

Blood tests (Overview)

This infoKID topic is for parents and carers about children's kidney conditions.

This leaflet has the overview only.

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Your child may need some tests at the clinic or hospital. These tests help find out whether your child has a health condition, and the best treatment. For children with a kidney condition, the tests can find out how well a treatment is working. They can also see whether there is damage to their kidneys or other parts of their body.

One very common test is a blood test. A small sample of your child's blood will be taken from the body, using a needle. This sample will be looked at by specialists in a laboratory.

This topic gives you information about:

- what a blood test is
- why your child may need a blood test
- how blood samples are collected
- complications and risks
- what the blood tests are looking for
- a special blood test to measure how well the kidneys are working – called glomerular filtration rate.



Why does my child need a blood test?

Your nurse or doctor will tell you why your child is having a blood test, and when you will get the results. Common reasons for testing blood in children include:

- to find out more about their general health
- to find out whether they have a condition, including any that affect the urinary system and kidneys
- to find out whether they have an infection
- to check how well their kidneys are working
- for children who have a kidney disease, to find out whether their kidney function is getting worse
- to check whether treatment is working
- before an operation
- before a **blood transfusion** (receiving blood from someone else who has given some of their own blood to be used as a medical treatment – a blood donor)
- to check the blood levels of some medicines.

Getting blood samples

A doctor, nurse or another healthcare professional specially trained to take blood will take the blood sample(s) from your child.

A thin needle is inserted through the skin and into a blood vessel, and a small amount of blood is drawn up into a syringe or special container.

For most children, taking blood is quick, does not hurt much and is very safe. Your child may feel a sharp scratch from the needle. A spray or cream can be put on the skin before the test, to help stop him or her feeling any pain.

Occasionally, there is some swelling, bruising or pain around the site where the blood was taken.

What are the blood tests looking for?

These tests can help find out:

- whether your child has the right amount of important chemicals in his or her body – including minerals called **electrolytes** and the waste products **urea** and **creatinine**
- whether your child has an infection
- the number of different types of blood cells, the living parts of your child's blood – a **full blood count**
- your child's **blood group** – this is important if he or she needs an operation or blood transfusion.

Testing kidney function with glomerular filtration rate

The blood test can also find out how well your child's kidneys are working – this is called the **kidney function**. This is done by estimating or measuring the **glomerular filtration rate (GFR)**, which is the amount of fluid (liquid) that the kidneys filter each minute.

There are two main methods of measuring GFR in children: a simple blood test or a radioactive tracer.

About blood

Blood is pumped by the heart around the body in tubes called **blood vessels**. It carries oxygen and nutrients around the body and takes away waste so that we stay healthy.

Blood is made up of liquid, called plasma, and living parts, called blood cells.

» [Read more about Blood tests on www.infoKID.org.uk](http://www.infoKID.org.uk)

Overview: Read more about blood

Plasma and serum

Plasma is the liquid part of blood. It is made up of water, proteins, nutrients, hormones and waste products.

Serum is plasma but with some of the proteins removed.

Blood cells

There are three types of **blood cells**, the living parts of blood. Blood cells are made in the bone marrow, which is found in the long bones in the body, like the leg bones.

- **Red blood cells** carry oxygen round the body. They do this in a substance called haemoglobin. Red blood cells are often called **RBCs** or **erythrocytes** ("erythro" means red and "cyte" means cell).
- **White blood cells** help fight infection. They are part of the immune system, which is the body's way of defending itself against disease and germs – bacteria and viruses. White blood cells are often called **WBCs** or **leucocytes** ("leuco" means white).
- **Platelets** help blood to clot, or form clumps. This helps the body to heal – for example, when you cut yourself.

Blood vessels

Two types of blood vessels carry blood around the body.

- **Arteries** carry blood from the heart to the rest of the body.
- **Veins** carry blood from the body back to the heart.

Your notes and contact information

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