



METHACHOLINE OR OTHER INHALATION CHALLENGE

What is a methacholine or other inhalation challenge?

Your doctor is concerned that some of your symptoms may indicate that you might have asthma or hyperresponsive airways, which this test can help confirm. This test is also occasionally done in a patient with known asthma to determine the severity of asthma or to identify specific triggers.

What happens during a challenge?

You will inhale increasing concentrations of a particular agent (i.e., methacholine, specific irritant, etc.) After each dose, you will be asked to perform a breathing test (spirometry). After the inhalation portion, you must be observed in the office (time varies on the agent used and if symptomatic) and repeat your breathing test.

What are the possible risks?

Inhalation challenge may be associated with irritation and constriction of the airways with mild shortness of breath, cough, chest tightness, wheezing, chest soreness, or headache. Many patients do not have any symptoms at all. If symptoms occur, they are generally mild, last for only a few minutes, and resolve following a bronchodilator treatment like albuterol. There is a minimal possibility of severe symptoms, which could cause severe shortness of breath. If this occurs, you or your child will be immediately treated with medications and oxygen. When allergens are used for the challenge, a delayed reaction 3-8 hours later may occur; your healthcare provider will tell you what to do in that case.

Scheduling your test:

Tell the medical staff if you:

- Have a history of hives, swelling of the upper airway, or both
- Are pregnant (or chance of being pregnant), breastfeeding
- Have a heart condition (heart attack/stroke in last 3 months, uncontrolled blood pressure)
- Have certain types of blood vessel problems (i.e., aortic or cerebral aneurysm)
- Have had an upper respiratory infection or an immunization in the last 4 weeks

Preparing for your test: ***Please read carefully & call our office if you have questions.*

- Try to avoid exposure to known allergens for 24 hours before testing.
- You may need to **stop certain medications before the test** (*see the chart below for details*).
- **Continue** inhaled steroids at the SAME DOSE.
Examples: Aerospan, Alvesco, ArmonAir, Arnuity Ellipta, Asmanex, Flovent, Pulmicort, QVAR
- **Continue** reflux medications such as cimetidine (Tagamet), esomeprazole (Nexium), famotidine (Pepcid), lansoprazole (Prevacid), or omeprazole (Prilosec).

On the day of the challenge:

- Wear comfortable clothing.
- Do not wear lipstick, perfume, or cologne.
- No smoking, nicotine products, coffee, cola, caffeinated beverages, or chocolate.
- Do not exercise at least 6 hours prior to your test.
- Avoid large meals within 2 hours before the test.



WHEN TO STOP MEDICATION BEFORE TEST	NAME OF MEDICATION
72 hours	Nasal spray and/or eye drop antihistamines <ul style="list-style-type: none"> • Azelastine (Astelin, Astepro, Dymista) • Olopatadine (Pataday, Patanase, Patanol) Oral antihistamines (can be in cold/flu/sleep meds) <ul style="list-style-type: none"> • Acrivastine (Semprex-D) • Brompheniramine (in combination products) • Carbinoxamine (Dimetapp, Palgic, Rondec) • Cetirizine (Zyrtec, Wal-Zyr, Allertec) • Chlorpheniramine (Chlor-Trimetron, Triaminic) • Clemastine (Tavist) • Desloratadine (Clarinex) • Diphenhydramine (Benadryl, Nyquil, may end in -PM) • Fexofenadine (Allegra, Allerfex) • Hydroxyzine (Atarax, Vistaril) • Levocetirizine (Xyzal) • Loratadine (Alavert, Allerclear, Claritin)
48 hours	Long-acting bronchodilators <ul style="list-style-type: none"> • Formoterol (Foradil, Symbicort, Dulera, Bevespi) • Arformoterol (Brovana) • Olodaterol (Striverdi, Stiolto) • Salmeterol (Serevent, Advair, Airduo) • Vilanterol (Breo, Anoro) Nedocromil (Tilade) Aclidinium (Tudorza) Glycopyrrolate (Bevespi, Seebri) Tiotropium (Spiriva, Stiolto) Umeclidinium (Incruse, Anoro) Oral theophylline (Theo-Dur, Theolair, Theo-24, Uniphyll, etc.) Decongestants: Phenylephrine, Pseudoephedrine (Sudafed)
24 hours	Leukotriene inhibitors <ul style="list-style-type: none"> • Montelukast (Singulair) • Zafirlukast (Accolate) • Zileuton (Zyflo) Ipratropium (Atrovent, Duoneb, Combivent)
8 hours	Cromolyn sodium (Intal) Quick-acting rescue inhalers <ul style="list-style-type: none"> • Albuterol (Proair, Proventil, Ventolin) • Levalbuterol (Xopenex)