Low Breast Milk Levels of n-3 Fatty Acids are associated with Maternal atopic eczema, but not with Respiratory Allergy.

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Objective: Changed dietary habits are suggested to be a factor of the dramatic increase of allergies. Long chain n-3 fatty acids are reported to have anti inflammatory effects in atopic allergies and are therefore interesting to investigate. We sought to compare fatty acid composition and cytokine content in breast milk from healthy and atopic women and to evaluate a possible association between n-3 fatty acids and certain atopic symptoms.

Methods: Breast milk and serum samples were collected from 22 healthy and 23 atopic women and analyzed regarding fatty acids and cytokines.

Results: Women with atopic eczema had lower breast milk levels of EPA and DPA, and higher AA/EPA and n-6 PUFAs/n-3 PUFAs ratios, compared to healthy women. This was not found when comparing healthy women and women with respiratory allergy only.

Conclusion: Our data suggest reduced levels of long chain n-3 fatty acids in breast milk from women with atopic eczema, but not with respiratory allergy alone.