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MEDICINES AND YOUR KIDNEYS

Your kidneys play an important role in keeping your body healthy. Their main job is to clear wastes and extra water from the body. Many medicines are also cleared from the body by the kidneys.

Your kidney function may be lower as you get older, or if you have diabetes or high blood pressure.

How well your kidneys work affects how well some medicines are cleared from the body. In addition, some medicines can affect your kidneys.

This brochure will help you to understand:

-  what the kidneys do
-  what you should know about kidney function and medicines
-  how kidney function is checked
-  common medicines that are cleared from the body by the kidneys or that may affect your kidney function
-  factors that can affect kidney function.

If you take medicines, talk to your GP about whether you need to have a blood test to check your kidney function.

If required, your GP can work with you to make any necessary adjustments to your medicines, based on your kidney function, so that you will get the most benefit from your medicines.

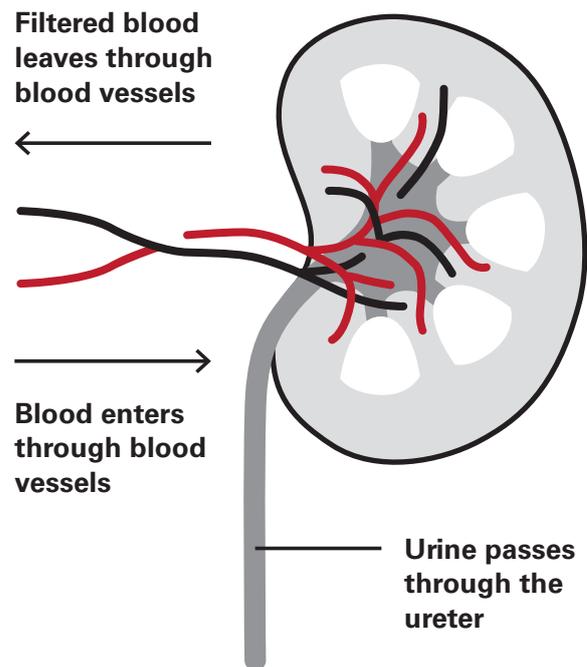
? What do the kidneys do?

The kidneys sit just above the small of your back, on either side of your backbone. They filter and clean your blood and remove substances, such as some medicines, from the blood.

Blood enters the kidneys through blood vessels and passes through many tiny units called nephrons which filter the blood. After the blood is filtered and cleaned, it flows back to the heart through blood vessels (see diagram). Urine, made from wastes and extra water in the blood, flows from the kidneys down through tubes to the bladder, where it is kept until you pass it out through a tube called the urethra.

The kidneys also:

- ⚙️ help to control your blood pressure
- ⚙️ keep the right amount of fluids in your body
- ⚙️ produce other substances that your body needs to stay healthy.



If your kidneys aren't working well, they can't filter blood like they should, and this can cause some medicines to build up in your body.

? What should I know about kidney function and medicines?

💊 How well the kidneys work can affect how well some medicines are cleared from the body

Reduced kidney function means that your kidneys are not able to clear wastes and other substances, such as some medicines, as well as someone with normal kidney function.

Your GP may need to test your kidney function before you start taking some medicines. Your GP will also need to check your kidney function from time to time after starting the medicine.

If your kidney function is low because of factors including age or your medical conditions, your GP can work with you to make any necessary changes to your

medicines such as reducing the amount or type of medicines that you take. This will help to prevent any harm from your medicines, such as a build-up of some medicines in the body, and further reduction in your kidney function.

💊 Some medicines can affect your kidneys

Some medicines can make it hard for your kidneys to work well.

Your GP can test your kidney function after you start taking these medicines.

If a medicine has affected your kidney function or may affect your kidney function, your GP can reduce the dose of the medicine or prescribe a different medicine for you.

? How is kidney function checked?

You may not realise that your kidneys are not working well because you may not have any obvious symptoms.

A simple blood test will help to determine how well your kidneys are working.

A blood test will measure your serum creatinine level. Creatinine is a waste

product made from muscle tissue and the breakdown of protein that you eat. When your kidneys are not working well, creatinine builds up in your blood. Your creatinine result is used to calculate an estimate of your glomerular filtration rate (eGFR). Your eGFR estimates how well your kidneys are working.

? Which medicines might need to be adjusted or changed?

Not all medicines are cleared from the body by the kidneys or affect the kidneys.

For some prescription medicines, the dose of the medicine may need to be adjusted, or the medicine may need to be avoided or replaced, if your kidney function is reduced. These medicines include:

-  some medicines for diabetes
-  some medicines used to treat high blood pressure
-  some antacid medicines
-  some antibiotics.

Before purchasing over-the-counter medicines, ask your pharmacist if they are suitable in reduced kidney function. These medicines include:

-  some pain medicines including non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen; NSAIDs are sometimes included as an active ingredient in medicines for fever, colds and coughs
-  some complementary medicines.

If you would like to know which of your medicines are cleared from the body by the kidneys or may affect your kidneys, talk to your pharmacist or GP. Ask your GP if you need a Home Medicines Review. In this DVA-funded service, a specially trained pharmacist comes to your home to talk to you about your medicines and review any medicines that are cleared from the body by the kidneys or that may affect your kidneys.

Together with your GP and pharmacist, you can work out how to best manage your medicines.

Always talk with your GP before starting, stopping or changing any of your medicines

? What can affect kidney function?

Factors that may affect your kidney function include:



Age

As you get older, your kidney function decreases. By 80 years of age most people have about half the kidney function that they had when aged 20 years.



Diabetes

Diabetes can result in damage to the blood vessels of the kidneys. If the blood vessels are damaged, they may not work as well and this may lead to reduced kidney function.



High blood pressure

High blood pressure can cause damage to the small blood vessels that deliver blood to the kidneys leading to a possible decrease in kidney function.

If you are taking medicines, ask your GP if you need a blood test to check your kidney function. Your GP can also help you to manage other health issues that you may have such as diabetes and high blood pressure.

