



Breathing and lung function tests

Bronchial challenge tests

What is a bronchial challenge test?

A bronchial challenge test measures how sensitive the airways in your lungs are. It's used to help make a diagnosis in people who may have **asthma** (blf.org.uk/asthma).

The bronchial challenge test is sometimes called an airway provocation test. It involves breathing in gradually increasing doses of a medication that can irritate the airways and cause them to get narrower. People with sensitive lungs will be affected by a much lower dose of this medication than people with healthy lungs. The test is done carefully to make sure it is safe.

What's it used for?

A bronchial challenge test may help your health care professional understand if your symptoms are caused by sensitive airways. It may be used if you've had **spirometry** (blf.org.uk/support-for-you/breathing-tests/spirometry-and-reversibility) and **FeNO** (blf.org.uk/support-for-you/breathing-tests/exhaled-nitric-oxide-test) tests but doctors still aren't sure if you have asthma. If your airways are more reactive than normal this may suggest asthma.

How can I prepare for a bronchial challenge test?

You might be sent a leaflet or some instructions on an appointment letter. Make sure you read this, as it will ask you to stop using some or all of your inhalers before the test.

What happens during a bronchial challenge test?

A bronchial challenge test is carried out in a hospital but don't worry, you won't need to stay the night. It aims to produce the same symptoms and changes in your lungs that happen with asthma. The effects of the medication you are given during the test are closely monitored.

Before the test begins, you will be asked to do some simple breathing tests, including **spirometry**. This is to check what your lung function is like before starting the test. If the results are OK, then the bronchial challenge test can be performed.

You will be asked to inhale increasing doses of a medication called a **provocation agent**. This will cause a reaction in your airways. It will be given as an aerosol mist or a dry powder. This starts at a very low dose and then builds up slowly.

Between each dose your breathing will be tested again, to see if there are any significant changes. If a significant change occurs, the test will be stopped. You will be given medication to return your breathing measurements back to normal.

Types of bronchial challenge test

There are 3 types of bronchial challenge test, using different provocation agents:

- methacholine challenge test
- histamine challenge test
- mannitol challenge test.

All three can help tell your doctor if you have asthma or not.

What do the results mean?

If your breathing gets worse quickly, this suggests your airways are very sensitive. This makes a diagnosis of asthma more likely. Your doctor can decide what kind of treatment is best for you.

Get in touch with us to find support near you.

Helpline: **03000 030 555**

Monday to Friday, 9am-5pm

Ringing our helpline will cost the same as a local call.

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We value feedback on our information. To let us know your views, and for the most up to date version of this information and references, call the helpline or visit **blf.org.uk**