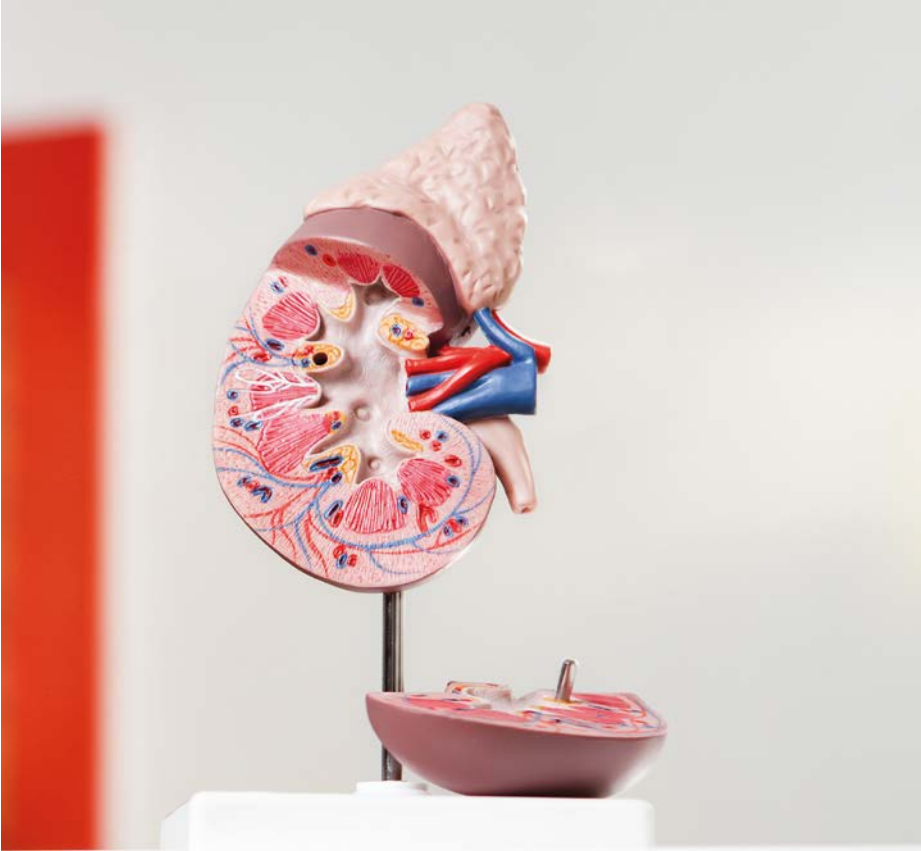
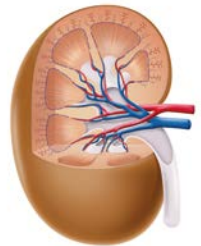


ABOUT YOUR KIDNEYS CHRONIC KIDNEY DISEASE



ABOUT YOUR KIDNEYS

The kidneys are important life-sustaining organs. Their main job is to cleanse (filter) the blood of toxins or wastes. It is these toxin/wastes and excess water which form urine. Most people have two kidneys. They are shaped like kidney beans and are found either side of your spine; each one is about 10-15cm long (about the size of your fist). They filter about 200 litres of fluid every day and get rid of 1-1.5 litres of urine per day.



THEY PERFORM MANY FUNCTIONS:

- Filter the blood to get rid of waste products from your body
- Remove excess fluid and regulate certain minerals such as potassium, sodium and calcium which come from the food you have eaten
- Help to control blood pressure
- Maintain salt and water balance
- Secrete a number of essential hormones (e.g. renin to keep your blood pressure normal and erythropoietin to make red blood cells)
- Help keep your bones healthy
- Maintain the blood in a neutral (non-acid) state.

ABOUT YOUR KIDNEYS

WHAT HAPPENS IF YOUR KIDNEYS ARE NOT WORKING PROPERLY?

- Harmful toxins and excess fluids will build up in your body, which may cause the symptoms of kidney disease. These symptoms can include:
- High blood pressure
- Extreme tiredness or lethargy
- Persistent headaches
- Swelling in the face and ankles
- Fluid retention and/or lower back pain
- Loss of appetite.

ABOUT YOUR KIDNEYS

WHAT IS CHRONIC KIDNEY DISEASE?

Chronic Kidney Disease or CKD is the term used to describe most of the abnormal conditions of the kidney. The term 'chronic' means a condition that does not get completely better, it does not mean severe, as CKD can also mean a very slight abnormality in the kidneys. CKD is often found by accident when your doctor is doing tests to investigate something else. Signs of kidney disease may appear at an early, moderate or advanced stage.



ABOUT YOUR KIDNEYS

HOW COMMON IS CKD?

Around 1 in 10 people in the population have CKD. It is less common in young adults, being present in 1 in 50 people. It is increased in those aged over 75 years as kidney function declines naturally with age.

WHAT CAUSES CKD?

There are many causes but the most common are diabetes and high blood pressure (See “Diabetes Mellitus” / “High Blood Pressure”). Kidney disease can also be hereditary; that is, passed down from a parent. Examples are Polycystic Kidney disease and Alport's disease. You should ask the doctor what the cause of your CKD is.

ABOUT YOUR KIDNEYS

WHAT DOES STAGE OF CKD MEAN?

The table below explains the stage of CKD:

Stage	Description	Action/Treatment
1	Normal kidney function but urine or other abnormalities indicate kidney disease	Observe, keep a good control of blood pressure (BP) and diabetes (DM). Investigate possible cause. Blood and urine tests: annually or as clinically indicated.
2	Mildly reduced kidney function, urine or other abnormalities indicate kidney disease	Monitor BP and DM. Investigate possible cause. Blood and urine tests: annually or as clinically indicated.
3	Moderately reduced kidney function	Monitor BP and DM. Determine cause if diagnosis not already made. Possible referral to a kidney specialist. Blood and urine tests: 6 monthly or as clinically indicated.
4	Severely reduced kidney function	This is when you may need closer follow-up by kidney specialist: Discussion about treatment options.
5	Very severe or End Stage Kidney failure	Attending a specialist Kidney Clinic: Preparation for treatment options e.g. dialysis/Transplantation/ Conservative management.

ABOUT YOUR KIDNEYS

Ask your doctor or nurse which CKD stage you are currently at and discuss your treatment plan.

WHAT DOES HAVING STAGE 1 OR 2 CKD MEAN?

This means there is mild damage to the kidney with a mild reduction in kidney function. There may be blood or protein in your urine which indicates damage to your kidneys. If you are at either of these stages, talk to your doctor or nurse about any concerns you may have. They will explain how any damage to your kidneys will affect you and what you need to do to take care of yourself.

WHAT DOES HAVING STAGE 3 MEAN?

This means there is some moderate damage to the kidney. There may also be blood or protein in your urine. If you are at this stage, you will need regular monitoring of your kidney function (e.g. blood and urine tests every 6 months).

ABOUT YOUR KIDNEYS

WHAT DOES HAVING STAGE 4 MEAN?

This means there is severe damage to the kidneys. If you are at this stage, your family doctor may refer you to see a kidney doctor for specialist advice. This will depend on how quickly your kidney function is declining. If your kidney function is declining rapidly the kidney doctor and nurses will discuss the various treatment options with you such as Dialysis (haemodialysis/peritoneal dialysis), Transplantation or Conservative management (not having dialysis). You will be given information on all these choices and be able to discuss them with your family, as well as the doctors and nurses in the kidney clinic.

WHAT DOES HAVING STAGE 5 MEAN?

This means there is severe damage to the kidneys, due to advanced kidney disease which will require urgent referral to a kidney doctor for advice. If you are at this stage, treatment options will be discussed and a decision made with you as to which one may be suitable for you.

ABOUT YOUR KIDNEYS

WHY ARE YOU IN THE KIDNEY CLINIC?

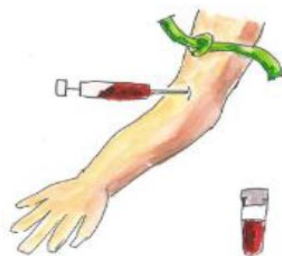
You are here because you have some damage to your kidneys and require the advice and support of the specialist kidney doctors, nurses and/or dieticians.

WHAT HAPPENS WHEN YOU COME TO THE KIDNEY CLINIC?

- Your doctor/nurse will ask you questions about your health
- You will have your blood pressure taken and be weighed
- You will have a urine test to check for any blood or protein in your urine
- You will have your kidney function checked by a blood test called eGFR.



Urine Test



Blood Test

ABOUT YOUR KIDNEYS

WHAT IS eGFR?

Estimated glomerular filtration rate (eGFR) is a blood test to find out how much blood your kidneys can filter. It measures the filtering rate of the kidney as ml/min and this equates to a percentage of kidney function (e.g. eGFR 90ml/min = 90% kidney function).

Knowing your level of kidney function will help decide which stage of CKD you are at (see table below):

eGFR	Stage of CKD
Equal or more than 90ml/min (90%)	1
89-60 ml/min (89-60%)	2
59-45ml/min (59-45%)	3A
44-30 ml/min (44-30%)	3B
29-15 ml/min (29-15%)	4
Less than 15ml/min (14-0%)	5

ABOUT YOUR KIDNEYS

WHERE CAN YOU FIND MORE INFORMATION ABOUT CKD?

You can ask your nurse for more information from your local Kidney Clinic or from national kidney foundations and/or organisations.

Some reliable websites:

- www.kidneyresearchuk.org
- www.kidney.org
- <http://nkdep.nih.gov/resources/kidney-disease>

KEY POINTS TO REMEMBER

- The main job of kidneys is to cleanse the blood of toxins and change waste into urine
- The most common causes of chronic kidney disease are uncontrolled high blood pressure and diabetes.
- The term 'chronic' in kidney disease refers to a condition that lasts a lifetime. It does not mean severe.
- There are 5 stages of CKD, with stage 1 being the mildest and stage 5 being the advanced stage.
- Kidney function is measured by a blood test (eGFR).
- Your urine will be tested regularly for any signs of blood or protein.

The Patient Education Document is sponsored by B. Braun Avitum AG.

Text: Karen Jenkins, RN, PG Dip HE, MSc Health and Social
Care (Nursing) - UK.

Review: Lesley Bennett, RN, Rm, BA, MSc - UK.

Illustrations: Miquel Àngel Velasco Martín, PhD (Cotemporary History), Watercolourist.
Barcelona,
Catalunya – Spain (renal patient).