
Cystic Fibrosis Sweat Test

Does this test have other names?

Sweat chloride test

What is this test?

A sweat chloride test is the gold standard test for diagnosing cystic fibrosis (CF). CF is a disease that causes mucus to build up in various organs, especially the lungs. This causes breathing problems. CF can be life-threatening if not treated.

CF is an inherited disease that affects about 30,000 children and adults in the U.S. This simple test measures the amount of chloride, which is part of salt, in your child's sweat. This test is quite accurate because people with CF have more chloride in their sweat than people without this disease.

Why does my child need this test?

Although this test can diagnose CF in anyone, it's usually done on babies and young children. If your baby had a blood test at birth (newborn screen) that was positive for CF, your baby's healthcare provider may order a sweat test. This test is usually done before your baby is 4 weeks old.

Your child's provider may also order this test if they suspect CF because of signs or symptoms at any age. CF causes thick mucus to build up in the lungs and the digestive system. Signs and symptoms may include:

- Salty-tasting skin
- Coughing that doesn't get better
- Trouble breathing, wheezing
- Failure to gain weight even with a good appetite
- Frequent lung infections, including pneumonia or bronchitis
- Abnormal bowel movements, such as frequent greasy, bulky stools

What other tests might my child have along with this test?

Your child may also have a blood test or a swab of cells taken from inside the mouth to look for abnormal genes that cause CF.

What do my child's test results mean?

Test results may vary depending on your child's age, gender, health history, and other things. Your child's test results may be different depending on the lab used. They may not

mean your child has a problem. Ask your healthcare provider what your child's test results mean for them.

Sweat test results are measured in units called millimoles per liter (mmol/L). Here are some possible readings for infants and children of any age:

- 29 mmol/L or less means your baby probably does not have CF.
- 30 to 59 mmol/L means your baby may have CF.
- 60 mmol/L or higher means your baby will probably be diagnosed with CF.

If your child has a sweat test done at a cystic fibrosis center, the caregivers at the center may discuss the results of the sweat test with you. The sweat test results may also be sent to your child's healthcare provider. You should discuss the results with them.

How is this test done?

A sweat test takes about 1 hour. It's usually done at a CF care center. No needles are used for this test. Here is how it's done:

- A clear liquid that causes sweating is rubbed over a small area of skin on the arm or leg.
- An electrode is placed on the wet spot. A small current of electricity is passed to the skin to stimulate sweat glands for about 5 minutes.
- The small electric current may cause a mild tingling or warmth.
- Sweat is then collected from the skin and sent to the lab to have the amount of chloride in it measured.

Does this test pose any risks?

The electric current used is weak and causes no harm. Other than feeling a mild tingling or warmth, your child faces no risks with this test. In some cases, if too little sweat is collected or if the results are borderline, the test may need to be repeated.

What might affect my child's test results?

Some infants may not be able to make enough sweat to do this test. The test will then likely be repeated at a later time. Once this test is positive, it will always be positive. Medicines don't affect the results.

How do I get my child ready for this test?

The only preparation for the sweat test is to not use skin creams and lotions for 24 hours before the test. Be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements your child is taking. This includes medicines that don't need a prescription and any illegal drugs you may have used when pregnant.