

Lactation hormone also helps a mother's brain

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Credit: University of Otago

The same hormone that stimulates milk production for lactation, also acts in the brain to help establish the nurturing link between mother and baby, University of Otago researchers have revealed for the first time.

The researchers found that signalling by the [hormone prolactin](#) to its

receptors in a specific brain region is essential for mothers to show vitally important maternal nurturing behaviour towards their young. This finding raises the question, is this [brain circuitry](#) the "feel good" factor to encourage breast feeding?

Prolactin is best known for its role in enabling milk production in mammals.

The research team at the University's Centre for Neuroendocrinology undertook targeted deletion of prolactin receptors in the preoptic area of the brains of adult female mice.

Study co-author Dr Rosie Brown says the team observed that these mice without prolactin receptors were able to get pregnant and give birth normally, but abandoned their litters around 24 hours after birth.

The research is newly published in the prestigious international journal *PNAS*.

"Our findings establish a critical role for prolactin for more than simply milk production. This work is the first to show this hormone is a literal life saver in that it establishes and maintains the normal parental care that ensures offspring survival."

Disruptions in the ability of [prolactin](#) to communicate in the [brain](#) could lead to problems for mothers establishing a bond with their baby. This may in part explain issues with some animal species abandoning their young, she says.

More information: Rosemary S. E. Brown et al. Prolactin action in the medial preoptic area is necessary for postpartum maternal nursing behavior, *Proceedings of the National Academy of Sciences* (2017). [DOI: 10.1073/pnas.1708025114](https://doi.org/10.1073/pnas.1708025114)

Provided by University of Otago

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