

Breast milk should be drunk at the same time of day that it is expressed

October 1 2009



Breast milk should be drunk at the same time of day that it is expressed. Credit: SINC.

The levels of the components in breast milk change every 24 hours in response to the needs of the baby. A new study published in the journal *Nutritional Neuroscience* shows, for example, how this milk could help newborn babies to sleep.

Breast milk contains various ingredients, such as [nucleotides](#), which perform a very important role in regulating babies' [sleep](#). The new study, published recently in the journal *Nutritional Neuroscience*, confirms that the composition of [breast milk](#) changes quite markedly throughout the day.

The scientists looked for three nucleotides in breast milk (adenosine,

guanosine and uridine), which excite or relax the central nervous system, promoting restfulness and sleep, and observed how these varied throughout a 24-hour period.

The milk, collected from 30 women living in Extremadura, was expressed over a 24-hour period, with six to eight daily samples. The highest nucleotide concentrations were found in the night-time samples (8pm to 8am).

"This made us realise that milk induces sleep in [babies](#)", Cristina L. Sánchez, lead author of the article and a researcher at the Chrononutrition Laboratory at the University of Extremadura, tells SINC.

"You wouldn't give anyone a coffee at night, and the same is true of milk - it has day-specific ingredients that stimulate activity in the infant, and other night-time components that help the baby to rest", explains Sánchez.

In order to ensure correct nutrition, the baby should be given milk at the same time of day that it was expressed from the mother's breast. "It is a mistake for the mother to express the milk at a certain time and then store it and feed it to the baby at a different time", points out the researcher.

The benefits of breast milk

The World Health Organisation (WHO) says breast milk is the best food for the newborn, and should not be substituted, since it meets all the child's physiological requirements during the first six months of life. It not only protects the baby against many illnesses such as colds, diarrhoea and sudden infant death syndrome, but can also prevent future diseases such as asthma, allergies and obesity, and promotes intellectual

development.

The benefits of breastfeeding also extend to the mother. Women who breastfeed lose the weight gained during pregnancy more quickly, and it also helps prevent against anaemia, high blood pressure and postnatal depression. Osteoporosis and breast cancer are also less common among women who breastfeed their children.

More information: Sánchez, Cristina L.; Cubero, Javier; Sánchez, Javier; Chanclón, Belén; Rivero, Montserrat; Rodríguez, Ana B.; Barriga, Carmen. "The possible role of human milk nucleotides as sleep inducers". *Nutritional Neuroscience* Vol. 12(1):2-8. 2009.

Source: FECYT - Spanish Foundation for Science and Technology

Citation: Breast milk should be drunk at the same time of day that it is expressed (2009, October 1) retrieved 22 July 2023 from <https://medicalxpress.com/news/2009-10-breast-drunk-day.html>

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