

What is a Methacholine Challenge Test ?



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A Methacholine Challenge test (MCT) is a breathing test designed to measure how reactive your airways are. It can be used help diagnose airway reactivity (i.e. asthma) , or to determine if your medication is working well enough to control your breathing symptoms.

Methacholine is a drug used to determine how reactive your airways are. It is given by inhalation in gradually increasing doses. If you have reactive airways, it will trigger this, and likely the symptoms you have been complaining of. If you don't have reactive airways, there will be no reaction.

How is the test done?

Prior to booking a MCT, you will have had a baseline breathing test called a Pulmonary Function Test or Spirometry.

A Respiratory Therapist will explain each stage of the MCT for you. You will be ask to breath through a mouthpiece and inhale a mist that contains different concentrations of Methacholine. Before the test begins and after each period of inhalation, you will be ask to blow forcefully into a spirometer. At the end of the test or if there is a change in your airways, you will be given a medication, Ventolin (salbutamol) to reverse any effects of the Methacholine. The test will take approximately 1 hour.

What are the side effects?

If the test is positive, you can expect to feel some chest tightness, some cough, and perhaps some wheezing; basically the same symptoms that sent you to the doctor in the first place. These symptoms, if they occur, are generally mild, last for only a few minutes, and disappear after receiving the Ventolin.

Other symptoms that may occur include - throat irritation, headache.

The act of performing the blowing test may cause light headedness.

There is a very small possibility of severe narrowing of your airways. This could cause severe shortness of breath. If this occurs, you will be immediately treated.

SPECIAL INSTRUCTIONS, PLEASE READ CAREFULLY

- **DO NOT TAKE** - Ventolin or Airomir (salbutamol), or Bricanyl (terbutaline) for **8 hours before** the test.
- **DO NOT TAKE** – Atrovent (ipratropium), Combivent, or Singulair (montelukast), for **24 hours** before the test.
- **DO NOT TAKE** – Theophylline, Advair, Spiriva (tiotropium), Serevent (salmeterol), Oxeze (formoterol), Seebri (glycopyrronium), Tudorza Genuair (aclidinium) Onbrez (indacaterol) Ultibro, Anaro, Breo, or Symbicort for **48 hours** before the test.
- **DO NOT TAKE** – Reactine (cetirizine) or Zyrtec for **3 days** before the test.
- Take all of your other medications as you normally do, unless you are told otherwise by your physician.

NOTE: If shortness of breath bothers you when you stop taking your medication, start taking them as you normally do.

Please inform us if any of the following applies to you:

- You are pregnant or nursing.
- You have had a heart attack or a stroke in the last 3 months.
- You are taking medication for high blood pressure or heart problems.
- You have an Aortic Aneurysm.
- You are taking a Cholinesterase inhibitor for Myasthenia Gravis.