

Progesterone does not prevent preterm birth or complications, says study

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Credit: University of Auckland

An increasingly popular hormonal "treatment" for pregnant women with a history of preterm birth does not work, a major new international study shows.

A total of 789 women from 39 Australian, New Zealand, and Canadian

maternity hospitals took part in the PROGRESS study, led by Professor Caroline Crowther at the University of Auckland-based Liggins Institute. Half were randomised to give themselves progesterone pessaries for 14 weeks starting at mid-pregnancy; the other half used the matching placebos.

Researchers then assessed the health of the babies and their mothers. The rate of [health problems](#) in the babies, including [respiratory distress syndrome](#), where the baby struggles to breathe, was not significantly different between the two [treatment](#) groups. The mother's health and side effects of treatment were also overwhelmingly similar.

Progesterone pessaries are sometimes prescribed to pregnant women who have previously given [birth](#) before 37 weeks, who have more than double the risk of another preterm birth. Based on earlier evidence, it was thought that the treatment could delay birth, reducing the risk and severity of complications affecting babies born too early, and improve mothers' health.

Babies born preterm carry a heightened risk of breathing problems due to immature lungs and other serious health problems.

"Progesterone plays an important role during pregnancy, and concentrations of this hormone fall away just before labour begins, which is one rationale for the treatment," says Professor Crowther.

"But there have been mixed findings from recent studies – some show the use of [vaginal progesterone](#) reduces the risk of preterm birth, while others don't and there has been uncertainty about the health benefits. Without a consensus, treatment practices vary widely across hospitals and countries."

So the researchers designed a large, double-blind randomised trial to see

exactly what, if any, beneficial effect the treatment has, and if there are any side effects.

"We now have a clear answer we can believe: vaginal progesterone does not improve the baby's health when given to women who have had a history of a previous [preterm birth](#)," says Professor Crowther.

"This is good for [pregnant women](#) and [health](#) practitioners to know, so they won't waste time and resources on an ineffective treatment."

The PROGRESS findings, published in high-ranking journal *PLOS Medicine*, match those from two other recent large, randomised studies. Commenting in the same journal, Jane Norman from the University of Edinburgh and Phillip Bennet from the Imperial College London argue this growing body of evidence justifies a thorough review of all progesterone studies, and exploring other alternatives for preventing premature birth.

More information: Caroline A. Crowther et al. Vaginal progesterone pessaries for pregnant women with a previous preterm birth to prevent neonatal respiratory distress syndrome (the PROGRESS Study): A multicentre, randomised, placebo-controlled trial, *PLOS Medicine* (2017). [DOI: 10.1371/journal.pmed.1002390](https://doi.org/10.1371/journal.pmed.1002390)

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