

## Asthma and Microbiome

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Researchers believed mistakenly for many years that the lungs are sterile [1].

The Microbiome can be defined as all microorganisms that inhabit humans and interact with the environment [2]. Microbiome of humans is continuously exposed to many factors such as the use of antibiotics, diet, and infections which may change its diversity and composition and lead to increasing susceptibility to asthma and allergies [3].

There are differences between the lung and the gut microbiomes of healthy people as well as those with asthma and allergies [4]. The ultimate goal is to understand whether the microbiome is linked to disease and whether manipulation of the microbiome will be useful to preserve lung function, prevent, and treat allergies.

Regulating the microbiome of the mother prenatal and the newborn postnatal seems to be the most promising approach in preventing or ameliorating atopy [5-9]. Identification of populations at risk is of utmost importance to ensure primary prevention.

Effective anti-viral therapies, targeting pathogenic bacteria within the Naso pharyngeal microbiome during first year, could represent a prophylactic approach to asthma [10,11]. Increasing knowledge of the immunomodulatory effects of microbial-host interactions might also offer a chance to develop novel therapeutic treatments.

We may conclude: Microbiome of the infant effect and modulate its immune reaction. The diversity of the gut microbiome effects the development of automate intestinal microbiota IS a potential therapeutic target in the prevention of asthma and atopic diseases. Therapeutic interventions for microbial dysbiosis would need to occur very early in life. Genetic predisposition, environmental setting, bottle feeding, cause changes in the microbiome of the gut and lung in the growing infant which in turn effect the immunity of the growing infant.

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