

Sweat Test

A test to measure the amount of chloride (from salt) in the sweat of people suspected of having cystic fibrosis (CF). It is a painless, simple and usually an accurate test to assist in the diagnosis of CF, and a gold standard tool used internationally.

People with CF have a problem with transporting salt across cell membranes. This results in higher concentration of chloride in sweat compared to those without CF. The sweat test is used to assist in diagnosis of CF and can be done on people at any age. Some infants may not produce enough sweat to be measured at the first test and it will be repeated.

How is the sweat test done?

A sweat sample is collected using a sweat stimulation procedure by placing small discs using a strap on the baby's arm that stimulates sweat production, a small amount of solution is placed under the disc. Sweat is then collected in another collection disc strapped on the arm which has coiled filter paper that collects moisture. Usually sweat is collected for 30 minutes and sent to the laboratory for analysis of chloride concentration. It takes about an hour for the test to be done. The arm or leg area that has been stimulated may remain red for a few hours after the test.

When is the sweat test done?

Screening for CF is part of the Australian newborn screening program (Guthrie/heel prick test). The sweat test is usually done between 4 – 6 weeks of age in babies with a positive newborn screening test as part of the follow up process to the newborn screening process. Sometimes more than one sweat test is needed.

What to do before the test

It is best not to apply cream or lotion to the skin 24 hours before the test. Babies should be fed their usual feed at the regular time. No changes need to be made to the baby's routine.

The result of the sweat test

If your baby is being tested because of the newborn screening test result, the sweat test results will be explained to you by a doctor or genetic counsellor at the CF clinic.

Useful Resources

- Carrier Screening Factsheet <https://www.cfwa.org.au/wp-content/uploads/2017/12/CF-Fact-Carrier-Screening.pdf>
- Cystic Fibrosis: New Diagnosis Information for Parents <https://www.cfwa.org.au/wp-content/uploads/2017/12/CF-Fact-Newly-Diagnosed-Support.pdf>

Cystic Fibrosis WA

The Niche
11 Aberdare Rd
Nedlands WA 6009

Postal Address
PO Box 959
Nedlands 6909

T: +61 8 6457 7333
F: +61 8 6457 7344
E: admin@cfwa.org.au

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