

PRESS RELEASE

Olympic-level training causes asthma

Istanbul/Zurich, 12 June 2011 - Elite athletes who have asthma symptoms but no previous history of the condition have been suspected of abusing anti-asthma drugs to enhance performance. However, a new study by Professor Sergio Bonini and colleagues in Italy in collaboration with the Italian National Olympic Committee, indicates their asthma is genuine. They surveyed over a thousand European athletes competing at the Beijing Olympics, and found that 15% had problems with asthma compared to only three to five per cent in the normal population.

Professor Bonini from the Institute of Neurobiology and Molecular Medicine in Rome explained today that one of the reasons is that these sports people push themselves to the limits of their endurance. "Strenuous and prolonged exercise and training are stressors that reduce the numbers of immune cells that protect from infection, and increase the types of cells that cause allergy and asthma". Another reason is that exercise causes rapid breathing (hyperventilation) and over long periods this can cause dehydration, which can trigger a sudden narrowing of the airways (bronchoconstriction).

Therefore, the high numbers of elite athletes reporting asthma symptoms includes those with 'real' asthma and those who experience identical symptoms caused by their strenuous training (called 'exercise-induced bronchoconstriction'), according to Professor Bonini and his colleagues, Claudia Gramiccioni and Matteo Bonini. Although the symptoms are indistinguishable, exercise-induced bronchoconstriction is different to asthma because when these athletes cease their strenuous training, the exercise-induced bronchoconstriction disappears too. Speaking at the Congress of the European Academy of Allergy and Clinical Immunology, Professor Bonini believes that concerns over the muscle-bulking effects of anti-asthma drugs (which only happen if the drugs are injected rather than inhaled) are currently unfounded. He said, "There is a genuine problem with bronchoconstriction attacks among athletes and the drugs currently available do not have muscle-increasing effects. There is evidence that certain bronchodilator drugs increase muscle mass but they are banned by the anti-doping agency."

Professor Bonini believes it is crucial to consider the mind-set of an elite athlete: avoidance of such attacks is paramount for sportspeople competing at this level if they are to avoid the potentially disruptive effect of an asthma attack on training or performance in a competition. Athletes who experience these attacks sometimes take the drugs before or during an event to reduce the likelihood of an attack. For example, the footballer David Beckham was recently witnessed using an inhaler during a match.

This is a reason for some elite sportspeople with no history of asthma to request anti-asthma medication, rather than the belief that they will increase muscle mass. Also, when taking these drugs, their side effects need to be carefully considered. "For the bronchodilator drugs that are allowed, there is no real advantage in performance - on the contrary some bronchodilators can cause tremors or a rapid heartbeat, which could be a

disadvantage for athletes competing at this level," he explained. "Overall, we found a strong attitude against drug abuse among athletes - they want to be perfect."

Symposium 8

NOTES TO EDITORS

Professor Sergio Bonini, Institute of Neurobiology and Molecular Medicine, Rome, Italy
se.bonini@gmail.com

Publications: Bonini S. **EIB or Not EIB? That is the Question.** *Med Sport & Science Exerc* 2008;40:1565-66

Bonini M, Braido F, Baiardini I, Del Giacco S, Gramiccioni C, Manara M, Tagliapietra G, Scardino A, Sargentini V, Brozzi M, Rasi G, Bonini S. **AQUA®: Allergy Questionnaire for Athlete. Development and Validation** *Med Sport & Science Exerc* 2009;41:1034-41

Bonini M, Gramiccioni C, Bresciani M, Casasco M, Pelliccia A, Todaro A, Canonica GW, Bonini S **Allergy and asthma records at the Beijing Olympics** *Abs. World Asthma Congress, Montecarlo November 5-8, 2008*

Bonini S, Craig T. **The elite athlete: yes, with allergy we can** *J Allergy Clin Immunol.* 2008;122:249-50

Schwartz LB, Delgado L, Craig T, Bonini S, Carlsen KH, Casale TB, Del Giacco S, Drobic F, van Wijk RG, Ferrer M, Haahtela T, Henderson WR, Israel E, Lötvalld J, Moreira A, Papadopoulos NG, Randolph CC, Romano A, Weiler JM. **Exercise-induced hypersensitivity syndromes in recreational and competitive athletes: a PRACTALL consensus report (what the general practitioner should know about sports and allergy).** *Allergy.* 2008;63:953-61

About EAACI:

EAACI - The European Academy of Allergy and Clinical Immunology is a non-profit organisation active in the field of allergic and immunologic diseases such as asthma, rhinitis, eczema, occupational allergy, food and drug allergy and anaphylaxis. EAACI was founded in 1956 in Florence and has become the largest medical association in Europe in the field of allergy and clinical immunology. It includes 6'500 members from 107 countries, as well as 41 National Allergy Societies.

Throughout 2011, EAACI will develop different activities to celebrate the 100th anniversary of immunotherapy in Allergy, which will aim at increasing the knowledge in this field among healthcare professionals, increase awareness in the general population, and finally, promote the availability of immunotherapy for allergic patients.

For further information:

EAACI 2011 Press Center

Elaine Snell (English)
Tel.: +44 (0)20 7738 0424, Mobile: +44 (0)7973 953 794
elaine@snell-communications.net
Snell Communications Ltd, UK www.snell-communications.net



Eren Akyurt (Turkish)
Tel Mobile +90 (0)544 344 5800
ernakyurt@gmail.com
Gülçin Yılmaz İzel (Turkish)
Tel +90 (0)212 356 09 09 or Mobile +90 (0)532 244 46 29
gulcinyilmaz@3diletisim.com
3D Communication Services, Turkey www.3diletisim.com

Direct Tel: EAACI Press Office *from 11-15 June 2010 only*: +90 212 373 99 15

EAACI Headquarters

Head of Communications
Panthea Sayah
Genferstrasse 21
8002 Zurich
Switzerland
Tel.: +41 44 205 55 33
Fax: +41 44 205 55 39
Mobile: +41 79 551 99 48
E-mail: panthea.sayah@eaaci.org
Internet: www.eaaci.net