

Study looks at how changes in maternal diet impact human milk oligosaccharides and milk microbiome

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In a study to be presented Thursday, Jan. 26, in the oral plenary session, at the Society for Maternal-Fetal Medicine's annual meeting, The Pregnancy Meeting, researchers with Baylor College of Medicine, Houston, Texas and University of California, San Diego, La Jolla, California, will present their findings on a study titled, Maternal Diet Structures the Breast Milk Microbiome in Association with Human Milk Oligosaccharides and Gut-Associated Bacteria.

Previous studies have shown that a high fat maternal diet during gestation and lactation has a long-term impact on the infant's gut microbiome (the community of bacteria living inside the [human gut](#).) This study represents the first step in understanding whether [breast milk](#) contributes to this process.

In this study, researchers found that specific changes to maternal diet in the same woman (changing fat versus carbohydrate consumption, or changing consumption of specific sugars), is associated with changes in both the milk microbiome and human milk oligosaccharide (a carbohydrate) composition. Given that these two components of breast milk have the potential to alter the gut microbiome of breast-feeding infants, the results of the study suggest that development of the infant gut microbiome may be affected in part by what the mother eats during breastfeeding.

"Further studies are needed to delineate if specific changes in [maternal diet](#) during breast-feeding alter the infant gut microbiome and to determine if this results in any health consequences for the infant," said Kristen Meyer, in the Department of Obstetrics and Gynecology at Baylor College of Medicine and the presenter of the study at the SMFM annual conference. "Ultimately, we would hope that future studies would form dietary guidelines for breastfeeding mothers to promote healthy development of their infants' [gut microbiota](#)," Meyer added.

More information: Abstract #20: Maternal diet structures the breast milk microbiome in association with human milk oligosaccharides and gut-associated bacteria, The Pregnancy Meeting, 2017.

Provided by Society for Maternal-Fetal Medicine

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