

Tests before surgery

Information for the public

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About this information

NICE guidelines provide advice on the care and support that should be offered to people who use health and care services.

This information explains the advice about tests people should have before surgery that is set out in NICE guideline NG45.

This is an update of advice on tests before surgery that NICE produced in 2003.

Does this information apply to me?

Yes, if you are aged over 16 years and about to have planned (also called 'elective') surgery.

It does not cover pregnant women, or people having:

- emergency surgery
- heart or lung surgery

- neurosurgery (involving the brain or spinal cord).

Tests before surgery

Before you have surgery you will have a preoperative ('pre-op') assessment. You will usually have this at a preoperative assessment clinic, either at the hospital or in your community. At this appointment you will be asked questions about your health and about any medicines you are taking. You may then be offered some tests. These are called 'preoperative tests'.

Why are preoperative tests done?

Preoperative tests give your nurse or doctor more information about:

- whether you have any medical problems that might need to be treated before surgery
- whether you might need special care during or after surgery
- the risk of anything going wrong, so that they can talk to you about these risks.

The tests you will need depend mainly on:

- your health **and**
- the type of anaesthetic and surgery you're having.

What if I have already had some tests?

If you have had tests at your GP surgery the results need to be included in the letter from your GP when you are referred to see a surgeon. Check this with your GP or practice nurse.

Who will be involved in your care

Different professionals may be involved in your preoperative assessment. You are likely to see a nurse and, if you need to, an anaesthetist or a doctor who specialises in care for people having surgery. Your GP will also be involved.

Making decisions about your tests

Your nurse or doctor should talk with you about preoperative tests. They should explain any tests you have been offered, why they are needed and what they involve, so that you can decide together what is best for you. If you choose to, you can involve your family or carer in making decisions.

We have suggested a list of [questions](#) to help you talk with your nurse or doctor.

There is more information in the [your care](#) section of the NICE website about information, support and giving your consent. You may also like to read NICE's information for the public on [patient experience in adult NHS services](#). This sets out what adults should be able to expect when they use the NHS.

About preoperative tests

Examples of the tests you might be offered are described below.

Full blood count: a blood sample is taken to count different types of blood cells.

Kidney function test: a blood test that checks the salts in the blood and how well the kidneys are working.

Pregnancy test: a urine sample is tested to see if a woman is pregnant.

Blood clotting test: also called a 'haemostasis' test, a blood sample is tested to see how well the blood clots.

Electrocardiography (ECG): a test that uses stickers placed on your skin to produce a trace showing how well the heart is working.

Echocardiography ('echo'): this uses an ultrasound scan to check how well the heart is working.

Lung function tests: tests to check how well the lungs are working, for example, a test called spirometry measures how well you can breathe in and out.

Blood gas tests: a blood sample is taken from the wrist and measured for levels of oxygen and carbon dioxide and the acidity of the blood.

HbA1c (blood sugar) test: a blood sample is tested to give information about the long-term control of blood sugar.

Urine test: a urine sample is tested for urinary tract infections or to check kidney function.

Sickle cell test: a blood sample is tested for a condition called sickle cell anaemia.

When should preoperative tests be offered?

You won't usually need any preoperative tests if you are:

- in good health **and**
- having minor surgery, for example a mole removed.

Usually, only people with a health condition that is making them very unwell may be offered tests before minor surgery (these might be an ECG and kidney function tests).

When tests may be needed

People having certain types of surgery or who have long-term health conditions may need preoperative tests.

Tests before intermediate surgery

Examples of intermediate surgery include removing varicose veins, taking out the tonsils or a knee arthroscopy (where a surgeon uses keyhole surgery to look inside the knee).

This table shows the tests that might be offered. If you are in good health you are unlikely to need tests.

Health conditions	Possible tests
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Diabetes, heart disease or kidney disease	<ul style="list-style-type: none">• Kidney function• Full blood count• ECG
Lung disease	<ul style="list-style-type: none">• Lung function and blood gas tests• Kidney function• ECG
Liver disease	<ul style="list-style-type: none">• Blood clotting test

Tests before major surgery

Examples of major surgery include removing a woman's womb (called a hysterectomy), removing part or all of the colon (large bowel), or replacing a joint such as the hip or knee.

You are more likely to need tests if you are having major surgery. Everyone having major surgery should be offered a full blood count. You are also likely be offered:

- kidney function tests
- ECG.

Other tests you might be offered:

- lung function tests if you have lung disease
- blood clotting tests if you have chronic liver disease.

See [about preoperative tests](#) for a description of the tests above.

Other preoperative tests you might be offered

Pregnancy test

If you are a woman you may be asked if you could be pregnant. If there is a chance you could be pregnant you should have a pregnancy test because an anaesthetic and surgery can cause problems for an unborn baby.

Sickle cell test

You should be asked if you or any member of your family has sickle cell anaemia. This is because surgery and an anaesthetic can cause problems for someone with this condition.

If you have sickle cell anaemia, the nurse or doctor preparing you for surgery should work closely with your sickle cell care team to make sure you have the care you need.

HbA1c (blood sugar) test

You don't need this test if you don't have diagnosed diabetes.

If you have diabetes and have recently had an HbA1c test at your GP surgery, the results need to be included in the letter from your GP when you are referred to see a surgeon. Check with your GP or practice nurse about this. If you haven't been tested in the last 3 months you should be offered this test before surgery.

Echocardiography (echo)

Most people won't need an echo test before surgery, but you might be offered one if you have a heart problem, for example a heart murmur, or signs of a heart problem, like chest pain or being short of breath. Your doctor should do an ECG before deciding if an echo is needed.

Urine test

Depending on the type of surgery you are having, you may be asked for a urine sample for testing to make sure you haven't got a urinary tract infection.

Questions you might want to ask about preoperative tests

These questions may help you discuss preoperative tests with your nurse or doctor.

- When will I have my preoperative assessment?
- Can you tell me more about the tests you've offered me?
- Why have you offered me these particular tests?
- Can you explain the benefits of the tests you have offered me, and if there are any possible harms?
- What do these tests involve?
- Where do I need to go for my preoperative tests?
- How long will it take to get the results?
- How will I find out the results of my tests? Who will they go to?
- What does it mean if any of the tests show problems?
- Could the test results affect whether I can still have my surgery as planned?
- What would it mean for me if I choose not to have these tests?
- Please can you give me some written information about preoperative tests or tell me where to find out more?

More information

The [patients and relatives](#) section of the Royal College of Anaesthetists website has more information about getting ready for an anaesthetic. You can also go to [NHS Choices](#) for

more information.

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