

Researchers recommend limiting the time during which mother's milk is given to premature babies

May 24 2019



Credit: Asociación RUVID

Giving human milk to premature babies is recommended by the WHO for at least six months to provide nutrients and essential antimicrobial

substances for those babies born with low weight or who are immunosuppressed. In premature babies, milk is administered through a nasogastric tube. These newborns are at risk of infection by pathogens such as *Cronobacter sakazakii*.

Researchers of the CEU Cardenal Herrera University have studied the optimum conditions to administer human [milk](#) through nasogastric tubes to [premature babies](#) in newborn nurseries to decrease the risk of infection by this bacterium, recommending that it is not administered for more than 3.5 hours.

The study was carried out by the directors of the Research Group of Human Nutrition and Food Safety of the CEU UCH, Dolores Silvestre Castelló and Mari Carmen López Mendoza, as well as research professor Sandra Fernández Pastor, who presented the study at the Congress.

Pastor says, "The *Cronobacter sakazakii* bacterium is a pathogen linked to outbreaks of infection caused by consuming powdered formulas for infants which causes meningitis, sepsis and necrotising enteritis. Mortality rates of 40 to 80 percent have been registered, and the survivors typically suffer from severe neurological effects. The contamination of human milk by this same bacterium has recently been documented, which is why we decided to analyse the optimum conditions for administering this donated milk to [premature infants](#) in neonatology units in order to decrease the risk of infection."

To do so, the research team of the UCH CEU introduced the microorganism into samples of [human milk](#) kept in [nasogastric tube](#) administration conditions at 22°C of temperature for four hours. The samples were then placed on APC agar plates every 30 minutes, and then all the plates were incubated to recount and observe the behaviour of the microorganism during these four hours in 30-minute intervals. "We observed that at the four-hour mark, pathogen cells had doubled

compared to the beginning, making the differences significant. Therefore, as well as taking greater hygiene precautions to prevent contamination by the microorganism, we also recommend decreasing the administration time in newborn nurseries to 3.5 hours, before the bacteria starts increasing its proliferation," explains professor Sandra Fernández.

Provided by Asociacion RUVID

Citation: Researchers recommend limiting the time during which mother's milk is given to premature babies (2019, May 24) retrieved 23 April 2024 from <https://medicalxpress.com/news/2019-05-limiting-mother-premature-babies.html>

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