

## Medicines for EIA

Though some people can keep their exercise-induced asthma under control with simple workout strategies, you may need medication. There are two broad types of medications that your physician might prescribe.

Bronchodilators work to keep the airways relaxed and open, and are used before, or during exercise. A relatively new class of drugs called leukotriene inhibitors blocks the chemical the body uses to constrict the bronchial muscles. The other main categories of medicines are the anti-inflammatories. These include inhaled corticosteroids, which reduce the sensitivity to airways.

While most available medications are inhaled, some are taken in pill form. No one medicine works best for everyone, and you may need a combination for best control. The accompanying table lists the generic medicines, indicated how they work and for how long. Side effects, in cases where they exist, are possible tremors, nausea, or heart palpitations. If you are an athlete, it is important to check that the medication suggested for you is legal, as several of these have been on the list of banned medications for different sports.

Medication	How Long Before Exercise?	Lasts How Long?
Short-acting beta-agonists (B)	15-30 min.	2 hrs.
Salmeterol (B)	30-60 min.	12 hrs.
Cromolyn sodium or nedocromil sodium (A)	10-20 min.	2 hrs.
Inhaled corticosteroids (A)	Ongoing therapy	Ongoing therapy
Ipratropium bromide (B)	1 hr.	2-3 hrs.
Oral theophylline (B)	Ongoing therapy	Ongoing therapy
Leukotriene inhibitors (B)	Ongoing therapy	Ongoing therapy

**A = Anti-inflammatory B = Bronchodilator**

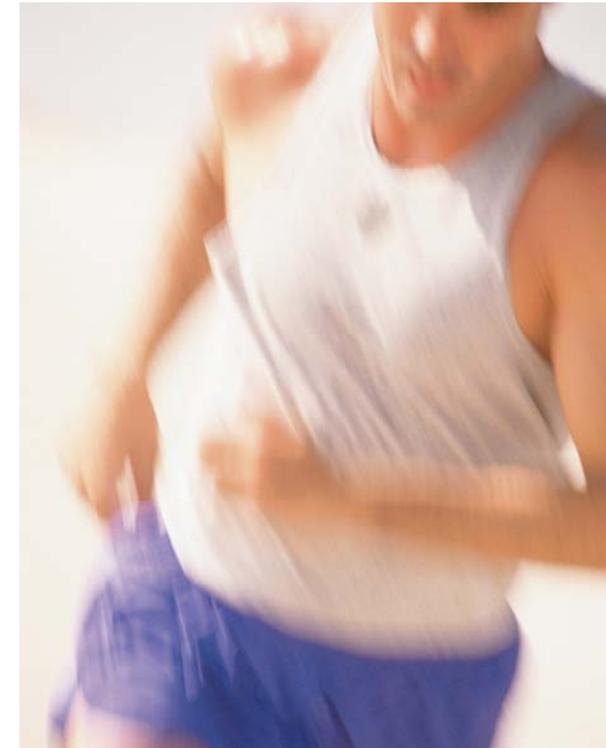


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## An ACSM Public Information Brochure

# Exercise – Induced Asthma



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## “Out of Shape?” Maybe Not...

Many people incorrectly believe that they are “out of shape,” when in fact they may have exercise-induced asthma (EIA). Because the symptoms of EIA are similar to poor fitness, shortness of breath and a tight feeling in the chest, it is difficult to tell the difference between them. Increased training does not stop the problem, and for some, the symptoms of EIA may deter them from exercising. Exercise-induced asthma may not be life-threatening, but it is uncomfortable. EIA affects more people than was originally believed. Clinicians estimate that up to 15 percent of the general population may suffer from this easily over-looked condition. Approximately 11 percent of the 1984 United States Olympic Team had symptoms of exercise-induced asthma. The good news is that EIA is controllable.

## What is Exercise-Induced Asthma?

Exercise-induced asthma is a reaction of the passages of the lungs that is caused by exercise. The bronchial tubes become irritated during exercise and begin to constrict. The bronchial muscles around the tube go into spasm, thus the term “broncho spasm.” Mucus builds up in the tubes, and the cells that line the airways also start to swell, closing the airways even more. Thus, you have problems getting air in and out of your lungs.

## Probable Cause

What triggers an EIA attack is not yet completely known. Your airway warms and moistens incoming air, which is usually cooler and drier. In the process the airways can cool down and dry out, which can irritate sensitive tissues. The amount of air moved in and out of the lungs increases during exercise, thus increasing the amount of cooling and drying. The bronchial tubes react to this process with EIA. Although chronic asthma sufferers are more likely to have EIA, the presence of EIA does not lead to chronic asthma.

## Symptoms of Exercise-Induced Asthma

The symptoms of EIA include: shortness of breath during or after exercise, chest tightness or pain, coughing, and wheezing. These symptoms start a few minutes into exercise and may last for 30-60 minutes. In contrast, if

the problem is poor fitness, the symptoms will usually disappear a few minutes after stopping exercise.

## What To Do

You should speak with your doctor if you think you have exercise-induced asthma. Only a doctor can decide whether you have EIA. An exercise test can be used to determine EIA. However, this test will not be positive for everyone with EIA. Many doctors will base their diagnosis on your history and symptoms, and may have you use a trail of bronchodilator therapy prior to exercise. Although chest pain is a symptom of EIA, it is important for your doctor to rule out cardiovascular disease.

You can take several simple steps to reduce the change of having an EIA attack. Breathing through your nose will help warm and moisten the air before it reaches the bronchial tubes, though it’s not very easy during anything but a mild workout. Staying out of cold, dry air may be the best course of action, but if you do exercise outdoors, wear a face mask or scarf, which enriches inhaled air with heat and moisture from your skin. If you exercise inside, such as on an indoor track, on a treadmill, or in the warm, moist air of an indoor swimming pool, you are less likely to have an EIA episode. Lower intensity sports, such as golf, baseball or weight-lifting are less likely to stimulate EIA (though they provide less cardiovascular benefits). And no matter what your activity, if high amounts of airborne irritants like pollen increase your chance of an attack, it makes good sense to exercise indoors on days when those pollutants are high.

**Most Importantly** — you should continue to exercise. Exercise training will improve fitness so that a lower level of breathing is needed at a given exercise level. Good cardiovascular fitness will enable you to exercise at a higher intensity before causing an EIA attack.

### TIPS TO TRAIN BY

- Exercise indoors
- Cover mouth and nose when outdoors
- Warm-up 45-60 minutes before training
- Interval training

## Additional Workout Strategies

Nature has created an EIA loophole called the “refractory period.” The refractory period lasts up to two hours after

an exercise-induced asthma attack. During this time your lungs are less likely to react as strongly. If you warm up 45 minutes to an hour before your workout you may be able to exercise without too many symptoms. In addition, EIA usually starts several minutes into a workout. Some athletes have found they can exercise easier by using alternating work and rest periods (interval training).

