

## Kids' allergies may correlate with omega-3, omega-6 lipid levels in cord blood

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Children with high proportions of poly-unsaturated fatty acids (PUFA) in cord blood at birth are more likely to develop respiratory and skin allergies in their early teens, according to research published July 10 in the open access journal *PLOS ONE* by Malin Barman and colleagues from the Chalmers University of Technology, Sweden.

The researchers followed nearly 800 children born in 1996-97 for diagnosis of allergies at age 13, and studied a subset of 44 who were diagnosed with respiratory allergies, 37 with chronic skin rashes and 48 who did not suffer allergies. Cord blood samples taken at birth from these participants revealed that individuals who suffered allergies later in life had higher proportions of unsaturated fatty acids.

Children with allergies at age 13 had higher proportions of omega-3 and omega-6 PUFAs in cord blood samples taken at birth. Compared to healthy children, [allergy sufferers](#) also had lower levels of mono-unsaturated fats in their cord blood. The risk of respiratory allergies in children with higher PUFA levels was equally significant in children with allergic and non-allergic mothers. The study says, "The mechanism by which these lipids affect allergy development is unknown, but may involve dampening of the [immune activation](#) in infancy needed for proper maturation of the infant's immune system."

**More information:** Barman M, Johansson S, Hesselmar B, Wold AE, Sandberg A-S, et al. (2013) High Levels of Both n-3 and n-6 Long-Chain Polyunsaturated Fatty Acids in Cord Serum Phospholipids Predict

Allergy Development. PLOS ONE 8(7): e67920.  
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