The impact of extreme exercise on breathing in GB Olympic boxers and swimmers

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Many British swimmers and some boxers won medals and achieved personal best performances at the Rio Olympic Games despite asthma related breathing issues.

Researchers from the School of Sport and Exercise Science (SSES) investigated elite British athletes from both swimming and boxing and their research suggests asthma related breathing problems should not be a barrier to sporting success, as long as they are well managed and controlled.

Team GB swimmers at the Rio Olympics were nine times more likely to have asthma related breathing problems than boxers, the research, published in the journal *Respirology*, found.

Exercise-induced bronchoconstriction (EIB) is highly prevalent in certain groups of elite athletes. To compare athletes from two different sports, Irisz Karolina Levai, MD and her colleagues in SSES performed breathing assessments on members of the elite GB boxing and swimming squads.

Both sports require increased heart rates and respiration; however, both the training environment and the duration that athletes are exposed to these demands differ significantly.

The findings uncovered airway dysfunction in a high proportion of elite swimmers, likely due to a combination of environmental exposures such

as swimming pool chemicals coupled with repeatedly high respiratory requirements of an elite swimming.

The Kent findings suggest optimising airway health for swimmers may lead to improved performance in the pool. The findings also suggest that asthma should not be a barrier to taking part in swimming. In fact, recreational swimming can enhance asthma control whilst improving cardio-vascular fitness.

More information: "Environmental influence on the prevalence and pattern of airway dysfunction in elite athletes" DOI: 10.1111/resp.12859/full

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