Patient Information
Chronic Kidney Disease

What is Chronic Kidney Disease (CKD)?

CKD means that your kidneys are damaged in some way, and unlikely to get better. Chronic means long lasting.

What causes chronic kidney disease?

Common causes include Diabetes, high Blood Pressure and various forms of inflammation. For some people the cause is never found. CKD is more common in older people.

What are the tests to check how well my kidneys are working?

To know how well your kidneys are working a blood test and urine test are done, as well as a check of your blood pressure.

The blood test is the Creatinine level and provides an eGFR

Creatinine is the most common test used to measure kidney function. Creatinine is a normal waste product from the breakdown of protein in muscles and is removed from the body by the kidneys. If the kidneys are damaged then the creatinine level will rise.

eGFR stands for estimated glomerular filtration rate. It measures how much blood your kidneys filter each minute. If your kidneys are not working properly the eGFR will go down.

Kidney function declines with age in most people and stable values just below the normal range may be OK for older people, provided there is no decrease in kidney function and the urine test is normal.

The urine test looks at the **albumin** (a type of protein) in your urine.

Albumin **can pass into the urine when the kidneys are damaged. The urine test is a good way of picking up any kidney damage.** If protein levels in the urine are high, this will speed up the loss of kidney function.

Blood Pressure **is the force of the blood against the artery (blood vessel) walls as the heart pumps it around the body.**

When the blood pressure is too high, it can damage the artery walls and some organs, especially your brain, heart and kidneys. A target blood pressure is considered to be less than 140/90, or 130/80 if you have albumin in your urine.

What are the stages of CKD

CKD can be divided into five stages with stage 1 being nearly normal to stage 5 which is severe damage.

- **Stage 1** with normal or high GFR (GFR > 90 mL/min)
- **Stage 2** Mild CKD (GFR = 60-89 mL/min)
- **Stage 3** Moderate CKD (GFR 30-59 mL/min)
- **Stage 4** Severe CKD (GFR = 15-29 mL/min)
- **Stage 5** End Stage CKD (GFR <15 mL/min)

Treatment

If you have high levels of protein in your urine then you may be advised to take medication even if your blood pressure is normal. A type of medication called an angiotensin-converting enzyme (ACE) inhibitor (for example captopril, inhibace or cilazipril) has been shown to be beneficial for some people with CKD. It reduces the risk of heart and blood vessel disease, and can prevent further worsening of the function of your kidneys.

What can you do to keep your kidneys healthy?

There are things you can do to look after your kidneys, as well as taking the medication your doctor prescribes for you. The most important thing is to maintain a "healthy lifestyle". This includes:

- Avoid salt. Salt can increase your blood pressure which in turn damages your kidneys; therefore avoid adding salt to your food.
- Cut out refined sugars and processed foods as much as possible – these can worsen blood pressure control as well as gout, causing more strain on the kidneys.
- Diet is important. Fresh fruit and vegetable intake is essential, and reduce meat intake. In the later stages of kidney disease dietary restrictions may be needed, your doctor will talk to you if this should become necessary – your blood results will be a way of telling the doctor if there are restrictions needed.
- If you are obese you should lose weight, you may need to ask your doctor about seeing a dietician.
- Regular exercise can help your blood pressure, weight and wellbeing – ask your doctor about the Green prescription.
- Drink to satisfy thirst, if you have a fever, vomiting and/or diarrhoea these can cause you to lose more fluid, in these cases it is important you contact your doctor to ensure you do not become dehydrated as this can damage your kidneys. Restricting alcohol consumption to moderate amounts - although this doesn't cause kidney disease in can have a negative impact on other parts of your body.
- If you smoke, stop - talk to your practice nurse about the smoking cessation programs available
- Non-steroidal anti-inflammatory drugs (or NSAIDs), such as Nurofen and voltaren are excellent drugs for a variety of minor complaints. However, they can be dangerous; if your kidneys are already damaged then these medications should be avoided. Paracetamol (Panadol) is safer in standard doses.
- Get to know what your blood test results show - you can ask for a copy to be sent to you when you have your blood tested. Patient-portals are also available. This way you can see how your kidneys are working and if there are any changes. You can check with your doctor as to why this might have happened, and what might need to be done.

If you have any questions or concerns you can call 0800 543639 (KIDNEY).

Medicine Sick Day Rules

When you are unwell with any of the following;

- **Vomiting or diarrhoea (unless only minor)**
- **Fevers, sweats and shaking**

Then STOP taking the medicines listed below.

Restart when you are feeling well (after 24-48 hours of eating and drinking normally)

If you are not sure contact your pharmacist, GP or nurse.

Medicines to stop on sick days

- **Blood pressure tablets which include:**
  ACE inhibitors: e.g. those ending in "pril" such as cilazipril, lisinopril

  ARBs: e.g. those ending in "sartan" such as candesartan, losartan

- **Diuretics (water tablets)e.g. frusemide, spironolactone**
- **NSAIDs: anti-inflammatory painkillers e.g. dicoflenac(voltaren), ibuprofen**
- **Metformin: a medicine for diabetes**