

# The Truth About Food Pouches

The fruit-and-vegetable packets are O.K. in moderation, experts say, but don't rely on them for every meal.

By Alice Callahan

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On a recent Saturday morning, I answered my antsy 3-year-old's request for a snack by digging into my bag and finding – to my relief – a pouch of applesauce. I snapped off the cap and handed it over, and he was content for the last few minutes of his sister's violin class. Perhaps apple slices would have been more ideal, but I was glad to have the pouch on hand.

Since the introduction of baby food pouches about 10 years ago, they've claimed more of the market each year. Technavio, a market research firm, estimated in 2018 that global revenue from baby food pouches grew tenfold between 2010 and 2017 — from \$16 million to \$160.8 million. In 2017, the market research firm Mintel surveyed 1,000 households in the United States with young children and found that about half of kids 3 and under eat purees from pouches, and of these, 58 percent have one or more pouches per day.

As a parent and college nutrition instructor, my guess is that pouches are popular because they're convenient, shelf-stable and usually more nutritious than other packaged snacks. While they're mostly fruit and vegetable purees, they can include more interesting ingredients like chia seeds, chickpeas, millet, avocado and yogurt.

"They were great when my daughter was about 2 and so hungry at 5:30 when I picked her up from day care. It prevented many dinner-prep meltdowns," said Melissa Marks, a biology professor in Salem, Ore. "I didn't love the eco-unfriendly nature of them," said Marks, "but they got this scientist mom through the final pre-tenure year." While the pouches are not recyclable through municipal services, they can be mailed to TerraCycle at a cost of at least \$65 per shipment, except for a few brands that have set up free mail-in programs with the recycling company. Pouch caps are collected in some locations by Preserve, which manufactures goods like toothbrushes and razors from recycled plastic.

The pediatric feeding experts I spoke with said that there's nothing wrong with giving your kids pouches from time to time, but they're worried that some families might be becoming too reliant on them. The pouches' entry into the baby food market is so recent that there isn't yet published research on their impact, but they are enough of a departure from traditional baby foods that they raise several theoretical concerns, including delaying motor development, diluting nutritional quality, and increasing picky eating and cavities in young kids.

One potential problem is that pouches may oversimplify the eating process, leaving fewer opportunities for babies to practice the oral and fine motor skills they need to use utensils and to eat more textured foods. For example, babies can suck from a pouch using similar mouth and tongue movements as when they breastfeed or drink from a bottle, said Jenny McGlothlin, M.S., a speech-language pathologist at the University of Texas at Dallas and coauthor of "Helping Your Child With Extreme Picky Eating." It's better for babies to eat purees with a spoon, she said, so they can practice closing their lips over the utensil and moving food back in their mouths to swallow, and then advance to food with more texture as soon as they're ready.

Pouched baby foods are marketed for babies as young as 4 months, and since they're easy for babies to suck down, this might encourage parents to add too much pureed food to their babies' diets too early. "As semi-liquids that could fill up the baby, they are not good nutritional substitutes for breastmilk or formula in early life," said Dr. Steven Abrams, M.D., chair of the American Academy of Pediatrics' Committee on Nutrition. The A.A.P. advises parents to start offering solids to babies when they're interested and developmentally ready to sit up and eat from a spoon, usually around 6 months.

Anecdotally, some professionals say they're observing delays in motor development among kids overly dependent on the pouches. Ruth McGivern, M.A., a pediatric speech-language pathologist in Philadelphia, said that she and her colleagues had noticed that some of their toddler clients were learning to self-feed with a spoon later than usual, and that she was "pretty sure reliance on the pouches is part of the reason." On its own, taking longer to learn to use a spoon wouldn't necessarily be a problem, she said, but she worries that these toddlers are missing out on an important stage of food exploration.

"Without the opportunity to smear food all over their faces, and lick it off with their tongues, and wave the spoon around while they play with the food in their other hand, young toddlers tend to lose their curiosity about food and become more and more dependent on either the pouches or their parent spoon-feeding them," said McGivern.

Research suggests that kids use all their senses to learn about food. Having the opportunity to see, smell and play with food can increase a toddler's acceptance of new foods, according to studies published in the journal *Appetite*, and pouches don't allow for that full sensory experience. Maryann Jacobsen, M.S, R.D., a coauthor of "Fearless Feeding," recommended advancing from purees – like those in pouches – to more textured foods between 6 and 10 months so that babies can learn to chew and feed themselves finger foods.

Babies are most open to new tastes during a "golden window of opportunity" between 6 and 18 months, said McGlothlin. It's a perfect time to get used to the bitterness of green vegetables, which can require repeated exposures. "If we don't offer a variety of foods and experiences, then we're setting ourselves up for pickiness later," she said.

If vegetables are introduced to kids only in pouch form, their taste is probably masked. "When you're mixing it with other flavors, there's no guarantee that they're able to taste it in the way that they need to in order to learn to like that flavor over time," said Kameron Moding, Ph.D., a postdoctoral fellow in pediatric nutrition at the University of Colorado School of Medicine, whose research has shown that most packaged baby and toddler vegetable products, including pouches, are blended with fruits or sweet vegetables.

Those sweet ingredients also mean the pouches are high in sugar. A study published this July in the journal *Nutrients* analyzed 703 pureed baby and toddler food products and found that pouched purees were often higher in sugar than baby food in other packages, like jars or plastic tubs. For example, among fruit and vegetable blend products, pouches had a median of 11 grams of sugar per serving, compared with 5 grams of sugar per serving in products with other packaging because the pouches both came in larger serving sizes and were more concentrated in sugar. Among the pouched blends, 58 percent had added sugar beyond that naturally present in fruits and vegetables, compared with 33 percent of the purees in other packaging.

"The higher the sugar content, the higher the risk of tooth decay," said Dr. Joe Castellanos, D.D.S., immediate past president of the American Academy of Pediatric Dentistry. He recommends using pouches only in moderation, along with a good tooth brushing routine.

Despite these concerns, there's nothing wrong with the occasional pouch, Jacobsen said. "It's fine to use these," she said. "It's just when we overuse them and we rely on them too much, I think that's when it becomes problematic."

The experts I spoke with said that it's impossible to give hard and fast rules on how many pouches is too many. Some kids who eat several pouches per day are still comfortable eating many other foods. However, if your kid is fussy when they can't have a pouch; or if they refuse to eat more textured foods, or if they don't want to use utensils or touch food with their hands, it's a problem, McGlothlin said. A pediatric feeding specialist can do an evaluation to identify sensory or oral motor issues that may be contributing and help make a plan to broaden the child's diet.

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Although she's concerned about overuse of pouches, McGlothlin, who's also a mother of three, said that it's not helpful to judge parents about how they feed their kids. "We're all kind of just trying to do the best we can on a daily basis," she said.

Pouches may be especially helpful for parents with disabilities, or for those who have little time for food prep and who might find that pouches are the most realistic way of getting fruits and veggies into their kids' lunchboxes.

The same can be true for children with special needs. Katie Herzog, a mother in Novi, Mich., has a 4-year-old daughter who has significant feeding problems that require therapy. "Even as we add solid foods to her diet, the pouches are important to give her jaw a break," Herzog said. Her daughter also has celiac disease, an autoimmune condition in which the body mounts an attack response against the small intestine after eating gluten, she said, so pouches can be given to her on the go without having to worry about wheat contamination.

For my part, I see parenting as both a short game and a long game. My long game that Saturday morning was to make a fragrant lentil and veggie curry that would simmer in the slow cooker all afternoon. I wasn't sure if my son would eat much of it, but at least he would smell it, taste a bit of it, and watch his sister and parents enjoy it. But my short game? It might involve a pouch every now and then.

*[For more healthy eating tips for your children, see our pieces on meal planning, vegetarian diets, instilling healthy eating habits without shame, and dealing with picky eaters.]*

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