

## What is Chronic Kidney Disease?

Chronic kidney disease (CKD) is a common long-term condition, usually affecting the older generation.

A diagnosis of CKD means your kidneys are not working as effectively as they used to. The older you are the more likely you will have a degree of CKD.

CKD doesn't always cause symptoms especially in the early stages and so someone only becomes aware of problems when the level of kidney function has fallen to low levels.

Therefore it is blood and urine tests that are used to diagnose the problem in the early stages.



## How common is CKD?

It is estimated that about one in five men and one in four women between the ages of 65 and 74 has some degree of CKD.

## Why do so many people have CKD?

Your kidneys are remarkable organs. They work every hour of every day filtering blood to take out waste and converting it into urine. They do a number of other things too (see below) and they never stop working - they use 25% of your body's energy to do their job.

Many of us live a lot longer than we used to and so we are at the mercy of illnesses and conditions as we age. Chronic kidney disease can occur when the kidneys are less able to do their work long term. This can be caused by damage to the kidneys from other conditions - most often diabetes and high blood pressure.

Find out how to keep your kidneys healthy and safe  
www.thinkkidneys.nhs.uk

# THINK KIDNEYS

For more info on the programme visit  
www.thinkkidneys.nhs.uk/ckd

### What do your kidneys do?



### How to keep your kidneys healthy



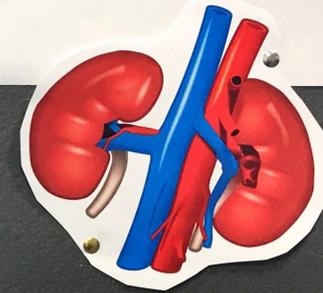
### Why you need to think kidneys



## Treating CKD

While there is no cure for chronic kidney disease, treatment can slow or halt the progression of the disease and can prevent other serious conditions developing. People with CKD may live an active and full life.

In more severe cases CKD can cause the kidneys to fail. This is known as established renal failure (ERF) or end-stage kidney disease when the usual functions of the kidneys drop to critical levels. To survive, the individual may need to have artificial kidney treatment, either through dialysis or with a kidney transplant.



The following lifestyle measures are usually recommended for people with kidney disease:

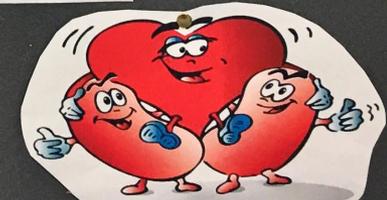
- **stop smoking** if you smoke
- eat a healthy, **balanced diet**
- restrict your salt intake to less than 6g (0.2oz) a day
- do regular **exercise** - aim to do at least 150 minutes a week
- **moderate your alcohol intake** so it's within the recommended limits of no more than **14 alcohol units** a week
- **lose weight** if you're overweight or obese
- avoid over-the-counter non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, except when advised by a medical professional - these medicines can harm your kidneys if you have kidney disease

There is no proven cure for CKD but its progression can be slowed or halted.

### What are the symptoms of kidney problems?

There may be no pain or reduction in urine output. Kidney problems are found by a blood test or urine test and we may not feel that people at risk of CKD feel any blood test results to your problems in your body.

• **Problems - frequent urination** - Loss of appetite - Sleep problems - Itchy skin - Nausea or vomiting - Swelling or puffiness of the body or feet - Feeling often tired - Shortness of breath - Feeling often short of breath - Feeling faint or dizzy - Muscle cramps



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‘THINK  
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# (Almost) everything you need to know about your kidneys



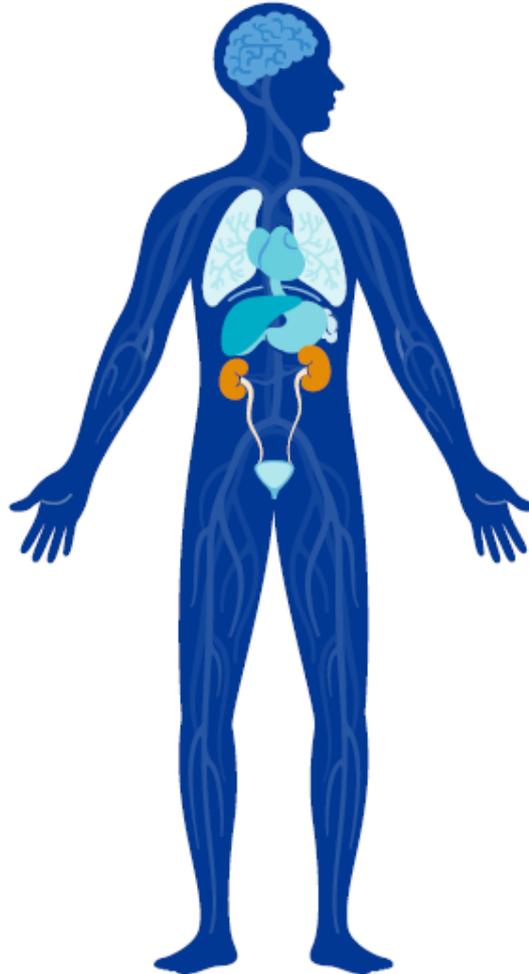
## Most people have two kidneys

They are about the size of your clenched fist, they each weigh around 150g and are shaped like kidney beans



## They sit in your lower back under the bottom ribs

Only 50% of the population know that kidneys produce urine



## They filter your blood every minute of the day

Your blood goes through the kidneys 40 times in 24 hours. There are 140 miles of tubes and a million filters in your kidneys



## They are the hardest working organs in your body

They use 25% of the blood from every heartbeat

## What do your kidneys do?

Make urine



Regulate salt and water in your body, making about 3-4 pints of urine each day



Remove waste products from your blood into your urine

Produce hormones



Regulate your blood pressure



Create erythropoietin to control the production of red blood cells

Activate Vitamin D



Keep bones healthy

Clean your blood



Remove many drugs that some people take for other conditions

## How to keep your kidneys healthy

Lead a healthy lifestyle



Keep hydrated



Don't smoke



Keep your weight down



Exercise regularly



Eat a healthy diet including fresh fruit, vegetables and fish



Reduce your intake of salt, processed foods and high sugar drinks

If you take regular medication ask your pharmacist how it may affect your kidneys

## What causes kidney problems?

**One of the most common causes of kidney disease is diabetes**

But there are many others including genetic and inflammatory conditions, blockages of urine flow and high blood pressure that can be a cause and/or consequence of kidney problems.

**About 1 in 10 people has some form of Chronic Kidney Disease (CKD)**

CKD is a long term loss of kidney function which can be harmful. Not all CKD gets worse but it can lead to kidney failure. CKD also increases the risk of heart attack or stroke and increases the risk of acute kidney injury.

**Acute Kidney Injury (AKI) is serious and can occur when a person is unwell**

AKI is a quick reduction in kidney function. Finding AKI in the early stages is very important as it can make other health problems more difficult to treat.

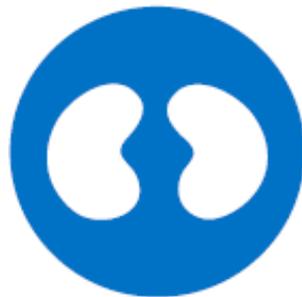
**Of emergency admissions to hospital 1 in 5 people have AKI**

AKI can occur after major surgery or with heart problems. Up to 100,000 deaths in hospital in the UK each year are associated with AKI. It causes harm and suffering and costs a lot.

## Why you need to think kidneys



If you are worried about your kidneys visit your GP and find out if screening is necessary



Always 'Think Kidneys' when visiting your GP as CKD and AKI often show few symptoms



Your kidneys are remarkable and can look after you at just 10% functionality



AKI often gets better and can even recover fully as the underlying problems are treated

## What are the symptoms of kidney problems?

**In the early stages of kidney disease there are often no symptoms**

There may be no pain or reduction in urine output. Kidney problems are found by a simple blood or urine test so we recommend that people at risk of CKD or AKI are tested regularly to spot problems as soon as possible.

**Symptoms of more serious kidney problems can include:**

- Tiredness
- Frequent headaches
- Loss of appetite
- Sleep problems
- Itchy skin
- Nausea or vomiting
- Swelling or numbing of the hands or feet
- Passing urine more (especially at night) or less often than usual
- Darkening / lightening of the skin
- Muscle cramps

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# Treating CKD

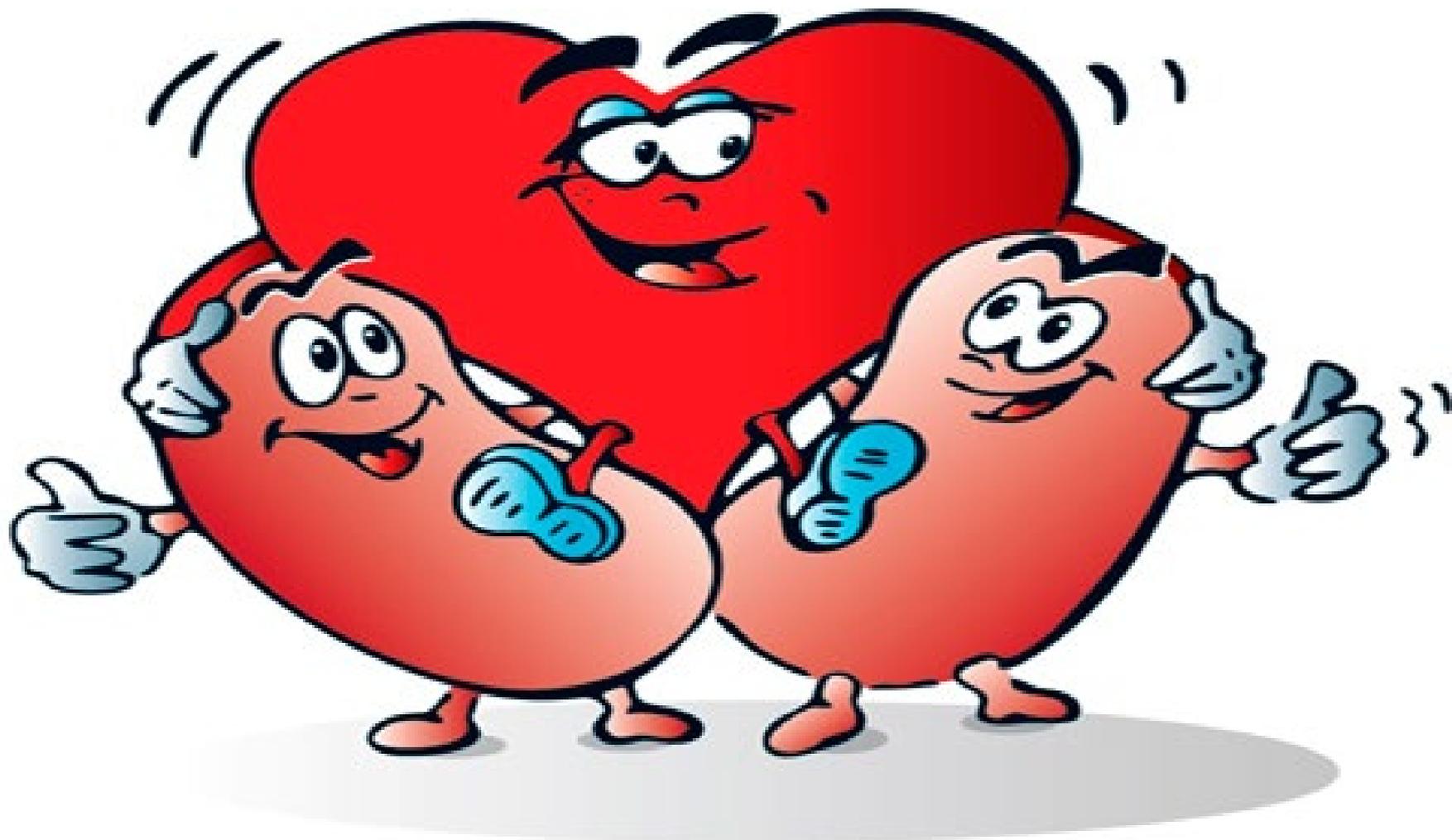
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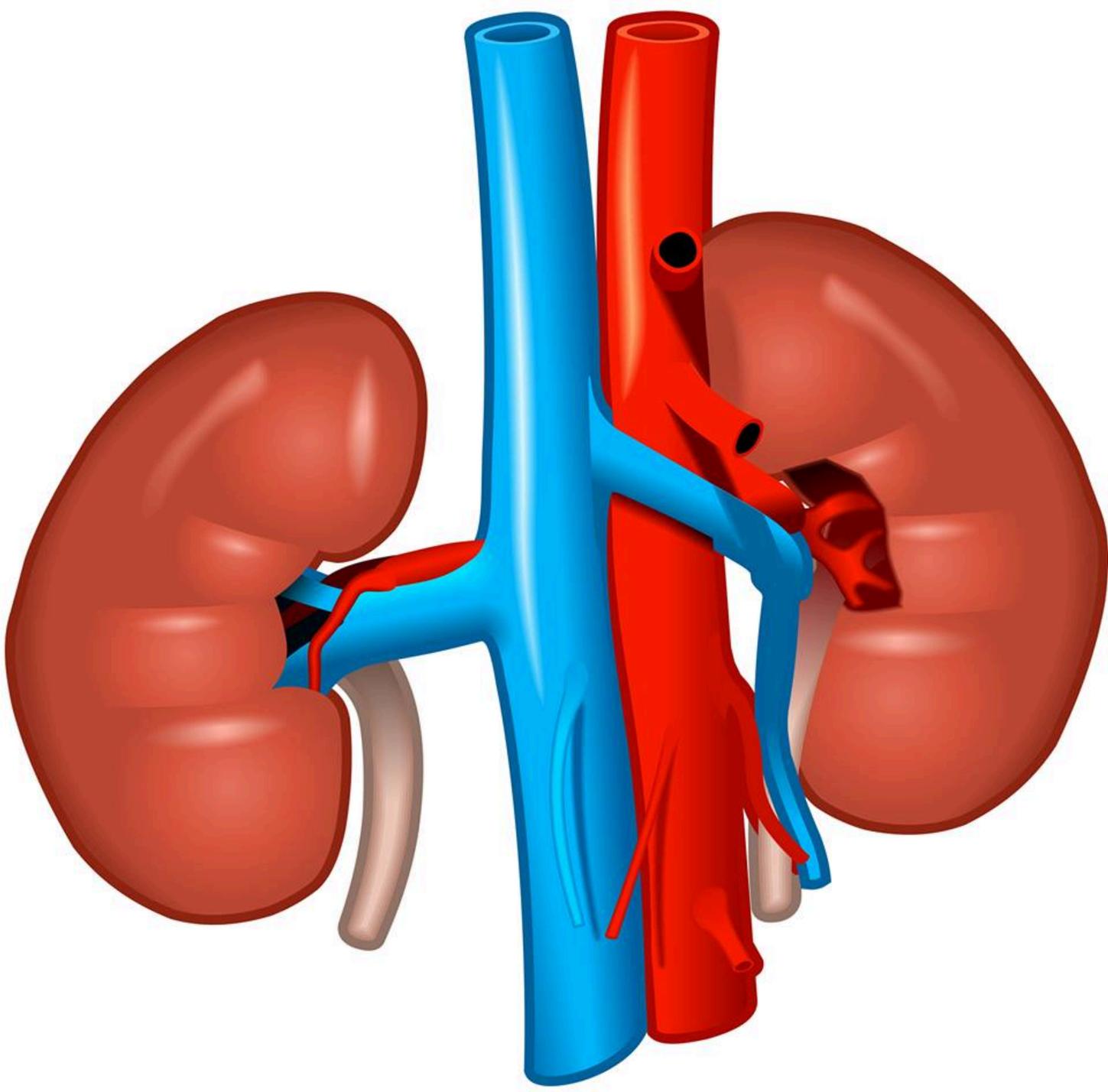
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**ACR**

<i>The numbers in this table indicate recommended frequency of monitoring per year</i>		ACR categories (mg/mmol), description and range		
		A1 <3 Normal to mildly increased	A2 3-30 Moderately increased	A3 >30 Severely increased
GFR categories (ml/min/1.73m <sup>2</sup> ), description and range	G1 $\geq 90$ Normal and high	$\leq 1$	1	$\geq 1$
	G2 60-89 Mild reduction related to normal range for a young adult	$\leq 1$	1	$\geq 1$
	G3a 45-59 Mild-moderate reduction	1	1	2
	G3b 30-44 Moderate-severe reduction	$\leq 2$	2	$\geq 2$
	G4 15-29 Severe reduction	2	2	3
	G5 <15 Kidney failure	4	$\geq 4$	$\geq 4$