



A Mother's Voice Reduces Pain Experience For Premature Babies In Intensive Care



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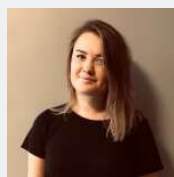
HEALTH AND MEDICINE

HEARING THEIR MOTHER'S VOICE REDUCED PAIN AND INCREASED OXYTOCIN FOR BABIES HAVING A BLOOD TEST.
IMAGE CREDIT: M. MOIRA / SHUTTERSTOCK.COM

Being born is hard, and when you come into the world early you often need a little extra help which can involve painful prodding and poking with various unfriendly medical contraptions. Fortunately, a new study has found that a very sustainable resource can limit this pain and discomfort: a mother's voice. The research found that both the expression of pain and oxytocin levels were influenced by the mother's voice, leading to better pain management for [premature babies](#).

The research, published in the journal [Scientific Reports](#), was carried out by a team from the University of Geneva (UNIGE), in collaboration with the Parini Hospital in Italy and the University of Valle d'Aosta. They report that their findings demonstrate the importance of paternal access to babies in neonatal care, given that even just hearing the voice of a parent can significantly improve a premature baby's experience during treatment.

[Premature babies](#) have to be taken away from their parents at birth because not "cooking" for the full gestation period of 37 weeks can cause their underdeveloped organs to struggle. Modern medicine has enabled these babies to survive in being able to [intervene](#) with intubation, feeding tubes, and regular monitoring, but it's an imperfect system as tiny bodies can't tolerate painkillers very well. As such, neonatal units lean on alternative forms of pain relief including wrapping, restraint, sugar solutions, and non-

**By Rachael Funnell**

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nutritive sucking with a teat.

Studies have already shown that the presence of a mother or father can be calming for these babies, especially if they speak to the child in a soothing way. This is what inspired Didier Grandjean, full professor at the Psychology Section of the Faculty of Psychology and Educational Sciences (FPSE) and at the Swiss Center for Affective Sciences (CISA) of the UNIGE, and their team to further investigate the influence of a mother's voice on a premature baby.

To do so, they followed 20 premature babies at the Parini Hospital in Italy and asked the mother to be present during the daily blood test. Blood tests for tiny babies are carried out via a prick in the heel rather than the arm. They compared the response of the baby under three conditions: an injection with the mother present, a second with the mother talking and a third with the mother singing.

"For the study, the mother started talking or singing five minutes before the injection, during the injection and after the procedure", said Grandjean in a [statement](#). "We also measured the intensity of the voice, so that it would cover surrounding noise, as intensive care is often noisy due to ventilations and other medical devices."

Using a Preterm Infant Pain Profile (PIPP) which assessed facial expressions and physiological signs of pain (heartbeat, oxygenation) they found that the mother's presence had a strong influence. If they weren't present the PIPP sat around 4.5 but dropped to 3 when if they spoke to their baby. This was lower than when the mother sang (3.8) which the researchers believe is due to the fact that "baby talk" sees a mother alter her voice for her specific baby more so than when singing a song.

Oxytocin was also affected, raising from 0.8 picograms per milliliter to 1.4 when the mother spoke which is a significant change for the hormone often referred to as the "love drug".

"We demonstrate here the importance of bringing parents and child together, especially in the delicate context of intensive care" said first author Manuela Filippa in a [statement](#).

"Furthermore, parents play a protective role here and can act and feel involved in helping their child to be as well as possible, which strengthens the essential attachment bonds that are taken for granted in a full-term birth," concluded Grandjean.



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