

# Roundworm associated with lower lung-function and asthma in younger males

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Roundworms found in a human body. Credit: Nils Oskar Jōgi

By looking at the exposure to the parasitic roundworm *Ascaris lumbricoides/suum* in Northern Europe (Norway, Denmark and Estonia), the study finds that younger men exposed to *Ascaris* had a striking

reduction in lung function and nearly five times higher odds of having asthma compared to the non-exposed. These effects were independent of smoking and other exposures such as house dust mites.

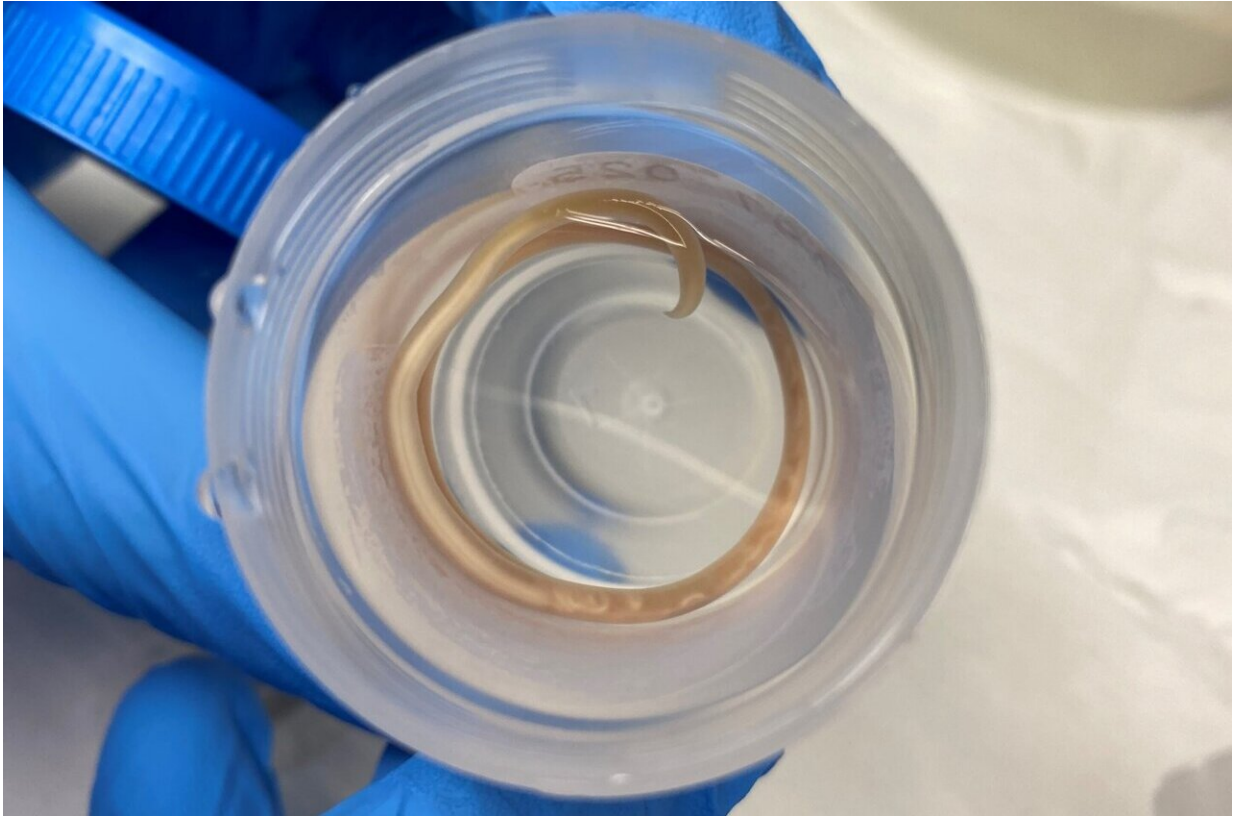
The paper was just published in the *Journal of Allergy and Clinical Immunology*.

The study is a collaboration between the University of Bergen, Tartu University Hospital Lung Clinic, University of Aarhus, the University of Birmingham and the University of Cape Town.

## **Differences in gender**

A curious finding in the study was that among women, lung function was not significantly lower in the *Ascaris* seropositive. In fact, the seropositive appeared to have even less asthma than the rest. This is the first research of its kind to show substantial gender differences in terms of helminth ([parasitic worms](#)) exposures and subsequent outcomes in humans.

The researchers also found that *Ascaris* infection in Europe might be an overlooked risk factor for asthma and respiratory health.



Roundworms found in a human body. Credit: Nils Oskar Jõgi

### **May result in lung damage**

It has previously been assumed that infections of roundworms have not been of significance in Europe, but the new findings indicate that exposure could potentially be a lot more common than assumed. For persons affected, this may result in serious lung damage with the risk of having a long-term impairment of [lung](#) function



Roundworms found in a human body. Credit: Nils Oskar Jōgi

Parasitic worm-infections are normally considered to be a problem only in low and middle-income countries. These findings present them as being of much greater importance in Europe.

This is also the first study to report a connection between reduced [lung function](#) and Ascaris [exposure](#), according to the researchers.

**More information:** Nils O. Jōgi et al, Ascaris exposure and its association with lung function, asthma, and DNA methylation in Northern Europe, *Journal of Allergy and Clinical Immunology* (2022). [DOI: 10.1016/j.jaci.2021.11.013](https://doi.org/10.1016/j.jaci.2021.11.013)

Provided by University of Bergen

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