



Exercise-Induced Asthma Management in Athletes

Introduction

Most patients with asthma will experience asthma symptoms with strenuous exercise. Usually, it is relatively easy to prevent exercise-induced asthma (EIA) by using an inhaled bronchodilator (for example, Proventil, Ventolin, or Albuterol) prior to exercise. However, in many athletes who exercise for sustained periods of time, simple treatments are not effective. This is frustrating for many athletes who see their asthma as causing a limitation of their ability to perform to their maximal level. Additionally, there is a concern that many of the asthma medications will not be allowed in competitive events, which could lead to disqualification.

Fortunately, treatment plans for athletes with asthma have been developed and successfully used in college, Olympic, and professional level sports. There are many medications which have been approved (and some which have been banned!) in various arenas of athletic competition, including international competition.

How Athletes Can Help Themselves Prevent EIA

It is important for you to develop a plan with your doctor to help you prevent EIA. Every individual is different. Here is what we recommend to our patients with difficult-to-control EIA.

- Make sure your asthma is as well controlled as possible on a day to day basis.
- If possible, choose a sport that is the least likely to trigger asthma. Swimming is less “asthmagenic” than biking, and biking is less “asthmagenic” than running.
- Pay attention to environmental factors and their impact on your asthma during exercise. For example, elevated pollution levels may affect your asthma during exercise, as may cold, dry air and pollen-filled air. Thus, exercising indoors at certain times may be preferable to outdoor exercise.
- Try to breathe through your nose during exercise as much as possible, since the nasal tissue’s function is to clean, warm, and humidify air before it reaches your lungs.
- Physical training and conditioning is important, since it can increase how efficient the heart and lungs work. Thus allowing you to do a greater amount of work with less effort.
- A warm-up period, when used together with inhaled (and occasionally oral) medications before exercise can help athletes avoid or control episodes of EIA during competition:
 1. Begin by pre-medicating with _____
 2. Warm-up with 3-5 minutes of very light aerobic activity. Proceed with a variety of stretching exercises.
 3. Begin aerobic exercise (for example, jogging or running). Raise heart rate to 50% to 60% of your maximum and sustain it for 5 to 10 minutes. This may cause the airways to “open-up” to a slight extent, therefore getting more air into the lungs and more oxygen into the bloodstream. Proceed until your training session is complete. Follow with a cool-down period.

If EIA symptoms continue to interfere with exercise, contact our office for further evaluation.

Recommendations for Medication Use For Asthma and Upper Respiratory Symptoms in Competitive Athletes

It is important for every athlete who is or will be participating in college and/or Olympic sports to ensure that all of his/her medications are in compliance with the rules and regulations of sports governing bodies. Different governing bodies have their own set of regulations regarding medications that are prohibited or restricted. Further, the particular form of a medication may make a difference in terms of its acceptability for use. In addition, certain medications require prior notification to the athletic governing body and/or other groups. Thus, it is essential that every competitive athlete contact the appropriate source(s) for information on all prescription and over-the-counter medications that he/she is using or is considering using. This includes all topical preparations.

It must be noted that if an athlete in the U.S. is using or considering using a medication obtained outside of the U.S., its status must be determined through an appropriate source. It should also be noted that the United States Olympic Committee (USOC) and the National Collegiate Athletic Association (NCAA) have different lists for medications.

Here is a list of information sources for medication use for athletes:

1. Sources for Olympic Athletes:

- Consult a USOC head team physician.
- Consult a knowledgeable USOC medical staff member.
- www.usantidoping.org has the most current Guide Book on Prohibited Substances.
- USOC Olympic Drug Reference Line at 1-800-233-0393. This line is staffed on weekdays from 8:00 a.m. to 5:00 p.m. (Mountain Time), is confidential, and can assist athletes, coaches, parents, physicians, and others. For emergencies during weekends or after-hours, coverage is provided through an answering service.
- Written information is available from the USOC.
It should be noted that the USOC has incorporated the principles and guidelines set forth by the International Olympic Committee (IOC). However, some medications may be prohibited by International Federations.

2. Sources for Collegiate Athletes:

- Consult a trainer, coach, and/or team physician.
- www2.ncaa.org This web site provides general information that includes a 'Banned Drug List'. Click on "Legislation & Governance" at top of home page, click "Eligibility & Conduct", then click "Drug Testing".
- NCAA 700 W. Washington St., P.O. Box 6222 Indianapolis, Indiana 46206-6222
317-917-6222
- Written information is also available from the NCAA.

References

- Huftel MA et al.: Finding and managing asthma in competitive athletes. **J Resp Dis** 1991; 12:1110.
- Reiff DB et al.: The effect of prolonged submaximal warm-up exercise on exercise-induced asthma. **Am Rev Respir Dis** 1989; 139:479.
- United States Olympic Committee Drug Education Program, Colorado Springs, Colorado, 80909, May, 1999.
- Athletic Drug Reference '99. Editors: Robert J. Fuentes, MS, Pharm D, Jack M. Rosenberg, Pharm D, PhD.