

Are babies who wake to breastfeed at night trying to delay the birth of a sibling?

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Image: Wikipedia.

In a new article published online today in the journal *Evolution, Medicine, and Public Health*, Professor David Haig argues that infants that wake frequently at night to breastfeed are delaying the resumption of the mother's ovulation and therefore preventing the birth of a sibling with whom they would have to compete.

It has already been documented that smaller gaps between the births of siblings are associated with increased mortality of infants and toddlers, especially in environments where resources are scarce and where infectious disease rates are high, and Professor Haig believes that the

benefits of delay are such that the selective forces are strong enough to have engendered a significant evolutionary response.

Professor Haig says, "The duration of postpartum amenorrhea is a major determinant of interbirth intervals (IBI) in natural fertility populations with more frequent and more intense nursing, especially at night, associated with prolonged infertility. Natural selection will have preserved suckling and sleeping behaviours of infants that suppress ovarian function in mothers because infants have benefited from delay of the next birth. Maximal night waking can be conjectured to overlap with the greatest benefits of contraceptive suckling."

Haig also points out that while less frequent night waking in formula-fed infants is usually explained by the fact that formula is harder to digest, and therefore more soporific, than breast milk, infants who were breastfed but were not nursed during the night slept longer than [breastfed infants](#) who were nursed at night.

Attention is also drawn to the sleep of infants with Prader-Willi syndrome (PWS) – who often have a weak suck and sleep a lot – and infants with Angelman syndrome (AS) – who wake frequently at night. These syndromes are both caused by deletion of a cluster of imprinted genes at chromosome 15q13 but differ in the parental origin of the deletion. These phenotypes suggest that imprinted genes of paternal and maternal origin have contrasting effects on sleep in [infants](#) without deletions, with genes of paternal origin promoting suckling and waking. Small-scale behavioural interventions in which parents were instructed not to respond to night waking by children with AS have resulted in dramatic improvements in sleep quality.

Professor Haig writes: "In the developed world, many of the health advantages of prolonged IBIs have diminished and more reliable forms of contraception have replaced lactational amenorrhea. Therefore, the

selective forces responsible for these behaviours have been attenuated but the behaviours remain part of our biological heritage. One should question whether modern sleep practices have had unintended consequences for child health but it would be irresponsible to recommend changes to these practices, solely on the basis of mismatch, without epidemiological evidence of harm. Mismatch is a medical problem only if it causes pathology.

"Identification of the 'environment of evolutionary adaptedness' with the optimal environment for wellbeing conflates questions of fitness and health. What was best for one was not always best for the other. Genetic conflicts within the family are part of our biological heritage, as are love and care for our children."

The journal has also published five articles and commentaries that respond to Professor Haig's paper from varying perspectives, along with a further reply to the responses by the author.

More information: Troubled sleep: Night waking, breastfeeding, and parent-offspring conflict, David Haig, *Evolution, Medicine, and Public Health*, [DOI: 10.1093/emph/eou005](https://doi.org/10.1093/emph/eou005)

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