

# Kidneys under siege

> These organs, which filter and remove wastes from the body, are at risk from today's common lifestyle diseases

**D**IABETES and high blood pressure are common lifestyle diseases but, if left uncontrolled, they can cause kidney damage.

Kidneys are among the most important organs in the body and the repercussions are serious when both kidneys are affected.

This is because these organs filter the blood and help remove waste products from the body.

The kidneys are bean-shaped organs, each about the size of a fist. They are located near the middle of the back, just below the rib cage, one on each side of the spine. The kidneys are sophisticated reprocessing machines.

Every day, the kidneys process about 200 quarts of blood to sift out about two quarts of waste products and extra water.

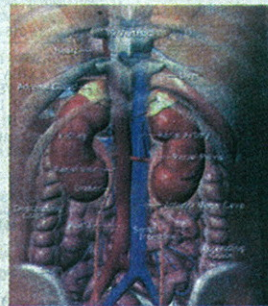
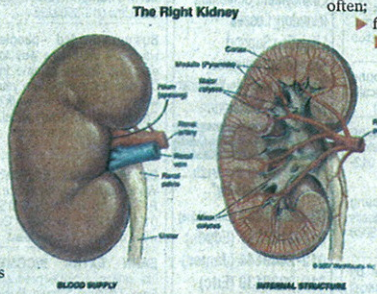
The wastes and extra water become urine, which flows to the bladder through tubes called ureters. The bladder stores urine until releasing it through urination.

The actual removal of wastes occurs in tiny units inside the kidneys called nephrons. Each kidney has about a million nephrons.

In the nephron, a glomerulus - which is a tiny blood vessel, or capillary - intertwines with a tiny urine-collecting tube called a tubule. The glomerulus acts as a filtering unit, or sieve, and keeps normal proteins and cells in the bloodstream, allowing extra fluid and wastes to pass through.

Most kidney diseases attack the nephrons, causing them to lose their filtering capacity. Damage to the nephrons can happen quickly, often as the result of injury or poisoning.

But most kidney diseases destroy the nephrons slowly and silently. Only after years or even decades will the damage become apparent. Most kidney diseases attack both kidneys together.



The two most common causes of kidney disease are diabetes and high blood pressure. People with a family history of any kind of kidney problem are also at risk for kidney disease.

Diabetes is a disease that keeps the body from using glucose, a form of sugar, as it should. If glucose stays in the blood instead of breaking down, it can act like a poison.

Damage to the nephrons from unused glucose in the blood is called diabetic kidney disease. Keeping blood glucose levels down can delay or prevent diabetic kidney disease.

High blood pressure can also damage the small blood vessels in the kidneys. The damaged vessels cannot filter wastes from the blood as they are supposed to.

People in the early stages of chronic kidney disease usually do

not feel sick at all. Those whose kidney disease has gotten worse may show the following:

- ▶ need to urinate more or less often;
- ▶ feel tired;
- ▶ lose their appetite or experience nausea and vomiting;
- ▶ have swelling in their hands or feet;
- ▶ feel itchy or numb;
- ▶ get drowsy or have trouble concentrating;
- ▶ have darkened skin; and
- ▶ have muscle cramps.

Some kidney problems may show up when a child is still developing in the womb.

Examples include autosomal recessive PKD, a rare form of polycystic kidney disease, and other developmental problems that interfere with the normal formation of the nephrons.

The signs of kidney disease in children vary. A child may grow unusually slowly, vomit often, or have back or side pain. But some kidney diseases may be silent - causing no signs or symptoms - for months or even years.

If a child has a kidney disease, the child's doctor should find it during a regular checkup. The first sign of a kidney problem may be high blood pressure; a low number of red blood cells, called anaemia; proteinuria; or hematuria.

If the doctor finds any of these problems, further tests may be necessary, including additional blood and urine tests or radiology studies. In some cases, the doctor may need to perform a biopsy.

Some hereditary kidney diseases may not be detected until adulthood. The most common form of PKD was once called "adult PKD" because the symptoms of high blood pressure and renal failure usually do not occur until patients are in their 20s or 30s.

But with advances in diagnostic imaging technology, doctors have found cysts in children and adolescents before any symptoms appear. - Agencies

## Marking World Kidney Day

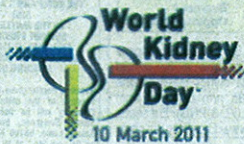
EVERY YEAR, World Kidney Day is celebrated on the second Thursday of March to raise awareness on the importance of our kidneys and overall health and aims to reduce the frequency and impact of the disease and its associated health problems.

This year marks the sixth year the event is celebrated, covering more than 100 countries in six continents. The theme for this year is *Protect Your Kidneys, Save Your Heart*.

Statistics reveal that the main cause of death for those on dialysis is cardiovascular disease - 34% of all dialysis deaths in Malaysia in 2009.

To mark World Kidney Day 2011, the National Kidney Foundation of Malaysia (NKF) has lined up various activities within the Klang Valley.

Although the day falls on March



10, its official launch will be held on March 13 at Sunway Pyramid where fun and educational events like the Amazing Kidneys colouring and drawing contest and Tile Art painting contest will be held for the whole family.

The NKF LifeCheck team will also be present to conduct free health screenings and create awareness on the importance of early detection.

Adding a celebrity touch is NKF ambassador Chef Wan, who will be there to give healthy cooking

demonstrations. Also, Kidney Care and Organ Donation Health exhibitions will be held to educate members of the public.

The foundation hopes to raise funds from a photo shoot and a lucky draw will also be held. All funds raised will be used to aid disadvantaged patients on dialysis at 25 dialysis centres across Malaysia.

On March 20, a World Kidney Day Run will be held at Dataran Merdeka in Kuala Lumpur, open to participants above 13 years.

The run, marking distances of 5km and 800m, will also be open to dialysis patients. Cash prizes for the winners total more than RM6,000, and runners will also receive an attractive goody bag.

For more, go to [www.nkf.org](http://www.nkf.org). - Anansa Jacob