

LIVE WELL WORK WELL

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BREAST FEEDING'S IMPORTANT ROLE In Seeding Infant Microbiome

A new study has found that 30% of the beneficial bacteria in a baby's intestinal tract comes directly from mother's milk, and an additional 10% comes from skin on the mother's breast. What's more, babies who breastfeed even after they begin eating solid food continue reaping the benefits of a breast milk diet: a growing population of beneficial bacteria associated with better health.

The findings appear in the May 8 issue of JAMA Pediatrics.

After birth, beneficial bacteria from the mother and environment colonize the infant's intestine, helping digest food and training the baby's immune system to recognize bacterial allies and enemies. But scientists still don't completely understand the mechanisms that help babies establish a healthy gut microbiome that includes the diverse community of bacteria that inhabits the intestines.

"Breast milk is this amazing liquid that, through millions of years of evolution, has evolved to make babies healthy, particularly their immune systems," said Dr. Grace Aldrovandi, the study's senior author and a professor of pediatrics and chief of infectious diseases at UCLA Mattel Children's Hospital. "Our research identifies a new mechanism that contributes to building stronger, healthier babies."

The study, which looked at 107 mother-infant pairs, is the largest to date showing the transfer of bacteria in the milk into the baby's gut, Aldrovandi said.

Earlier research has shown that a balanced bacterial community in the intestine is a key factor in people's susceptibility to immune diseases. For example, children who develop type 1 diabetes have abnormalities in their gut microbiomes. Additionally, a healthy gut appears to protect against allergies, asthma, and inflammatory bowel disease throughout life.

"We're appreciating more and more how these bacterial communities, particularly in the intestine, help guard against the bad guys," Aldrovandi said. "We know from animal model systems that if you get good bacteria in your gut early in life, you're more likely to be healthy."

Throughout the babies' first year of life, researchers collected samples of breast milk and infant stool and swabs from the skin around the nipple. They analyzed the samples to assess which bacteria were shared between mothers and infants, and calculated the relative abundance of the bacteria. The origin of breast milk bacteria remains unclear; one hypothesis is that it travels to the breast from the mother's intestine.

The project did not address whether babies who are fed only formula acquire healthy microbiomes.

Aldrovandi and colleagues want to expand the research to evaluate more samples in late infancy to better understand the transition to an adult microbiome. They would like to test in the lab how bacteria that are provided through breast-feeding are critical in infants' immune responses, and determine which beneficial bacteria are missing in people who have certain diseases.

HAVE A RESPONSIBLE SUMMER

Drive Sober or Get Pulled Over



This year from August 18th to September 4th, law enforcement will be stepping up their “Drive Sober or Get Pulled Over” campaign. This means police officers will be focused on spotting impaired drivers and pulling them over.

There were nearly 10,000 people killed in alcohol-impaired motor vehicle crashes in 2014, according to the CDC. This accounts for nearly 33% of all traffic-related deaths in the United States. Keep this sobering statistic in mind when attending gatherings with alcohol, like barbecues, beach parties, or work events.

The National Highway Traffic Safety Administration (NHTSA) created a [smartphone app](#) to help drivers who cannot safely drive home. The app can help tell you where you are and help you call a taxi or a friend. Other useful apps include [Uber](#) and [Lyft](#); both can get you home if it's not safe for you to drive.

For more information on the Drive Sober or Get Pulled Over campaign, [visit the NHTSA website](#).

AUGUST RECIPE

Broccoli Strawberry Orzo Salad

- ¾ cup orzo pasta (uncooked)
- 2 cups fresh broccoli (chopped)
- 2 cups fresh strawberries (diced)
- ¼ cup sunflower seeds

Lemon Poppy Seed Dressing:

- 1 Tbsp. lemon juice (fresh or bottled)
- 2 Tbsp. apple cider vinegar
- 2 Tbsp. olive oil
- 1 tsp. sugar (or honey)
- 1 tsp. poppy seeds (optional)



Cook pasta. Drain and rinse in cold water. In a large bowl, combine orzo pasta, broccoli, strawberries, and sunflower seeds. For the lemon poppy seed dressing, combine ingredients. Next, drizzle on top of the mixture in the other bowl. Season with salt and pepper. Chill in refrigerator until ready to serve.

Yield: 4 Servings. Each serving provides 153 Calories, 8 g of Fat, 18 g of Carbohydrates, 1 g of Saturated Fat, 33 mg of Sodium, 3 g of Dietary Fiber, 4 g of Protein. Percentage daily values are based on a 2,000 calorie diet. Source: USDA

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