



**MONELL CHEMICAL SENSES CENTER**

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## **Alcohol Consumption Disrupts Breastfeeding Hormones**

*Contrary to popular belief, a “few drinks” do not promote optimal lactation*

Philadelphia, PA (April 6, 2005) -- Despite age-old claims advising breastfeeding moms that alcoholic beverages can improve their nursing performance, researchers at the Monell Chemical Senses Center report that even moderate doses of alcohol affect the hormones responsible for lactation in a counterproductive manner.

“This information is important for women,” comments lead author Julie Mennella, PhD, a biopsychologist. “If a mother is drinking alcohol just to improve the quality or quantity of her milk, she needs to know that there is no evidence to support this claim. In fact, what happens is quite the opposite, as alcohol disrupts the hormonal milieu of lactation in a way that could impede successful breastfeeding.”

For centuries, breastfeeding women have been advised to drink alcohol as an aid to milk production and optimal lactation. Recent surveys indicate that 25% of women report being encouraged by their health professionals to drink alcohol while breastfeeding. But as Mennella points out, “There was no valid scientific evidence to support this claim.”

To address this research deficit, the current study, reported in the April 2005 issue of the [Journal of Clinical Endocrinology and Metabolism](#), is the first to analyze the effects of alcohol on lactational hormones of women who are breastfeeding.

Subjects were 17 women who were nursing infants between 2 and 4 months of age. While in a controlled clinical setting away from their infants, each woman drank a beverage containing alcohol in orange juice on one day and plain orange juice on a different day. The dose of alcohol was equivalent to that found in one to two glasses of wine. After consuming the beverages, the women used electric breast pumps to stimulate lactation. Blood samples taken throughout the procedure were analyzed for oxytocin and prolactin, the two key hormones that control lactation.

Alcohol disrupted release of both hormones during lactation: oxytocin levels decreased an average of 78% and prolactin levels increased by 336%, as

compared to when women consumed plain orange juice. Study co-author Yanina Pepino, PhD, a Monell developmental psychobiologist, explains the implications, “Under normal breastfeeding conditions, oxytocin and prolactin usually behave in tandem, such that sucking-induced breast stimulation results in transient release of both. However, following alcohol consumption we saw divergent responses in these two key hormones that control lactation.”

After consuming alcohol, women took longer to eject the first drop of milk and produced less milk overall, physiological effects related to the alcohol-induced changes in oxytocin.

The current research provides a physiological basis for Mennella’s previous findings concerning alcohol’s effect on breastfeeding. Those studies indicated that infants ingest less milk at the breast in the hours following maternal alcohol consumption, in part due to decreased maternal milk production.

Mennella notes, “It’s important for women to realize that these data should not frighten them away from breastfeeding. Unlike the situation during pregnancy, when alcohol consumed at any time is always passed onto the fetus, a lactating woman who drinks occasionally can wait a few hours after she stops drinking to breastfeed so that her infant is not exposed to the alcohol in her milk. However, she needs to be aware that the hormones underlying lactation and her milk production will be affected in the short term.”

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**ABOUT MONELL:** The Monell Chemical Senses Center is a nonprofit basic research institute based in Philadelphia, Pennsylvania. For 35 years, Monell has been the nation’s leading research center focused on understanding the senses of smell, taste and chemical irritation: how they function and affect our lives, from before birth through old age. Using a multidisciplinary approach, scientists collaborate in the areas of: sensation and perception, neuroscience and molecular biology, environmental and occupational health, nutrition and appetite, health and well being, and chemical ecology and communication. For more information about Monell, please visit [www.monell.org](http://www.monell.org) or email [media@monell.org](mailto:media@monell.org).

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