

Low birth weight, less breastfeeding create later health risks

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Lower weight babies and babies who aren't breastfed or not breastfed for long are at greater risk of developing chronic inflammation and related health problems later in life, according to a new study.

"There were good reasons to hypothesize that breastfeeding was important to influencing levels of inflammation in adulthood," says Thomas McDade (Northwestern University), a CIFAR (Canadian Institute for Advanced Research) Fellow in the Child & Brain Development program. "It changes the microbiome. It promotes development of the immune system. Children who are breastfed get fewer infectious diseases and are less likely to become overweight."

Connections have been made previously with both low birth weight and less breastfeeding and later poor health outcomes. The new study suggests one mechanism for the poor outcomes. It shows that both factors lead to elevated levels of C-reactive protein (CRP), which is an indicator of inflammation.

Although inflammation can be a good thing when it's in reaction to an infection, for instance, <u>chronic inflammation</u> is associated with risks such as heart attack, diabetes and other problems, McDade says.

McDade and his colleagues looked at a study that contained health information on 10,500 U.S. adults, including their CRP levels, their birth weight, and whether and for how long they had been breastfed as babies. The study was especially useful because it included information for many siblings.

Trying to figure out the role of birth weight and breastfeeding in long run health outcomes is complicated because children born to parents with less income and less education are also more likely to have low birth weight and less

breastfeeding. That means it's never clear if other factors are also in play.

But because of the number of siblings in the study, the researchers were able to show that even within the same family, <u>birth weight</u> and breastfeeding matter to inflammation in adulthood.

More information: McDade was lead author on the paper, which is accepted for publication in *Proceedings of the Royal Society B.*

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