

# Asthma is the most common chronic disease among Olympic athletes

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Based on data from the last five Olympic games, a study by the University of Western Australia has identified those athletes with asthma and airway hyper-responsiveness. With a prevalence of around 8% they are the most common chronic conditions among Olympic athletes, and could be related to intense training.

In summer and winter sports there is widespread suffering from asthma and airway hyper-responsiveness (AHR) among athletes who take part in [endurance sports](#). Its relatively late onset in many older athletes suggests to the experts that the years of intense training could be one of the causes.

"Inhaling polluted or cold air is considered an important factor which might explain the cause in some sports, but not in all", explained Kenneth D. Fitch, researcher at the University of Western Australia and sole author of the study.

The author identified those athletes with documented asthma and AHR from among those who during the last five Olympic games -from 2002 to 2010- used inhaled beta-2 agonists (IBA), a drug frequently used by [elite athletes](#) as an anti-[asthma treatment](#).

The results, published in the [British Journal of Sports Medicine](#), show a prevalence of around 8%, which makes these [chronic conditions](#) the most common among [Olympic athletes](#).

In fact, due to a significant increase in the number of Olympic competitors reporting the use of IBA between 1996 and 2000, in 2001 the International Olympic Committee (IOC) decided that athletes must justify their use by providing proof of the condition. The decision was not an anti-doping measure, but was taken to protect the health of athletes.

## **Summer sports vs winter sports**

"The quality of inhaled air could be harmful to the airways, but does not cause the same effect in all sports", highlights Fitch. For example, in the [summer Olympics](#) the prevalence of asthma and AHR is much greater in those who practise endurance sports.

According to the study, if there are many more asthmatic winter athletes compared with summer athletes it is mainly because in summer competition there are less individual medals in endurance sports.

For its part, during the winter games the inhalation of cold air contributes to airway damage. It also occurs inside skating rinks, where particles in suspension from the ice resurfacing machines can cause damage.

## **Why do athletes with asthma beat their rivals?**

Those athletes with asthma and AHR have continually beaten their colleagues, although there is no scientific evidence that the treatments provided improve performance. Genetic aspects could be a key factor in airway damage suffered by athletes, but this hypothesis needs further corroboration.

The Australian researcher wonders whether training harder than the

other competitors in order to improve results could be the reason why many athletes develop asthma and AHR during adult life. The experts even question whether the physiological changes associated with asthma represent a stimulus to train not experienced by non-asthmatics.

**More information:** Kenneth D. Fitch. "An overview of asthma and airway hyper-responsiveness in Olympic athletes". *BRITISH JOURNAL OF SPORTS MEDICINE* 46(6): 413-416, may 2012. [DOI: 10.1136/bjsports-2011-090814](https://doi.org/10.1136/bjsports-2011-090814)

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