

House-sharing with microbes

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Household dust contains up to 1000 different species of microbes, with tens of millions of individual bacterial cells in each gram. And these are just the ones that can be grown in the lab!

Dr Helena Rintala, speaking at the Society for General Microbiology's autumn meeting in Nottingham describes how we share our living and working spaces with millions of [microbes](#), not all of whom are bad news.

Microbes are a part of our normal environment and can be both beneficial and detrimental to our health. "Exposure to microbes in childhood can prevent the development of allergies. On the other hand, mould growth can increase the risk of [asthma](#)," said Dr Rintala from the National Institute for Health and Welfare in Finland.

In indoor environments microbes thrive on surfaces that are occasionally moist or wet, for example in the kitchen and bathroom. Prolonged damp anywhere in the house can lead to greater numbers of microbes. "These microbes, their [spores](#) and the molecules they secrete can be released into the air which can lead to health problems if they are breathed in," she said.

Dr Rintala explains why it is important to study the microbes, both good and bad, that typically live in indoor environments. "When you consider that we spend more than 90% of our lifetime in indoor environments and breathe the indoor air with all its components, it is important to know that the environment is healthy and that the air is safe to breathe," she said.

The Finnish group is working towards identifying [microbial species](#) that are important to our health - both good and bad - and developing rapid detection methods for them. "Culture methods are slow and selective - but with the development of new DNA-based methods we can assess the [indoor air quality](#) of homes and workplaces more rapidly, enabling people to take faster action if there is a problem," said Dr Rintala.

Provided by Society for General Microbiology

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