



CRITICAL CARE, PULMONARY
& SLEEP ASSOCIATES

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Methacholine Challenge Patient Information

What is a Methacholine Challenge Test?

If you have asthma, your airways will tighten when you breathe in methacholine. During the test, you will inhale a very small dosage of methacholine. If your breathing does not change with the first dosage, you will be asked to inhale progressively larger dosages of methacholine. If your airways tighten at any point, you will be given an inhaled bronchodilator medicine that will re-open your airways. Often, the person administering the test will know that your airways are tightening before you do because of the breathing test (spirometry) you will be asked to perform before and following each step of the test.

The basic steps for a methacholine (or histamine) challenge test are as follows:

1. You will do a spirometry test to see what your baseline lung function is. If your lung function is not limited, you will move to the next step of the challenge test.
2. In this step, you may or may not be asked to breathe a harmless saline (salt water) solution before repeating the spirometry test.
3. If your lung function does not change, you will be asked to breathe in a very low dose of methacholine.
4. You will repeat the spirometry test immediately after inhaling the chemical and again a few minutes later.
5. If your lung function does not change after the first very small dose of methacholine, you will inhale the next higher dose of methacholine that is a little stronger than the first dose. You will then do spirometry again.
6. As long as you do not react to the methacholine, you will continue the test, inhaling stronger doses of the chemical (usually between 5-10 doses total) followed by spirometry testing.
7. As soon as your lungs show a worsening in lung function, you will be given an inhaled bronchodilator treatment (usually albuterol or levalbuterol) to help re-open your airways. You will then repeat the spirometry test to make sure your lungs have returned to normal.
8. You will not leave the test area until your breathing has returned to normal. You may therefore be asked to wait for an hour or more, before being allowed to go home



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PRE-PROCEDURE INSTRUCTIONS

You may have a light meal prior to the test

No smoking 6 hours before test

No caffeine (coffee, tea, cola, energy drinks etc.) 4 hours prior to the test

If you have a cold, increased coughing or are feeling ill the day of the test, check with the testing center about postponing your test

See below for directions on stopping certain medications

Call our office you if have any questions 303 915-0600, option 5.

Our office will call you with results within 1 week.

Other _____

Medicines which may need to be stopped before a Methacholine Challenge Test

If you are taking this medicine...	Stop taking it before the test
Quick-acting bronchodilators such as albuterol (Proventil®, Ventolin®, ProAir®), levalbuterol (Xopenex®) or pirbuterol (Maxair®)	8 Hours
Long-acting bronchodilators such as formoterol (Foradil®), salmeterol (Serevent®) or tiotropium (Spiriva®)	48 Hours
Combination products such as budesonide/formoterol (Symbicort®) or fluticasone /salmeterol (Advair®)	48 Hours
Antihistamines (such as cetirizine (Zyrtec®), fexofenadine (Allegra®) or loratadine (Claritin®) 12 to 24 hours.	12-24 Hours
Leukotriene modifiers such as montelukast (Singulair®) or zifirlukast (Accolate®)	24 Hours
Nedocromil (Tilade®)	48 Hours
Cromolyn sodium (Intal®)	8 Hours
Ipratropium bromide (Atrovent®) or ipratropium/albuterol (Combivent®)	24 Hours
Check with your health care provider or testing center to find out when you should stop these medications prior to testing. These do not always need to be stopped. Check with your health care provider or the testing center.	
Inhaled corticosteroids such as beclomethasone (QVAR®), budesonide (Pulmicort®), fluticasone (Flovent®), mometasone furoate	



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(Asmanex®) or triamcinolone (Azmacort®)

<http://patients.thoracic.org/information-series/en/resources/lung-function-studies.pdf>