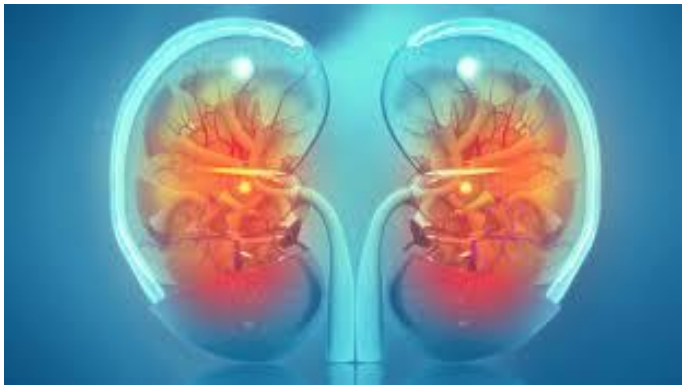
Kidney (Renel Disease)



Kidney disease can affect your body's ability to clean your blood, filter extra water out of your blood, and help control your blood pressure. It can also affect red blood cell production and vitamin D metabolism needed for bone health.

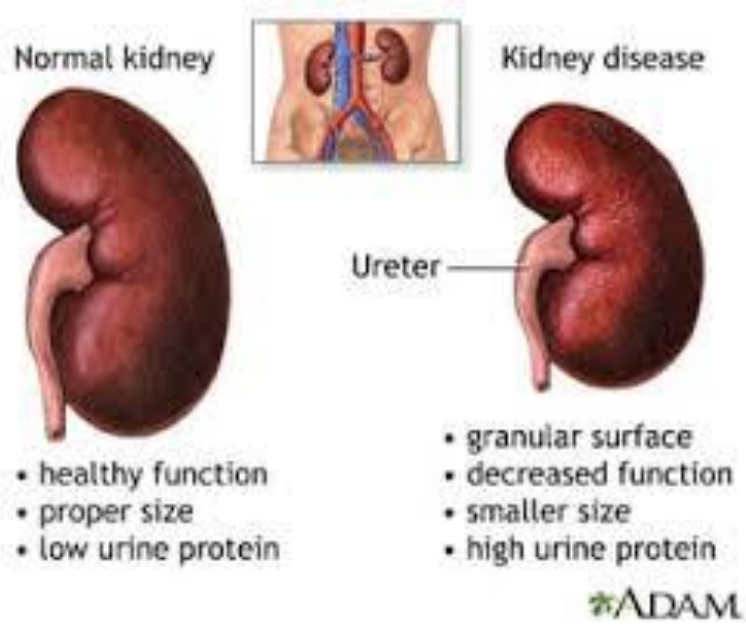
You're born with two kidneys. They're on either side of your spine, just above your waist.

When your kidneys are damaged, waste products and fluid can build up in your body. That can cause swelling in your ankles, nausea, weakness, poor sleep, and shortness of breath. Without treatment, the damage can get worse and your kidneys may eventually stop working. That's serious, and it can be life-threatening.

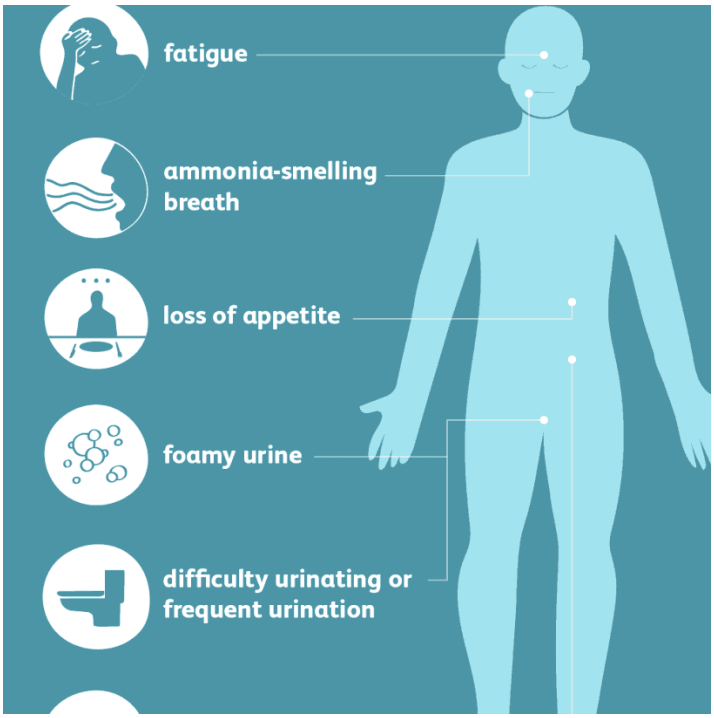
Healthy kidneys Function:

- **Keep a balance of water and minerals (such as sodium, potassium, and phosphorus) in our blood**
- **Remove waste from our blood after digestion, muscle activity, and exposure to chemicals or medications**
- **Make renin, which our body uses to help manage your blood pressure**
- **Make a chemical called erythropoietin, which prompts our body to make red blood cells**

- **Make an active form of vitamin D, needed for bone health and other things.**



Symptoms of Kidney Disease



What are the types of kidney disease:

- **Chronic kidney disease. The most common form of kidney disease is chronic kidney disease. ...**
- **Kidney stones. Kidney stones are another common kidney problem. ...**
- **Glomerulonephritis. ...**
- **Polycystic kidney disease. ...**
- **Urinary tract infections.**

Kidney Failure:

The kidneys filter the blood and remove extra water and waste from the body. When something causes the kidneys to work less efficiently, it can lead to kidney failure.

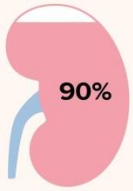
Various conditions can cause the kidneys to work less efficiently. This prevents the removal of waste, and when this happens, it can give rise to kidney failure.

According to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), kidney failure occurs when a person has less than 15% kidney function.

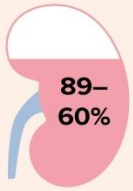
MEDICALNEWSTODAY

Stages of Kidney Disease

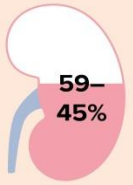
Stage 1 is characterized by mild kidney damage, though its function may still be normal. Kidney function is at about 90%.



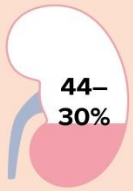
Stage 2 means that mild loss of kidney function has started. Kidney function is at about 89–60%.



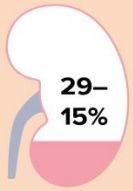
Stage 3a means that there is mild-to-moderate loss of function. Kidney function is at 59–45%.



Stage 3b means that there is moderate-to-severe loss of function. Kidney function is at 44–30%.



Stage 4 is characterized by severe loss of kidney function. Kidney function is at about 29–15%.



Stage 5 means kidney failure. Kidney function is now less than 15%.

Prevention from Kidney Disease:

PRIMARY PREVENTION

Aim: obviate or minimize the risk of CKD occurrence

Strategy/strategies:

- Promote healthy lifestyle choices such as increased physical activity and dietary salt restriction
- Influence predisposing behavioral patterns, e.g., smoking cessation, abstinence from alcohol, and restrict the use of over-the-counter medications and herbal preparations
- Health education about CKD and its risk factors
  - World Kidney Day

SECONDARY PREVENTION

Aim: Early detection and treatment of CKD

Strategy/strategies:

- Screening for risk factors for kidney disease as well as the presence of CKD

Two-staged approach to screening in LMICs:

1. Screen to identify individuals unaware of the presence of hypertension, diabetes
2. Identified individuals screened for the presence of CKD and appropriate treatment instituted

TERTIARY PREVENTION

Aim: Prevent the progression of CKD

Strategy/strategies:

- Effective control of blood pressure
  - <140/90 mm Hg
  - <130/80 mm Hg if UA >30 mg/24 h
- Effective control of albuminuria/proteinuria
  - Use of angiotensin-converting enzyme inhibitors or angiotensin receptor blockers