

Asthma's androgen connection

October 17 2018, by Niyati Vachharajani



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Women are more prone to developing asthma, particularly more severe types of asthma, compared to men. Studies have shown that the sex hormones, estrogen and testosterone, influence the mechanisms driving airway inflammation in animal models of asthma.

However, it has remained unclear how estrogen and testosterone affect pathways that increase the number of eosinophils and neutrophils, specific types of [white blood cells](#), entering the lung in [asthma](#).

In the current issue of the *Journal of Immunology*, Dawn C. Newcomb, Ph.D., and colleagues report that testosterone decreased type 2, eosinophilic and IL-17A, neutrophilic responses, whereas ovarian hormones increased these responses in a mouse model of [airway inflammation](#).

These findings provide a possible reason why the prevalence of asthma is higher in women and suggest that testosterone derivatives have a potential role in being used to treat patients with more severe types of asthma.

More information: Hubaida Fuseini et al. Testosterone Decreases House Dust Mite–Induced Type 2 and IL-17A–Mediated Airway Inflammation, *The Journal of Immunology* (2018). [DOI: 10.4049/jimmunol.1800293](#)

Provided by Vanderbilt University

Citation: Asthma's androgen connection (2018, October 17) retrieved 15 March 2023 from <https://medicalxpress.com/news/2018-10-asthma-androgen.html>

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