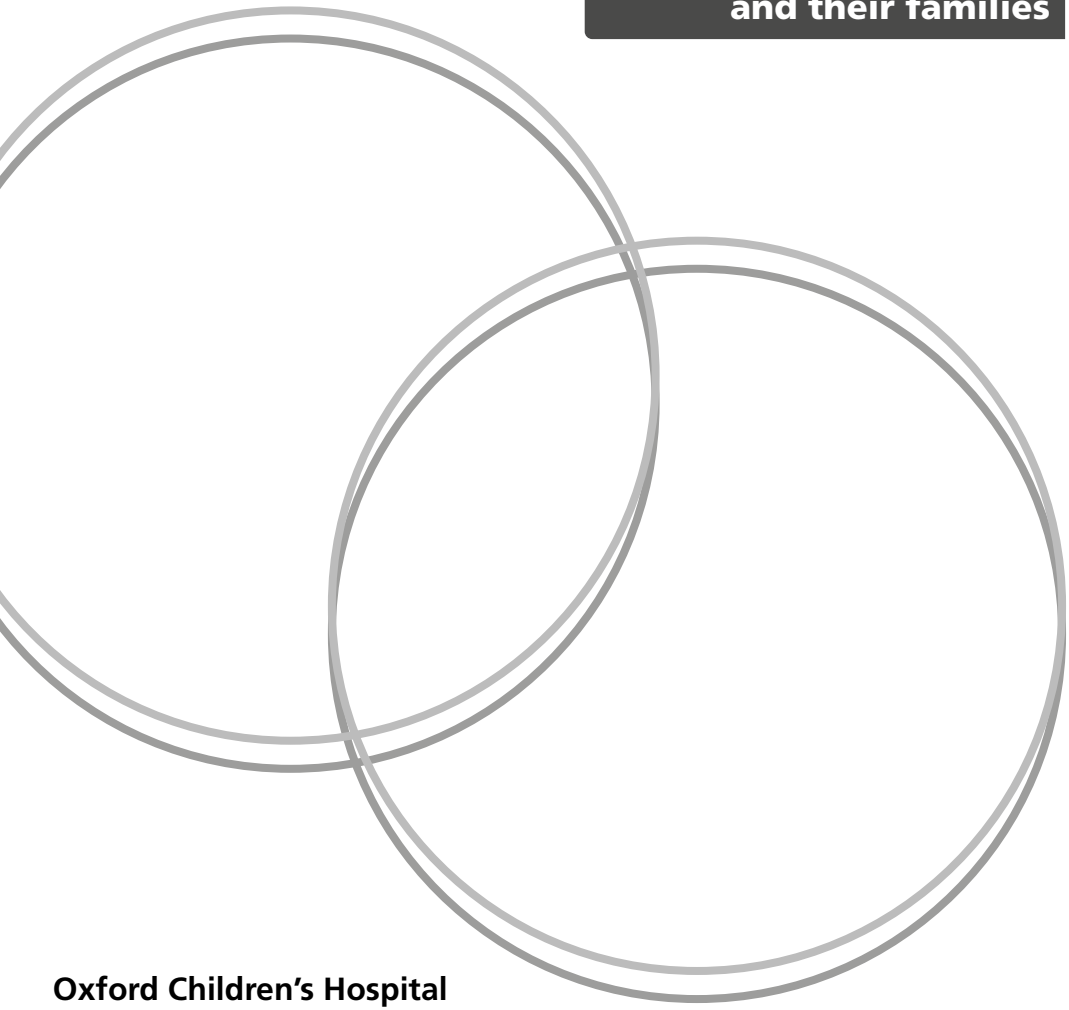
Oxford University Hospitals
NHS Foundation Trust

Sweat Test

Information for children and their families



Oxford Children's Hospital

Introduction

This leaflet has been produced to provide information for children who have been referred for a sweat test. It explains how the test works, why it is used, and what the results may mean.

What is a sweat test?

A sweat test measures the amount of salt (usually as chloride) that is in the sweat. The test takes approximately an hour to complete and will usually be performed in the Children's Day Care Ward, Level 1 or the Children's Out Patient Department, Level LG1.

Why does this need to be carried out?

The sweat test is carried out on children who may have one or more of the following:

- Recurrent chest infections;
- Frequent and/or unexplained pale stools;
- Problems gaining weight or growing properly;
- As part of the Screening programme (The Newborn Bloodspot Screening Programme was set up to enable early identification, referral and treatment of babies with rare but serious conditions)[1];
- Sibling of a known child with cystic fibrosis.

A positive result may mean that your child has cystic fibrosis (CF) but a final diagnosis will take into account other symptoms, clinical findings and test results. Cystic fibrosis is an inherited disease that causes sticky mucus to build up in the lungs and digestive system. Over time this causes lung infections and problems with digesting food.[2] People with CF have a high amount of salt in their sweat. A normal result can be helpful in ruling out CF. It is important to diagnose this condition as soon as possible in order to begin appropriate treatment.

Who does this test?

This test is usually performed by either a qualified healthcare technician or a nurse, trained to perform the test.

How is the test carried out?

The skin is cleaned with water on the forearm selected. Pilocarpine discs that stimulate sweat production are then fastened onto the arm. A small electric current from a battery is then passed through the discs to help the pilocarpine get into the skin. This step takes about 5 minutes and it is during this time that a tingling/tickling sensation may occur.

The next step is to remove the discs. They sometimes leave a red mark which indicates where they have stimulated the skin. This is normal and the marks should fade within a few hours.

The skin is then carefully washed with water and dried. A collection coil, about the size of a watch face is placed over one of the stimulated areas and secured.

You will then be asked to wait for about 30 minutes for the sweat to be absorbed into the collection coil. During this time your child will be free to read or play. The collection coil is then removed and analysed.

What are the benefits?

The sweat test is part of a number of tests the doctor may arrange to help make, or rule out, a diagnosis of cystic fibrosis.

Consent:

We will ask you for your verbal consent (agreement) for this test to go ahead. If there is anything that you are unsure about, or if you have questions, please ask.

What are the risks?

Some people experience a tingling or tickly sensation on the arm where the sweat is being collected.

The bands need to be tight to provide good contact with the pilocarpine gels that are used to initiate the sweat production. These bands may cause some discomfort to the child during the test.

There is a very small risk of burns associated with the phase of the test where the pilocarpine gels are placed to initiate sweat production.[3]

The results:

The sample will be sent to the Laboratory for testing, and will take a few days for the results to become available. You will usually receive the result of the test within a few days from the doctor who requested the test. Sometimes the results can be borderline and the test will need to be repeated. In a few cases the test may need to be repeated for technical reasons. This might be because the sample of sweat collected was too small.

How to contact us:

If you have questions about the process of doing the sweat test, please contact Lisa Tyler on 01865 251147 or Cathy McKenny on 01865 234087.

If you have further questions regarding the need for a sweat test for your child, please speak to the doctor who has referred you for this test as they can provide you with further information.

How can I give feedback about my experiences?

We would like to hear about your experiences with our Children's Services. There are different ways to feed back to us:

Via email: patient.experience@ouh.nhs.uk

You can also contact the Patient Advice and Liaison Service on Telephone: 01865 221 473 or email: PALS@ouh.nhs.uk

References:

[1] NHS England (2024) Newborn blood spot screening programme overview. Available at www.gov.uk/guidance/newborn-blood-spot-screening-programme-overview (Accessed 10/04/25).

[2] NHS Overview of Cystic Fibrosis (2025). Available at www.nhs.uk/conditions/cystic-fibrosis/ (Accessed 10/04/25).

[3] Safety Notice (1999) Prevention of Burns during Iontophoresis (Sweat Testing), MDA SN1999(05).

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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March 2025
Review: March 2028
Oxford University Hospitals NHS Foundation Trust
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Leaflet reference number: OMI 111852