptoms are treated, and measures are taken to avoid further kidney damage.

Treatment for mild to moderate kidney failure may include:
- Medication for high blood pressure.
- Good control of diabetes.
- Medication and diet change to improve anemia.
- A low-sodium, low-potassium, low-protein and/or low-cholesterol diet.
- Limiting the quantity of liquids in the diet.

Treatment for more severe kidney failure may require:
- Dialysis – Mechanical methods of filtering the blood.
- Kidney transplant – An operation that removes the diseased kidney and replaces it with a donated kidney.

HOME CARE INSTRUCTIONS
- Take medication as told by your caregiver.
- Quit smoking if you are a smoker. Talk to your caregiver about a smoking cessation program.
- Follow your prescribed diet.
- If you are prescribed vitamins, take them as told.

SEEK IMMEDIATE MEDICAL CARE IF YOU:
- Start to produce less urine.
- Notice blood in your urine.
- Have increased pain.
- Have increased weakness, fatigue or confusion.
- Notice new swelling.
- Develop a fever.
- Feel that you are having side effects of medicines prescribed.

Document Released: 09/26/2009
ExitCare® Patient Information ©2011 ExitCare, LLC.