

Coconut oil an immune boost for preterm newborns

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Coconut oil has been transforming the health and skin condition of preterm babies in Western Australia recently, and new research has revealed why.

Dr. Andrew Currie from Murdoch University and Clinical Professor Tobias Strunk from King Edward Memorial Hospital have been investigating reasons why [coconut](#) oil is a powerful treatment for vulnerable preterm [babies](#).

"Our recent clinical trials of twice daily application of coconut oil to the skin of very [preterm infants](#) have demonstrated that the treatment was safe and effective to improve skin condition. It is also a great opportunity to involve parents in the care of their babies and very affordable," Professor Strunk said.

"We also noticed that coconut oil could be reducing the risk of infection in these vulnerable babies and we wanted to understand more about this mechanism."

Antimicrobial test

The researchers partnered with Dr. Joel Gummer at Murdoch University to develop a new test to measure the levels of the fatty acid monolaurin, a substance with antimicrobial properties, found both in coconut oil and in the blood of babies treated with coconut oil.

Dr. Sam Abraham at Murdoch University's Antimicrobial Resistance Laboratory also worked on the project, testing how effective monolaurin was in countering bacterial diseases commonly affecting newborns such as the skin bacteria *Staphylococcus aureus*.

"Firstly, we discovered that levels of monolaurin in coconut oil varied between suppliers and found that the clinical grade product had the highest levels. These were high enough to have antimicrobial properties in the testing," said Clinical Professor Strunk.

"Following on from this, we measured significantly higher levels of

monolaurin the blood of preterm babies whose skin had been treated with coconut oil. It appears that applying coconut oil to the [skin](#) of these infants is facilitating monolaurin to be absorbed, which could help to explain the lower risk of infection of treated babies."

More than 15 million infants are born prematurely each year (11 percent of all pregnancies) and they are incredibly vulnerable to infection.

Lifelong health effects

Dr. Currie said that boosting the immunity of preterm infants would have lifelong health effects by reducing the need to administer antibiotics in early life.

"Antibiotics have a major impact on the development of infant gut microbiota with broad, potentially life-long consequences," he said.

Preparations are now underway to develop a national, multi-centre cluster randomised trial of coconut oil in [preterm](#) babies across Australia and NZ.

The researchers will be conducting a study to confirm their findings in healthy adult volunteers and are also exploring the use of [coconut oil](#) in the treatment of paediatric burns patients with Professor Fiona Wood at Fiona Stanley Hospital.

The research was published in *Neonatology*.

More information: Tobias Strunk et al. Topical Coconut Oil in Very Preterm Infants: An Open-Label Randomised Controlled Trial, *Neonatology* (2017). [DOI: 10.1159/000480538](https://doi.org/10.1159/000480538)

Provided by Murdoch University

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