Subject: probiotische studie
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für kleinkinder, aber sicherlich nicht nur

"Effects of probiotic supplementation for the first 6 months of life on allergen- and vaccine-specific immune responses.
Taylor AL, Hale J, Wiltschut J, Lehmann H, Dunstan JA, Prescott SL.

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Background A reduction in microbial burden during infancy when allergen-specific memory is evolving has become a prominent explanation for the allergy epidemic. Objective We sought to determine whether probiotic dietary supplementation in the first 6 months of life could modify allergen- and vaccine-specific immune responses. Methods Two hundred and thirty-one pregnant women with a history of allergic disease and positive allergen skin prick test (SPT) were recruited into a randomized-controlled trial. The infants received either a probiotic (3 x 10(9)Lactobacillus acidophilus LAVRI-A1; Probiomics) or placebo (maltodextrin alone) daily for the first 6 months of life, given independent of feeding methods. One hundred and seventy-eight children completed the study; blood samples were available from 60 children in the placebo group and 58 children in the probiotic group. Infant cytokine (IL-5, IL-6, IL-10, IL-13, TNF-alpha or TGF-beta) responses to tetanus toxoid (TT), house dust mite (HDM), ovalbumin (OVA), beta-lactoglobulin (BLG), Staphylococcus enterotoxin B (SEB) and phytohaemaglutinin (PHA) were measured at 6 months of age. Results Children who received the probiotics showed reduced production of IL-5 and TGF-beta in response to polyclonal (SEB) stimulation (P=0.044 and 0.015, respectively). They also demonstrated significantly lower IL-10 responses to TT vaccine antigen compared with the placebo group (P=0.03), and this was not due to any differences in vaccination. However, there were no significant effects of probiotics on either Type 1 (Th1) or Type 2 (Th2) T helper cell responses to allergens or other stimuli. The only other effects observed were for reduced TNF-alpha and IL-10 responsiveness to HDM allergens in children receiving probiotics (P=0.046 and 0.014, respectively). Conclusions In summary, although we did not see any consistent effects on allergen-specific responses, our study suggests that probiotics may have immunomodulatory effects on vaccine responses. The significance and clinical relevance of this need to be determined in further studies."

quelle pubmed