

## THE SWEAT TEST

### What is it and how is it performed?

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*This factsheet has been written to assist you and your medical advisers. It is not intended to replace any advice you may receive from your Specialist CF Centre or CF Clinic.*

### What is the sweat test?

The sweat test measures the amount of salt (usually measured as chloride) in sweat. This is achieved by collecting a small amount of sweat from the arm, or sometimes the upper part of the leg, of a small baby.

### Why is it used?

In people with Cystic Fibrosis (CF), there is defect in the transport of chloride across cell membranes. This results in higher concentrations of chloride (as salt) in sweat compared to those who do not have Cystic Fibrosis.

So, if there is a family history or a strong clinical indication of CF, the sweat test is part of the investigations to make, or exclude, a diagnosis of Cystic Fibrosis. The test is also used for those babies who have been detected on the newborn screening programme as possibly having Cystic Fibrosis

As part of the investigations to look for possible causes of illness, the sweat test is often performed on children with no family history of CF but who have had repeated chest infections, unexplained bouts of diarrhoea, or who are not putting on weight or growing normally, as part of the investigations to look for possible causes for these symptoms. In these circumstances the test is often used to exclude a diagnosis of Cystic Fibrosis. In the same way it is also helpful in investigating adults with problems such as bronchiectasis, infertility and pancreatitis.

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## **How is the test performed?**

A small area of skin on the arm or leg is cleaned with water, and two gels or special pads are attached. These gels/pads contain a substance called Pilocarpine, which will induce sweating. In order to get the Pilocarpine into the skin, the area is stimulated using a battery for about five minutes to produce a small current. This may produce a tingling sensation but does no harm and does not hurt.

The gels/pads are removed, the skin is cleaned and a small coil device or a piece of special paper is placed onto the arm/leg. The sweat is collected into the coil or on the paper for about 20–30 minutes. The sweat in the coil/on the paper is then taken to the laboratory for analysis. The whole test usually takes about 30 minutes.

The area of the arm or leg which was stimulated may stay red for a few hours after the test, but this is normal and nothing to worry about. The test is very safe and the risk of any problems is extremely small.

Occasionally it is necessary to repeat the test if insufficient sweat has been collected or there has been some contamination. This does not necessarily mean that your child is more likely to have Cystic Fibrosis. However, sometimes a borderline chloride result is obtained, and a repeat test will be necessary.

## **The result of the sweat test**

The result of the test will usually be available within a few days from the doctor who requested the test. The test can help them to decide what is wrong but they will also rely on the symptoms and the results of other tests. If your baby is being tested because of a screening test result, arrangements will be made for the test results to be given to you by your local CF Centre.

If you have any questions about why this test is being performed, you should ask your doctor. You should not telephone the laboratory for results. Laboratory staff are not allowed to give out results on the telephone, as they may not know the background for a specific patient.

## Further information

If you have any questions that have not been answered in this booklet, you can contact the Cystic Fibrosis Trust Support Service: ☎ **0300 373 1000**

For further general information and literature published by the Cystic Fibrosis Trust please contact:

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