

What do American babies eat? A lot depends on Mom's socioeconomic background

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Credit: University at Buffalo

You have to be at least 2 years old to be covered by U.S. dietary guidelines. For younger babies, no official U.S. guidance exists other than the general recommendation by national and international organizations that mothers exclusively breastfeed for at least the first six months.

So what do American babies eat?



That's the question that motivated researchers at the University at Buffalo School of Medicine and Biomedical Sciences to study the eating patterns of American infants at 6 months and 12 months old, critical ages for the development of lifelong preferences.

The team found that dietary patterns of the children varied according to the racial, ethnic and educational backgrounds of their mothers.

For example, babies whose diet included more breastfeeding and solid foods that adhere to infant guidelines from international and pediatric organizations were associated with higher household income – generally above \$60,000 per year – and mothers with higher educational levels ranging from some college to post-graduate education.

The <u>study</u>, "Sociodemographic differences and infant dietary patterns," was published this month in *Pediatrics*.

"We found that differences in dietary habits start very early," says Xiaozhong (pronounced Shao-zong) Wen, MBBS, PhD, assistant professor in the UB Department of Pediatrics and lead author on the paper.

Studying the first solid foods that babies eat can provide insight into whether or not they will develop obesity later on, he explains.

"Dietary patterns are harder to change later if you ignore the first year, a critical period for the development of taste preferences and the establishment of eating habits," he says.

Wen conducts research in the UB Department of Pediatrics' Behavioral Medicine division, studying how and why obesity develops in infants and young children.



In the study, babies whose <u>dietary pattern</u> was high in sugar, fat and protein or high in dairy foods and regular cereals were associated with mothers whose highest education level was some or all of high school, who had low household income—generally under \$25,000/year—and who were non-Hispanic African-Americans.

Both the higher sugar/fat/protein pattern and the higher dairy pattern resulted in faster gain in body mass index scores from ages 6 to 12 months for the babies.

Babies who consumed larger amounts of formula, indicating little or no breastfeeding, were associated with being born through emergency caesarean section and enrollment in the Special Supplemental Nutrition program for Women and Infant Children (WIC). Wen notes that one possible reason for high formula consumption in this group is that WIC provides financial assistance for formula purchases.

Some of the unhealthy "adult foods" consumed by 6- and 12-month-old babies in the study included items inappropriate for infants, such as candy, ice cream, sweet drinks and French fries.

"There is substantial research to suggest that if you consistently offer foods with a particular taste to infants, they will show a preference for these foods later in life," Wen explains. "So if you tend to offer healthy foods, even those with a somewhat bitter taste to infants, such as pureed vegetables, they will develop a liking for them. But if you always offer sweet or fatty foods, infants will develop a stronger preference for them or even an addiction to them.

"This is both an opportunity and a challenge," says Wen. "We have an opportunity to start making dietary changes at the very beginning of life."



The researchers also found that babies whose diets consisted mainly of high fat/sugar/protein foods were associated with slower gain in length-for-age scores from 6 to 12 months.

"We're not sure why this happens," explains Wen, "but it's possible that because some of these foods that are high in sugar, fat or protein are so palatable they end up dominating the baby's diet, replacing more nutritious foods that could be higher in calcium and iron, therefore inhibiting the baby's bone growth."

The UB researchers based their analysis on a subsample covering more than 1,500 infants, nearly evenly split between genders, from the Infant Feeding Practices Study II conducted by the U.S. Food and Drug Administration and the Centers for Disease Control and Prevention from 2005 to 2007. In that study, mothers reported which of 18 different food types their 6- and 12-month old babies ate in a week; those data then were used to develop infant dietary patterns.

Provided by University at Buffalo

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