



Rijnstate

202 Treatment of Children with Asthma from an Integrated Lifestyle Perspective

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June 18th, 2026*

Rijnstate. Voorop in zorg voor jou.

Disclosure statement

There is no conflict of interest

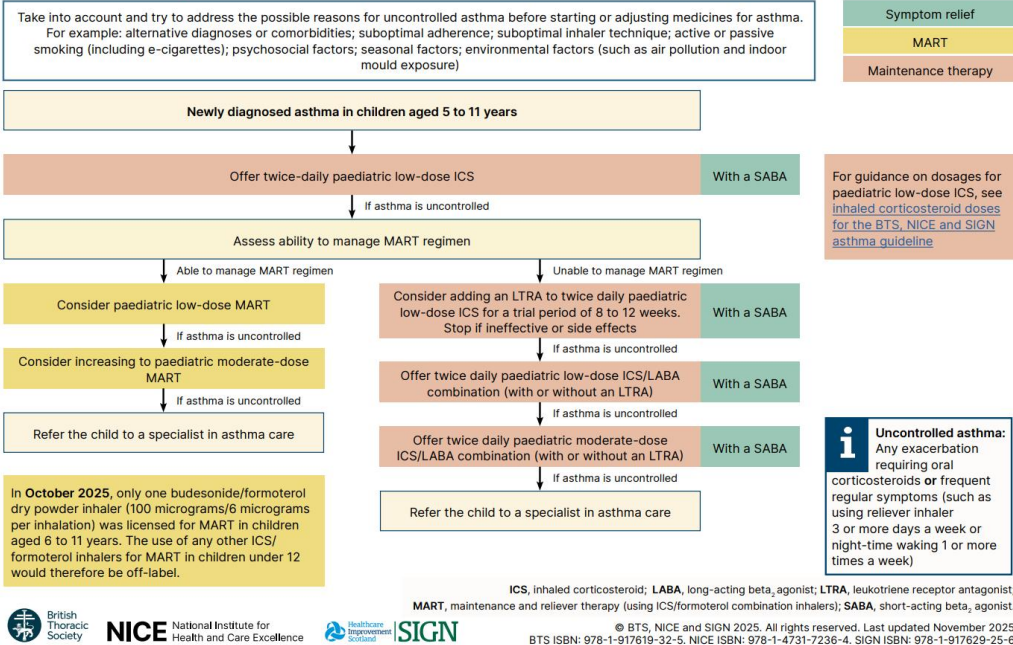
There is no financial interest or affiliation

Research supported by grants from non-profit organisations:
Lung foundation Netherlands, CBSIKZ and Dutch Foundation for Asthma
Prevention.



Asthma treatment: NICE, “nice to have, but ...”

Algorithm D: Pharmacological management of asthma in children aged 5 to 11 years BTS, NICE and SIGN guideline on asthma



Hypothesis: increase of allergy and asthma

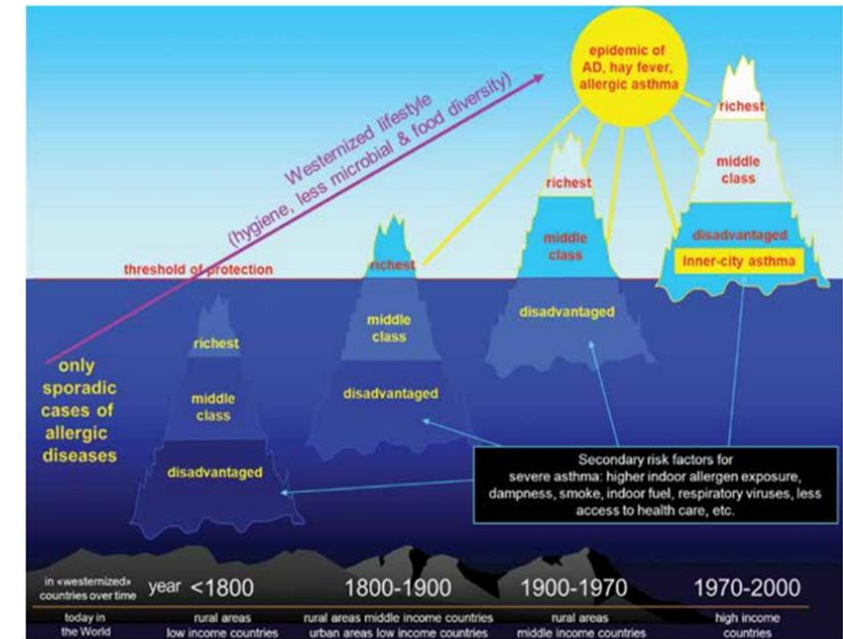
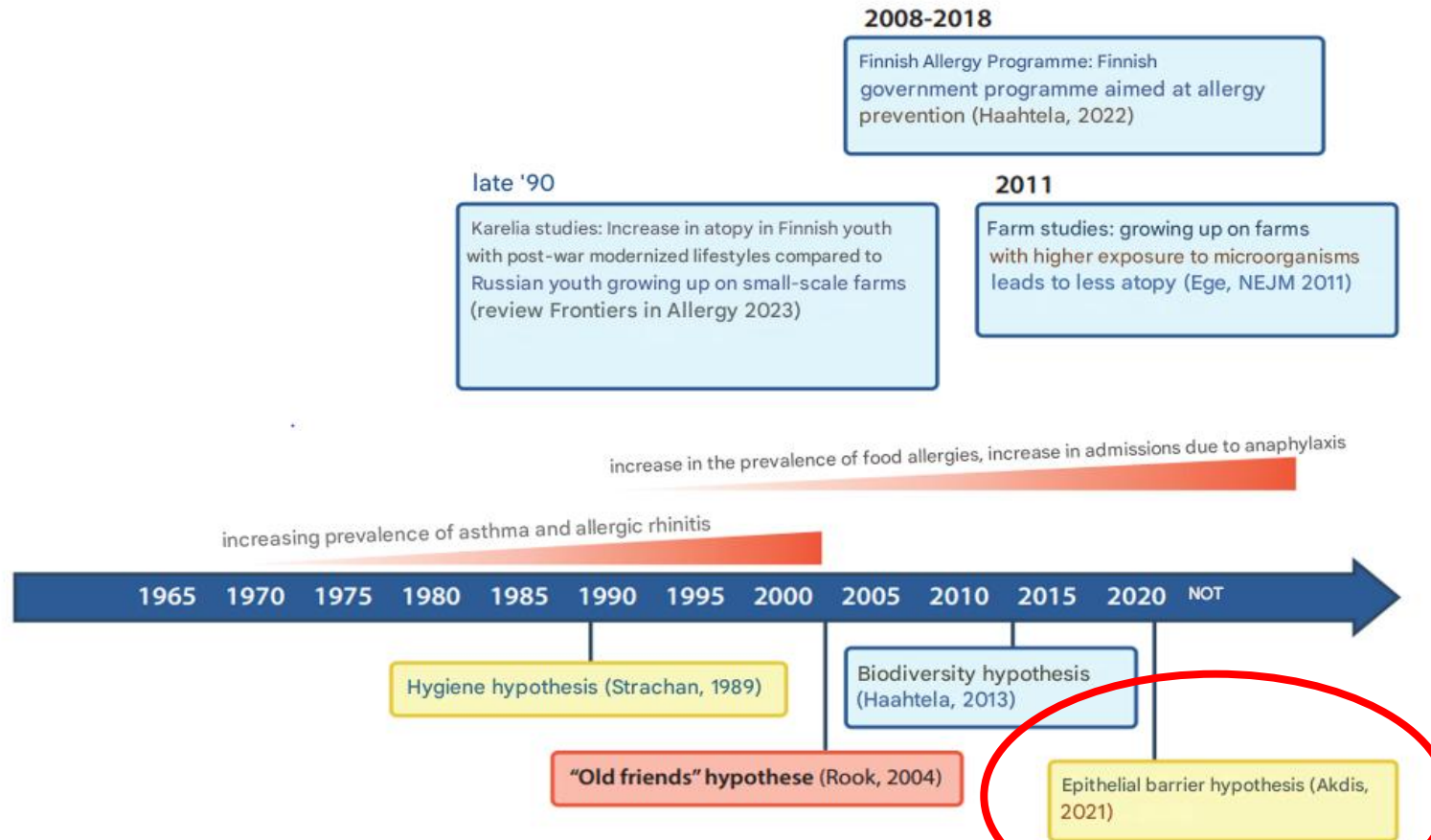


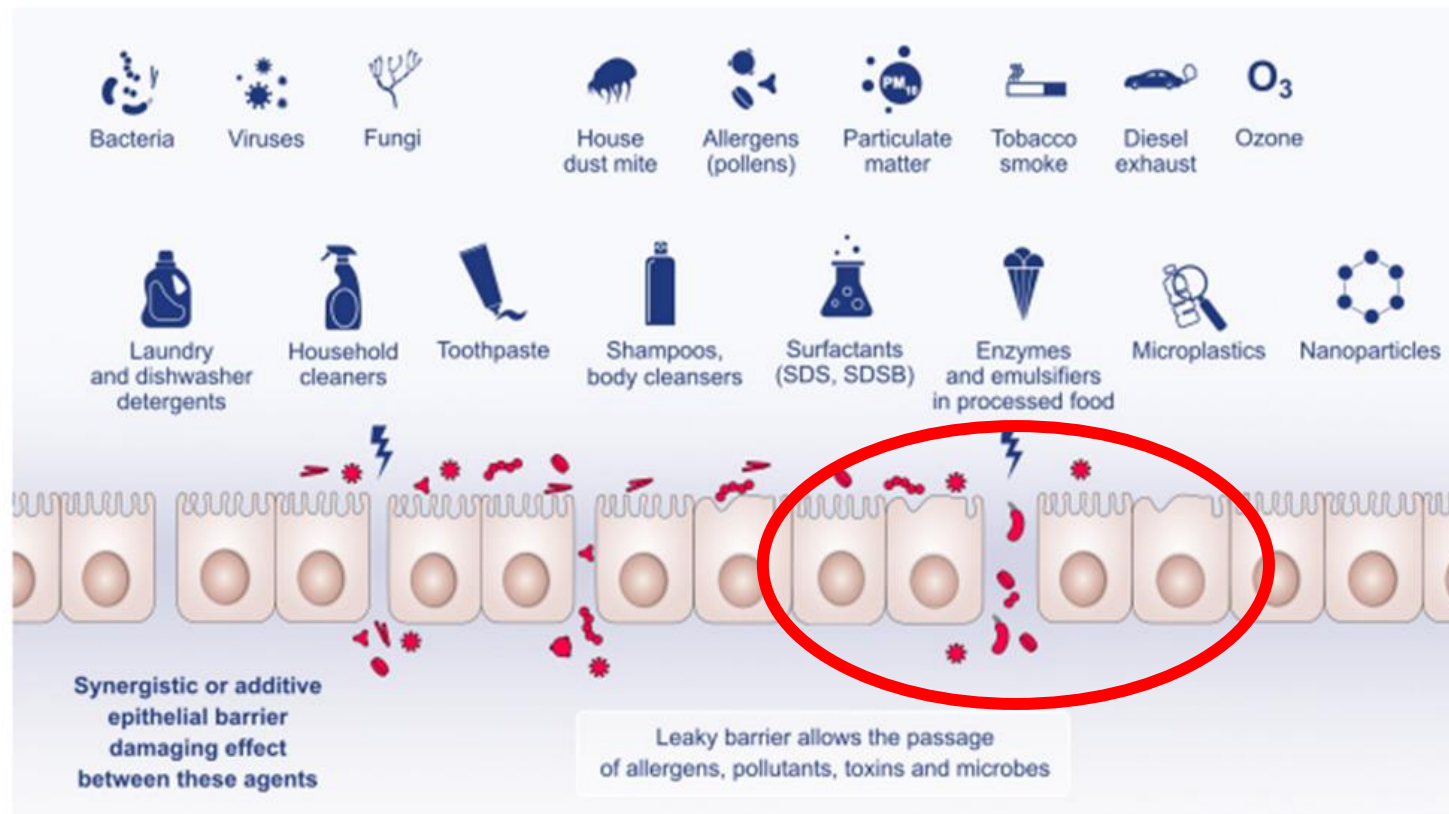
Figure 1 Timeline of the increase in atopic diseases with associated hypotheses and studies mentioned in the article.

Brand, Pract Ped 2024.
Biagioni B., PAI 2023.
Sozener C, Allergy, 2022.

Barrier hypothesis and inflammation

The epithelial barrier hypothesis

J Allergy Clin Immunol 2022;149:41-4.



Akdis JACI 2020.

New insights: pre-asthma, first 1000 days

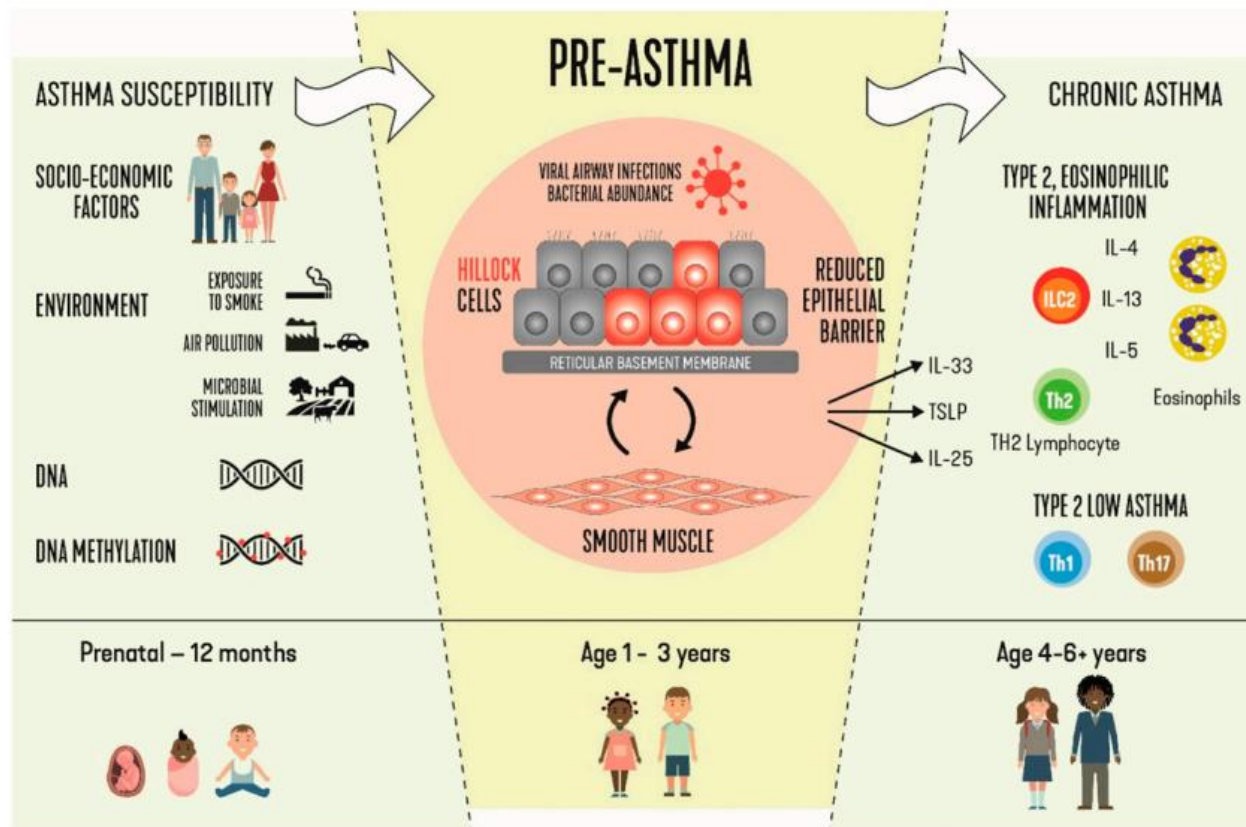
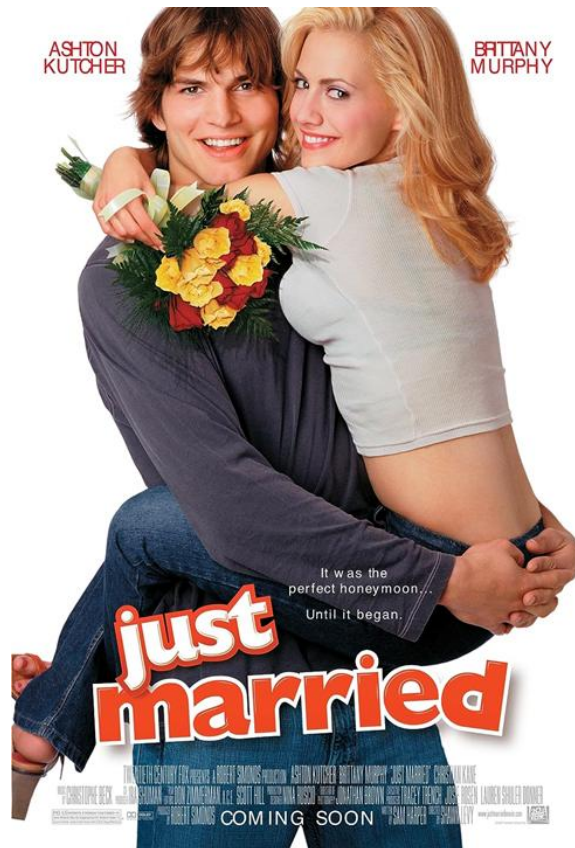


Figure 1. From asthma susceptibility to pre-asthma and chronic asthma (figure by Koppelman).

- Childhood-onset asthma is driven by dysregulated genes + *epithelial barrier dysfunction*
- Induction of abnormal pre-asthmatic airway responses: hillock-to-squamous differentiation of stem cells
- Leading to impaired protective function of the mucosa and to chronic inflammation

Translate this knowledge into lifestyle advice?

A. Prevention of asthma

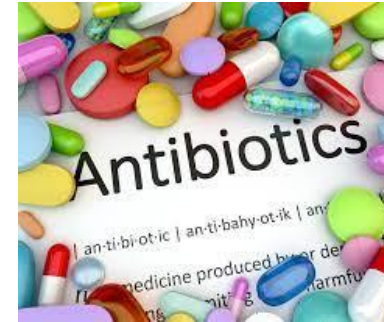
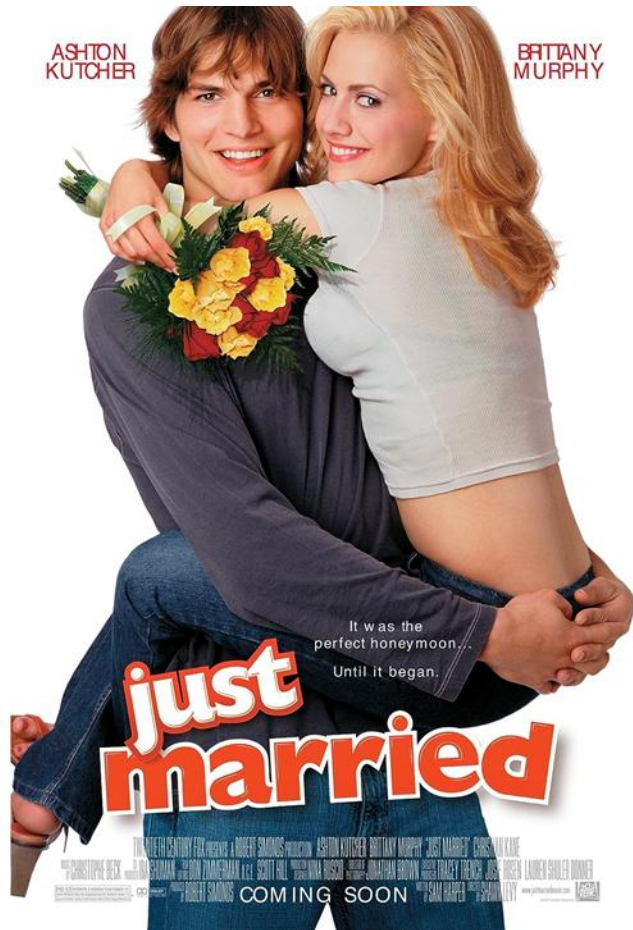


B. Integrative asthma treatment.

1. Anti-inflammatory medication (inhalation steroids) and beta-2-sympathomimetics.
2. Complementary personalized lifestyle advices



Primairy prevention of asthma



Dietary primary prevention of early childhood asthma

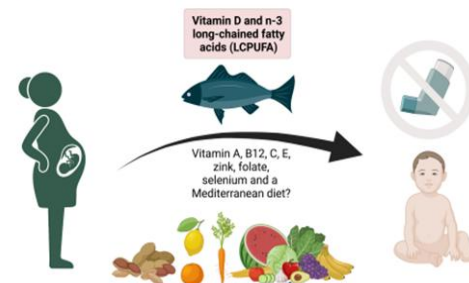


FIGURE 1 An illustration of current evidence of dietary primary prevention in pregnancy of childhood asthma.

Brustad, PAI 2023.
Haahtela, Allergy 2022
Melén, AJRCCM 2024

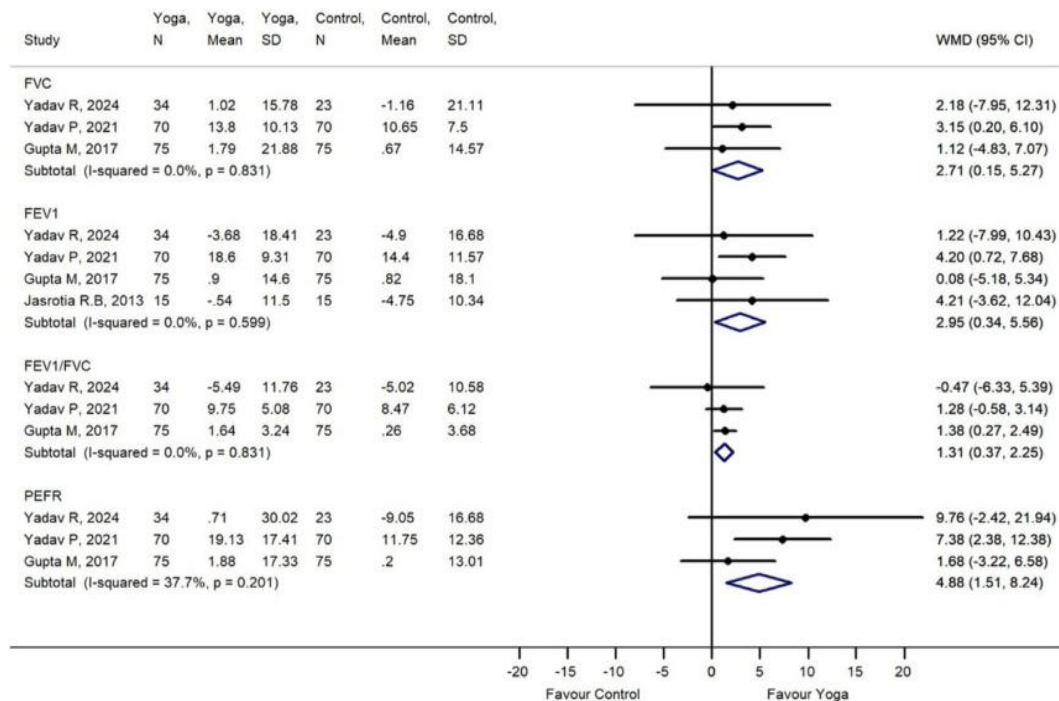
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B. Integrative asthma treatment.

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Effect of **yoga in children with asthma**, SR
Yadav, R., *J. of Asthma*, 2026.

Mind-body interventions in children with asthma, scoping review, submitted



Asthma in children, integrated lifestyle perspective

Mind body therapies,
stress reduction, yoga,
breathing, acupuncture,
psychosocial
interventions



Good air quality,
No smoking/vaping
Trigger reduction

Exposure to biodiversity: play
outside, contact with nature

Overweight reduction, healthy weight
Sport and (aerobic) exercise

Immune supportive (mediterranean) diet, incl. fermented food (anti-oxidative diet). **Gut-lung axis**
Herbs: e.g. black cumin, boswellia, heder, pycogenol
Correct Vit D deficiency, vitamins.
Minerals/supplements (e.g. Mg, Zn, Se, Omega-3), probiotics

Relaxation and sleep

Yadav R, J of Asthma, 2026
Van Brakel L, Nutrients 2020.
Lack S, J of Ped Nursing, 2020



Coming up:

