

# Effects of environmental pollutants and nutrition on health and performance of athletes

*Performance and health of professional athletes and physically active people*

DAVOS, SWITZERLAND, July 16, 2024 /EINPresswire.com/ -- [Athletes'](#) health - effects of environmental pollutants and nutrition on epithelial barrier function and healthy microbes in the body



Health and Performance of Athletes Can be Affected by Epithelial Barriers and Microbiome”

*Cezmi Akdis*

The health of athletes and physically active people is in the focus of the current research in the Swiss Institute of Allergy and Asthma Research (SIAF) in collaboration with the Sports Medicine Department of the Davos Hospital (Swiss Research Institute for Sports Medicine - SRISM) on the effects of environmental pollutants and nutrition on

the barrier function of the skin, respiratory tract and digestive tract. Epithelial barrier defects play a crucial role in defense against external influences such as viruses, bacteria, allergens and environmental pollutants. An intact barrier function is therefore essential for health and well-being.

While modern living conditions expose us to a variety of toxic and harmful substances, athletes are faced with particular challenges due to their increased risk of exposure to these substances. Various cleaning products, air pollutants, small plastic particles (micro and nanoplastic) and food additives can damage the barrier function of skin and mucous membranes, which can lead to a disturbed composition of the microbiome (skin and intestinal bacterial flora) and chronic inflammatory reactions.

The situation is particularly challenging for top athletes. The cumulative exposure to environmental toxins, cleaning agents, high levels of air pollution and special nutritional conditions can affect their overall health and sports performance. Reduced resistance to infection; increased hygiene conditions; increased burden of air pollution affect the health and performance of the athletes depending on their intensity of exercise, type of indoor, outdoor and water sports. Despite the well-known health benefits of physical activity, athletes must therefore also pay attention to a healthy diet and the protection of their [epithelial barriers](#) and healthy microbiome in order to minimize long-term health consequences and keep up with their

top performance.

In addition, our studies reviewed here demonstrate how food preferences, in particular the consumption of processed foods, can impair the epithelial barrier function. The use of emulsifiers and other additives in sports nutrition can lead to a disruption of the epithelial barriers and microbiome, which is associated with an increased risk of several diseases, such as allergies, autoimmunity and neuropsychiatric conditions.

Together these novel concepts highlight a holistic approach to overall health and physical performance of athletes, linked with their nutrition and exposure to pollution and toxic substances affecting the integrity of their barriers of skin and mucosal body surfaces and healthy microbiome.

Cezmi Akdis

+41 78 738 82 84

akdisac@siaf.uzh.ch

Swiss Institute of Allergy and Asthma Research

---

This press release can be viewed online at: <https://www.einpresswire.com/article/728015953>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2024 Newsmatics Inc. All Right Reserved.