

Salmon baby food? Babies need omega-3s and a taste for fish, scientist says

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Has your toddler eaten fish today? A University of Illinois food science professor has two important reasons for including seafood in your young child's diet, reasons that have motivated her work in helping to develop a tasty, nutritious salmon baby food for toddlers.

"First, babies need a lot of the [omega-3 fatty acids](#) found in fish for brain, nerve, and eye development, and when they switch from [breast milk](#) or formula to solid food, most of them don't get nearly enough," said Susan Brewer, also a registered dietitian.

"Second, children's food preferences are largely developed by the time they're five, so I urge parents to help their kids develop a taste for seafood early," she said.

Fish that are high in omega-3 fatty acids, such as salmon, have huge health benefits and help to prevent [coronary artery disease](#), but most adults don't eat fish twice weekly as experts recommend. In predisposing children toward liking fish, parents are doing their kids a big favor, she said.

Brewer knows her recommendations might meet with some resistance. "When we started working on salmon baby food, I thought, Ewwwh! But the American Heart Association and the American Academy of Pediatrics is solidly behind the idea, and fish-based baby foods, common in Asian markets, have been marketed successfully in the United Kingdom and Italy."

Brewer collaborated with former U of I professor Peter Bechtel, now of Alaska's Agricultural Research Service, in the effort to create a viable product, using wild-caught salmon from Alaskan waters.

"When salmon swim upstream to spawn, their flesh begins to get very soft. At that point, the meat is not firm enough for fillets, but it's perfect for baby food," she noted.

She has experimented with both pink and red salmon, finding that red salmon survives the baby food production process better.

And, to boost nutrition, in separate experiments she has added bone meal and pureed salmon roe (eggs) to her entrees. The first ingredient (made by grinding the bones in the salmon into a powder) provides calcium in a form that is readily available for bone building in children. The second provides high-quality protein and contains significant quantities of vitamin D and omega-3 fatty acids, particularly docohexaenoic acid (DHA).

"A newborn infant's brain is 50 percent DHA," she noted. "However, babies and toddlers have immature livers and can't synthesize enough DHA to ensure an adequate supply to their developing nerve tissues. If small children are going to get DNA, they must ingest it in their food."

According to Brewer, the results of her experiments have been encouraging. "Salmon is very mild, and the toddler dinners, which are 27 percent meat or fish, don't taste or smell fishy at all. They remind me of that salmon and cream cheese dip you have during the holidays."

Besides, could 107 parents of preschoolers be wrong? In a recent sensory panel conducted in the scientist's lab, parents found little difference in taste between formulations that contained roe or bone meal and those that didn't. Eighty-one percent of the parent panelists—even those who

don't eat salmon themselves—said they would offer it to their children after taste testing the product.

"It's not enough for mothers to know that toddlers need fish in their diets. They won't buy a product unless it also appeals to the eye and the taste buds," she said.

"Our goal is to deliver maximum nutrition in an entrée that's aesthetically pleasing, and these studies show that we can do just that," she added.

The paper on including salmon roe in salmon baby food products was published in the May 2010 issue of the *Journal of Food Science*. The sensory panels study has been accepted for publication in an upcoming issue of the *Journal of Food Science*.

F.A. DeSantos of the U of I and P. Bechtel and S. Smiley of the University of Alaska, Fairbanks, are co-authors of both papers. L. Ramamoorthi of the U of I is an additional co-author of the sensory panel paper. Research for the studies was funded by USDA CSREES.

A University of Illinois scientist is working to improve the nutrition of salmon baby foods. Toddlers need the omega-3 fatty acids found in fish for brain, nerve, and eye development, especially after they stop breast feeding, and it's important for children to develop a taste for fish early in life, food scientist Susan Brewer said.

Provided by University of Illinois at Urbana-Champaign

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