

Sweat Testing Procedure and Commonly Asked Questions

OVERVIEW

The sweat test has been the “gold standard” for diagnosing cystic fibrosis (CF) for more than 40 years. When it is performed by trained technicians, and evaluated in an experienced, reliable laboratory, the sweat test is still the best test to diagnose CF. It is recommended that the sweat test be performed in a Cystic Fibrosis Foundation-accredited care center where strict guidelines are followed to ensure the accuracy of the results. The test can be performed on individuals of any age. However, some infants may not make enough sweat for the laboratory to analyze. If an infant does not produce enough sweat on the first sweat test, it should be repeated to collect more.

What happens during a sweat test?

The sweat test determines the amount of chloride in the sweat. There are no needles involved in the procedure. In the first part of the test, a colorless, odorless chemical, known to cause sweating, is applied to a small area on an arm or leg. An electrode is then attached to the arm or leg, which allows the technician to apply a weak electrical current to the area to stimulate sweating. Individuals may feel a tingling sensation in the area, or a feeling of warmth. This part of the procedure lasts approximately five minutes. The second part of the test consists of cleaning the stimulated area and collecting the sweat on a piece of filter paper or gauze or in a plastic coil. Thirty minutes later, the collected sweat is sent to a hospital laboratory for analysis. The entire collection procedure takes approximately one hour.

What does the sweat test reveal?

Your physician has asked that this test be performed to rule out the presence of CF, an inherited disorder of the lungs, intestines and sweat glands. Children and adults with CF have an increased amount of chloride (salt) in their sweat. In general, sweat chloride concentrations less than 40 mmol/L are normal (does not have CF); values between 40 to 60 mmol/L are borderline, and sweat chloride concentrations greater than 60 mmol/L are consistent with the diagnosis of CF. For individuals who have CF, the sweat chloride test will be positive from birth. Once a test result is positive, it is always positive. Sweat test values do not change from positive to negative or negative to positive, as a person grows older. Sweat test values also do not vary when individuals have colds or other temporary illnesses.

Is there any preparation for the sweat test?

There are no restrictions on activity or diet or special preparations before the test. However, one should not apply creams or lotions to the skin 24 hours before the test. All regular medications may be continued and will have no effect on the test results.

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When are sweat test results made available?

Sweat test results are usually available to your physician on the next working day after the test is performed. In a small number of cases, the quantity of sweat obtained is not sufficient to give an accurate result, and the test may need to be repeated.

Can the test results be inconclusive?

Yes. In a small number of cases, the test results fall into “borderline” range between not having CF and indicative of CF. In these situations, repeat sweat tests, as well as other diagnostic procedures, may need to be carried out. These will only be done after consultation with a physician.

Established in 1955, the mission of the Cystic Fibrosis Foundation is to assure the development of the means to cure and control cystic fibrosis and to improve the quality of life for those with the disease.

For more information about the CF Foundation and the programs and services available to people with the disease, or to learn how you can volunteer and help make a difference, please visit www.cff.org or call **(800) FIGHT CF**.

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