

Bronchial challenge test

Bronchial challenge test is used to determine the response of airways in the lungs to different medications. This is also called as bronchial provocation test. Patients are asked to inhale certain medications which can cause narrowing of the airways in susceptible patients, and it helps establishing a diagnosis.

1. Purpose

This test is performed in patients who may have symptoms suggestive of asthma or hypersensitive Airways. The symptoms may include chronic cough, wheezing or breathlessness, especially in response to external triggers. It will tell us whether the hypersensitive airways or asthma is present.

2. Preparation for the test:

Patients need to stop their inhaler medications, ideally two weeks prior to the test but it can vary from patient to patient. Requesting doctor can specify the exact duration. Patient should not take any antihistamines or any anti-inflammatory medication like steroids. Montelukast should be stopped one week prior to the test. Patient can take short-acting bronchodilator like salbutamol or Ventolin but not within eight hours of the test. Patient should avoid eating heavy meal or smoking before the test.

3. Procedure:

In the pulmonary function lab, a baseline spirometry is performed. After establishing baseline spirometry, and if it is normal, patient is administered challenge medication like hypertonic saline in the form of nebulization. Sequential spirometry tests are performed at different intervals. If it shows reduction in the amount of airflow, a diagnosis of hyper responsiveness or asthma is established.

4. Risks:

It is a safe test. Occasional patient may develop significant spasm in the airways, causing a breathlessness. Bronchodilator medications can be given in case of any significant spasms in the airways. A doctor is present in the office during this test to deal with any untoward emergency.

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