

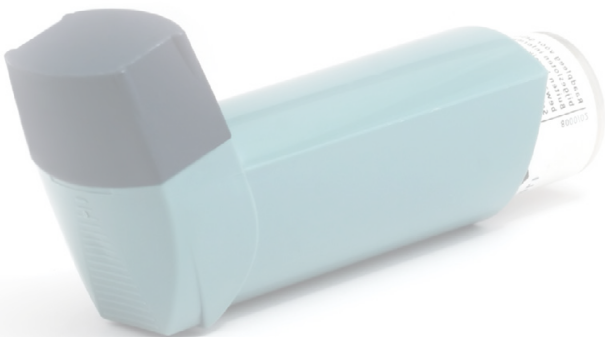


Out of Shape or Out of Breath?

Exercise-Induced Asthma (EIA) could be an underlying condition as to why many active people feel like they are “out of shape” or just can’t exercise like they used to in the past. EIA affects 15% of the general population and nearly 90% of active individuals with chronic asthma conditions. Exercise-Induced Bronchoconstriction (EIB) is also a form of airway hyper-reactivity that can occur without underlying asthma and can affect anyone at any time minutes after exercise.

EIA occurs when bronchial tubes undergo constriction and inflammation. With exercise, it is hypothesized that the increased intake of drier, cooler air causes the bronchioles to dry out resulting in airway edema, inflammation and bronchospasm. This theory supports the fact that most EIA occurs in cooler-weathered sports such as ice hockey, figure skating and skiing. In EIB there is no significant inflammation but mainly bronchospasm.

Athletes suffering from EIA typically feel short of breath, tightness in the chest and will cough or wheeze minutes into aerobic exercise. This often results in underperformance or fatigue during events. Factors that can worsen an EIA event are cool temperatures, poor air quality, high pollen counts, environmental chemicals and respiratory infection. The diagnosis of EIA is often made by a detailed history, not only from the patient, but from coaches, parents and workout partners. The athlete usually will have a normal physical examination, with no wheezing on lung field auscultation. One should exclude other diagnoses such as cardiovascular disease, anxiety, deconditioning syndrome and vocal cord dysfunction.



Summa Center for Sports Health



Nilesch Shah, M.D.

Dr. Nilesch Shah obtained his medical degree from The Ohio State University College of Medicine in 1998. He completed a sports medicine fellowship at The Ohio State University, is board-certified in family practice and possesses a certificate of added qualifications in sports medicine. Dr. Shah is the fellowship director for the Summa Health System Sports Medicine Fellowship and medical director of Summa Center for Sports Health. He is a team physician for the Akron Aeros, Kent State University athletics and Kent Roosevelt High School. Dr. Shah is also medical director for the Akron Marathon.



Tom Bartsokas, M.D.

Dr. Tom Bartsokas obtained his medical degree from Southern Illinois University School of Medicine and master's degree in exercise physiology from University of Wisconsin, La Crosse. He is board-certified in family medicine and possesses a certificate of added qualifications in sports medicine. Dr. Bartsokas provided medical support to the 1996 and 1998 Olympic Games. He is currently team physician for Kent State University athletics, Ravenna High School and provides medical support to Akron Aeros.



James Goff, D.O.

Dr. James Goff obtained his medical degree from Ohio University College of Osteopathic Medicine in 1998. He completed his fellowship training in sports medicine at The Ohio State University Medical Center. He is board-certified in family practice and possesses a certificate of added qualification in sports medicine. Dr. Goff is a clinical professor at Ohio University College of Osteopathic Medicine and is team physician for Kent State University athletics, Green and Manchester High Schools and provides medical support to Akron Aeros.

The use of diagnostic and imaging studies is usually reserved to rule out other possible conditions when the athlete is not improving with treatment. For a formal diagnosis of EIA, an exercise challenge test with pre-exercise and post-exercise pulmonary function testing (PFT) can be ordered by a physician. Pre-exercise PFTs are obtained, then the athlete bikes or runs to achieve 85% maximum heart rate for 10 minutes. Post-exercise PFTs are then taken several times over a 30 minute span. A drop of 10% or more from baseline indicates EIA.

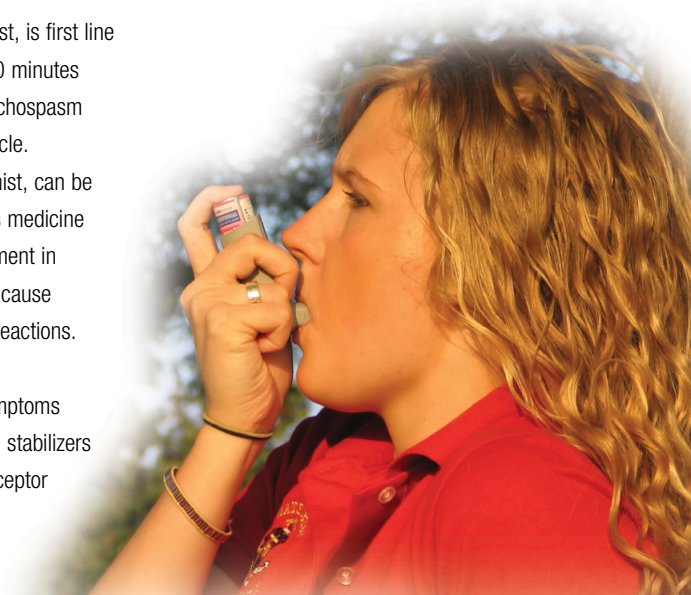
Preventive treatment of EIA can be achieved by non-pharmacologic measures such as covering mouth and nose during cold air exercise, avoiding pollens and pollutants, proper warm-up 15 minutes before event and cool down exercises before completion.

Albuterol, a short-acting beta 2-agonist, is first line treatment for EIA. One to two puffs 20 minutes before exercise usually prevents bronchospasm by relaxing the bronchial smooth muscle. Salmeterol, a long-acting beta 2-agonist, can be inhaled 45 minutes pre-exercise. This medicine should not be used as a rescue treatment in acute bronchospasm. Salmeterol can cause tachyarrhythmia and hypersensitivity reactions.

Other medicines that can improve symptoms when added to albuterol are mast cell stabilizers (cromolyn sodium) and leukotriene receptor

antagonists (montelukast). Inhaled steroids are useful for underlying inflammation seen in chronic asthma. Inhaled steroids can be used if inflammation is suspected. Some cases of EIB may not improve with inhaled steroids.

Treatment for acute EIA attack should start with removal of athlete from competition, assess basic life support actions, administer two doses of albuterol and observe for worsening symptoms. If no improvement in breathing then emergency transport to local ER is needed to avoid the athlete from progressing to status asthmaticus. If the athlete improves with sideline treatment, the use of a peak flow meter evaluation should be compared to the athlete's baseline peak flow measurement. If baseline is achieved and all symptoms have improved, the athlete could cautiously return to sport.



Same day/next day physician appointments offered. Call **1-888-7-SUMMA-SPORT** (888-778-6627)

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