



ACSM Information On...

## Exercise-Induced Asthma

Many people confuse being out of shape with having 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 can be difficult to tell the difference between them. The symptoms of EIA may deter people from exercise; however, it's a controllable medical issue.

### A COMPLETE PHYSICAL ACTIVITY PROGRAM

A well-rounded physical activity program includes aerobic exercise and strength training exercise, but not necessarily in the same session. This blend helps maintain or improve cardiorespiratory and muscular fitness and overall health and function. Regular physical activity will provide more health benefits than sporadic, high intensity workouts, so choose exercises you are likely to enjoy and that you can incorporate into your schedule.

ACSM's physical activity recommendations for healthy adults, updated in 2011, recommend at least 30 minutes of moderate-intensity physical activity (working hard enough to break a sweat, but still able to carry on a conversation) five days per week, or 20 minutes of more vigorous activity three days per week. Combinations of moderate- and vigorous-intensity activity can be performed to meet this recommendation.

Examples of typical aerobic exercises are:

- Walking
- Running
- Stair climbing
- Cycling
- Rowing
- Cross country skiing
- Swimming.

In addition, strength training should be performed a minimum of two days each week, with 8-12 repetitions of 8-10 different exercises that target all major muscle groups. This type of training can be accomplished using body weight, resistance bands, free weights, medicine balls or weight machines.

### WHAT IS EXERCISE-INDUCED ASTHMA?

In asthma, the small airways of the lungs become irritated from various causes and begin to constrict. The bronchial muscles around the tube go into spasm, and mucus builds up in the tubes. The cells that line the airways also start to swell, closing the airways even more. In exercise-induced asthma, this reaction is triggered by exercise.

### PROBABLE CAUSES OF EIA

The cause of what triggers an EIA attack is unknown. The 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 and increases the amount of cooling and drying. Although chronic asthma sufferers are more likely to have EIA, the presence of EIA does not lead to chronic asthma.

### SYMPTOMS OF EIA

The symptoms of EIA include:

- Shortness of breath during or after exercise



- Tightness or pain in the chest
- Coughing
- Wheezing

The 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

Speak with your doctor if you believe you are experiencing EIA. An exercise challenge test can be used to determine EIA. Many doctors will base their diagnosis on your history and symptoms and may have you use a trial 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.

#### REDUCING AN EIA ATTACK:

- Breathe through your nose. This will help warm and moisten the air before it reaches the bronchial tubes.
- Stay out of cold, dry air. If you do exercise outdoors, wear a face mask or scarf to help warm the inhaled air with heat and moisture from your skin.
- Exercise indoors. You are less likely to have an EIA episode when doing so.
- Participate in lower-intensity sports, such as golf, baseball or weightlifting.

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—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 experiencing an EIA attack

#### ADDITIONAL WORKOUT STRATEGIES

There's an EIA loophole called the refractory period. This 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. Some athletes have found they can exercise easier by alternating work and rest periods (interval training).

#### MEDICINES FOR EIA

In some cases, medicine is needed to treat EIA. There are two broad types of medications that your physician might prescribe: bronchodilators and anti-inflammatory medication. Bronchodilators work to keep the airways relaxed and open, and are used before or during exercise. Anti-inflammatory medications include inhaled corticosteroids, which reduce the sensitivity to airways. No one medicine works best for everyone, and you may need a combination for best control. Side effects, in cases where they exist, are possible tremors, nausea, or heart palpitations. If you are an elite 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.



#### STAYING ACTIVE PAYS OFF!

Those who are physically active tend to live longer, healthier lives. Research shows that moderate physical activity – such as 30 minutes a day of brisk walking – significantly contributes to longevity. Even a person with risk factors like high blood pressure, diabetes or even a smoking habit can gain real benefits from incorporating regular physical activity into their daily life.

As many dieters have found, exercise can help you stay on a diet and lose weight. What's more – regular exercise can help lower blood pressure, control blood sugar, improve cholesterol levels and build stronger, denser bones.

#### THE FIRST STEP

Before you begin an exercise program, take a fitness test, or substantially increase your level of activity, make sure to answer the following questions. This physical activity readiness questionnaire (PAR-Q) will help determine if you're ready to begin an exercise routine or program.

- Has your doctor ever said that you have a heart condition or that you should participate in physical activity only as recommended by a doctor?
- Do you feel pain in your chest during physical activity?
- In the past month, have you had chest pain when you were not doing physical activity?
- Do you lose your balance from dizziness? Do you ever lose consciousness?
- Do you have a bone or joint problem that could be made worse by a change in your physical activity?
- Is your doctor currently prescribing drugs for your blood pressure or a heart condition?
- Do you know of any reason you should not participate in physical activity?

If you answered yes to one or more questions, if you are over 40 years of age and have recently been inactive, or if you are concerned about your health, consult a physician before taking a fitness test or substantially increasing your physical activity. If you answered no to each question, then it's likely that you can safely begin exercising.

#### PRIOR TO EXERCISE

Prior to beginning any exercise program, including the activities depicted in this brochure, individuals should seek medical evaluation and clearance to engage in activity. Not all exercise programs are suitable for everyone, and some programs may result in injury. Activities should be carried out at a pace that is comfortable for the user. Users should discontinue participation in any exercise activity that causes pain or discomfort. In such event, medical consultation should be immediately obtained.



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