

Exercise-Induced Bronchoconstriction (EIB) Management in Asthmatic Athletes (Also called Exercise-Induced Asthma (EIA))

Most patients with asthma will experience asthma symptoms with strenuous exercise. Usually, it is relatively easy to prevent exercise-induced bronchoconstriction (EIB) by using an inhaled bronchodilator, i.e. albuterol prior to exercise. However, in many athletes who exercise strenuously 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.

NOTE: EIB can occur in non-asthmatics with extraordinary exercise efforts and especially in endurance sports.

Fortunately, treatment plans for athletes with asthma have been developed and successfully used in college, Olympics, 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 EIB

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

- Make sure your asthma is as well controlled as possible on a day to day basis.
- Some sports are less likely to trigger asthma. For example, swimming is less likely to cause EIB than biking, and biking is less likely to cause EIB than running, but usually it is possible to control EIB for most any sport.
- 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 in individuals sensitive to these pollens. 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. Dry air increases EIB. It is usually difficult to do so with strenuous exercise but scarves or masks can create a "pouch" of warm, humidified air.
- 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 EIB during competition for up to two hours:
 1. Begin by pre-medicating with _____
 2. Start with a variety of stretching. Warm-up with 1-2 minute bursts of strenuous activity, repeating 2-4 times.

If EIB 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:

- a. Consult a USOC head team physician.
- b. Consult a knowledgeable USOC medical staff member.
- c. www.wada-ama.org has the most current Guide Book on Prohibited Substances.
- d. USADA (US Anti-doping Drug Agency) Olympic Drug Reference Line at 1-800-233-0393. This line is staffed on weekdays from 8:00 a.m. to 4:00 p.m. (Mountain Time), is confidential, and can assist athletes, coaches, parents, physicians, and others. Written information is available from the USOC and USADA.

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 and other competitive athletes:

- a. Consult a trainer, coach, and/or team physician.
- b. www.ncaa.org web site provides general information that includes a '*Banned Drug List*'.
- c. NCAA 700 W. Washington St., P.O. Box 6222
Indianapolis, Indiana 46206-6222
317-917-6222, fax 317-917-6888.