Research SKETCHES

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Le réseau des allergies, des gènes et de l'environnement

Can Breastfeeding Help Protect Babies from Asthma?

New research shows that breastfed babies have a reduced rate of wheezing, putting them at a lower risk for asthma later on.

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What is this research about?

Wheezing—a whistling sound in the chest—is one of the most common reasons infants are hospitalized or receive medical care. Remarkably, between 20% and 50% of infants experience at least one episode of wheezing in their first year of life.

Wheezing in early childhood is associated with an increased risk of asthma and reduced lung function later in life. Studies have suggested that breastfeeding helps to reduce this risk; however, much about this relationship is still unknown, particularly in the case of infants born to mothers with asthma.

Research on this topic has produced inconsistent results, possibly due to challenges in collecting precise information about breastfeeding and other factors that influence wheezing. This study accounted for these issues in its investigation of the association between breastfeeding and wheezing in Canadian children.

What did the researchers do?

The study included over 2,700 infants and their parents who are participating in the Canadian Healthy Infant Longitudinal Development (CHILD) Study.

CHILD Study parents provided detailed information about themselves and their babies, and completed standardized questionnaires about feeding practices and their babies' health and development, including a description of wheezing episodes at three, six and 12 months of age.

The researchers calculated a "rate of wheezing" for each infant by dividing the number of wheezing episodes by the number of follow-up months in the first year of the study.

The researchers also carefully examined the exclusivity and duration (length) of breastfeeding each infant received by three, six and 12 months of age. Breastfeeding was categorized as: exclusive (breast milk only); partial (breast milk supplemented with infant formula or solid food); or none.

Finally, the researchers linked the infants' wheezing data with the breastfeeding information.

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What did the researchers find?

BABIES WHO WERE BREASTFED LONGER WERE LESS LIKELY TO WHEEZE, putting them at lower risk of developing asthma later on.

- Infants who were exclusively breastfed for at least three months had a 26% reduced rate of wheezing by one year of age compared to infants who were not breastfed.
- Infants who were still being breastfed at 12 months had a 33% reduced rate of wheezing by one year of age compared to those who were breastfed for less than six months

AMONG "HIGH-RISK" INFANTS BORN TO MOTHERS WITH ASTHMA, breastfeeding was especially protective against wheezing.

- At six months of age, high-risk infants who were exclusively breastfed had a 62% reduced rate of wheezing compared to those who were not breastfed.
- The benefits of exclusive breastfeeding were diminished by **supplementation with infant formula** before six months of age, but not by the introduction of solid foods.
- Breastfed babies supplemented with solid food before six months had a 37% reduced rate of wheezing, whereas breastfeeding was not significantly protective for babies who were supplemented with infant formula.

Several factors were associated with how long babies were breastfed and how much they wheezed. Babies were less likely to be breastfed and more likely to wheeze if their mothers were younger, smoked, or had not finished post-secondary education. After controlling for these factors, breastfeeding still provided significant protection against wheezing.

How can this research be used?

This research suggests that mothers, including those with asthma, can help their babies develop healthy lungs and reduce their risk of wheezing by breastfeeding. The protective effect is stronger with longer and more exclusive breastfeeding; however, even partial breastfeeding can be beneficial.

The research also supports the development of healthcare and government policies that promote breastfeeding (for example, paid maternity leave, access to lactation support, protection for pumping or nursing in the workplace, and development of a positive breastfeeding culture) as strategies to positively impact infant respiratory health. These programs could especially benefit mothers with asthma, younger mothers, and mothers who smoke or have lower education.

Finally, these results may help to inform changes to infant feeding guidelines. Currently, the World Health Organization (WHO) recommends exclusive breastfeeding for six months, yet there is emerging evidence that earlier introduction of certain solid foods may reduce the risk of food allergies. Results from this study suggest that introducing foods before six months does not interfere with the beneficial effect of breastfeeding on respiratory health.