

## Checking new tests

We may also use your sample to check how well new tests perform. This is important as laboratories constantly update their processes and introduce new technology so they can get more accurate results and provide a better service.

## Research

Scientists need to carry out research as part of university courses and specialist training. As part of the research, scientists may use your stored sample. We will keep your sample confidential. The research benefits the laboratory and patients as it monitors current tests and introduces new ones.

When we have finished testing your sample, we will destroy it confidentially in line with hospital guidelines.

For more information, see  
[www.talktransplant.com](http://www.talktransplant.com)  
or  
[www.dh.gov.uk](http://www.dh.gov.uk)



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Patient Information

# Kidney Transplants

Your guide to laboratory testing  
and giving your permission

Keeping you in control of the  
process

## **Why do you need my permission?**

We need permission for scientists to test, and store, your blood sample. Before you decide whether to give your permission you need to be aware of the tests we will carry out on your sample. This leaflet will explain the tests, and what happens to your sample after we have tested it. If you do not give your permission, we cannot carry out tests or keep your sample.

## **Why do you need to carry out the test?**

Doctors may ask scientists to carry out a range of tests on your blood sample if you are:

- a patient waiting for a transplant; or
- a donor (a person who is giving a part of their body to someone else).

This allows doctors to decide how your body will react to a new (donor) kidney. (This is a kidney someone else has given to you.) Or, if you are a donor, the tests will show how well your kidney will perform if it is given to the patient.

By carrying out tests on cells in your blood and examining your DNA, scientists can find out what type of tissue you have (see 'What is a tissue type?' on the next page). They also look at whether your body has come into contact with different tissue types in the past, for example because of:

- a blood transfusion;
- a pregnancy; or
- another transplant.

## **What is a tissue type?**

You have a unique combination of proteins on the surface of your cells. This combination of proteins is your tissue type. Your immune system checks the combination of proteins like a laser reads a barcode at the supermarket. If your immune system doesn't recognise the 'barcode' on a donor kidney, it will reject it. Giving you a new kidney with the same tissue type as your own means your immune system will recognise the combination of proteins and accept the kidney.

## **How do you test my blood?**

Cells from your blood sample have a unique combination of markers on their surface which shows us what your tissue type is. We can also take DNA, which shows a more detailed picture of your tissue type, from these blood cells. The more we know about your tissue type, the better we can match you with a donor kidney.

Scientists also carry out investigations using another part of your blood called serum. Serum contains antibodies, which your body produces to fight infections such as viruses. Some of these antibodies can attack and damage donor kidneys. We test your antibodies while you wait for your transplant. We let United Kingdom Transplant know about any antibodies we discover in your serum so they can use the information to find the best kidney for you.

Before you have your transplant, we carry out a 'crossmatch'. This is when we mix cells from the donor with your serum. The

result will show us whether you have any antibodies which could damage your new kidney.

## **What else do you use my sample for?**

With your permission, we may keep your DNA and serum samples in case we need to use them in the future. We keep your samples in a freezer in the transplant laboratories, which only transplant scientists have access to. We use the samples we keep for many reasons (see below).

## **Retesting your sample**

This is the most important reason for keeping your sample. We can test your sample again, which means you will not need to give more blood samples. We keep the samples to use for 'crossmatching' before your transplant. We can also carry out new tests on your sample when they become available. This makes sure that the information about your tissue type and antibodies is kept as up to date and accurate as possible.

## **Quality control**

To continue to offer a testing service, we must continually assess our test procedures to make sure we are carrying out tests correctly and to a high standard. We can use samples we have kept and which have a known tissue type for this. We also use the stored samples for training new members of staff.