



News Release

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Babies' colds prevented by 'friendly' bacteria, study shows

Bacteria that live in the nose and throat could be key to warding off childhood infections, research suggests.

Scientists have found that babies prone to colds and chest infections have variations in the bacteria that live in their respiratory tracts compared with healthy children.

The findings open up new possibilities to explore how doctors could boost protective bacteria to prevent respiratory infections in infants.

Acute respiratory infections account for 15 per cent of all childhood deaths in under-fives worldwide, with around one-fifth of children developing a severe or recurrent infection.

The study relates to bacteria that reside in vast numbers throughout the human body and are fundamental to maintaining health. Many types of bacteria colonise areas such as the upper respiratory tract, including the nose and throat.

Researchers monitored the health of 112 babies throughout their first year. They recorded all respiratory infections and characterised the babies' bacterial colonies.

Babies who got more infections had a different bacterial profile – including variations in numbers and types of bacteria – compared with those who were more resistant.

These differences were apparent from as early as two weeks after birth, before the first infections occurred.

Environmental factors, such as breast or formula feeding, vaginal or caesarean delivery, having siblings, and attending day care, were also found to affect the bacteria present.

Scientists say pinpointing the bacteria that are responsible for protection against infection holds the key to efforts to prevent infection in the future.

The study was carried out by researchers at the University of Edinburgh in collaboration with researchers from several institutes in The Netherlands. The findings are published in the *American Journal of Respiratory and Critical Care Medicine* and the study was supported by Dutch funding bodies.

Professor Debby Bogaert of the University of Edinburgh's Medical Research Council Centre for Inflammation Research, said: "Our study paints the clearest picture yet of the make-up of infants' respiratory bacteria in their first year. Our findings suggest that there could be protective bacteria missing in some babies, affected by factors such as mode of delivery and infant feeding. The study really opens opportunities to explore how we could enhance these specific bacteria to help vulnerable babies ward off infection."

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