

# Does the age you introduce food to an infant affect allergies later?

Heather Kovich, MD,  
Jane Huntington, MD  
Department of Family Medicine,  
University of Washington, Seattle

Sarah Safranek, MLIS  
Health Sciences Libraries,  
University of Washington, Seattle

## Evidence-based answer

Yes. In children at high risk for atopy (those with a family history of allergy, asthma, or eczema in at least 1 first-degree relative), breastfeeding or giving hydrolyzed protein formula during the first 4 to 6 months reduces the risk of atopy in the first year of life, when compared with introducing cow's milk or soy formula (strength of

recommendation [SOR]: **B**, based on a systematic review that included only 2 double-blinded randomized controlled trials [RCTs]).

There is inconsistent evidence to show that early introduction of solid food increases the incidence of atopic disease (SOR: **B**, systematic review of inconsistent studies).

## Clinical commentary

### Begin talking about infant feeding during the first postnatal visit

Having found a surprising number of children on cereal or other solids at the 2-month visit, I make it a practice to begin talking about infant feeding during the first postnatal visit. I encourage parents to wait until at least 4 months (but not more than 6 months) to start cereal, and to wait 3 to 4 days between introducing any new foods to make sure the child does not have an adverse reaction.

I generally tell all parents to keep their child on breast milk or formula and avoid whole milk until age 1, although small amounts of cheese and yogurt are fine. Additionally, I recommend avoiding citrus, honey, and eggs until age 1 and peanut butter until age 2 or 3.

For the child at high risk of atopy, the American Academy of Pediatrics

recommendation to wait to introduce solid foods until 6 months of age and to wait to introduce peanuts and fish until 3 years of age seems reasonable, although I'd let parents know that they could try these foods earlier if they wanted since there is no definite evidence that those changes will make a difference.

Although I've never recommended hydrolyzed protein formula for children at high risk of atopy, it is an option for discussion. Practical considerations to bring up in the discussion are the higher cost of these formulas and the palatability. Children receiving their formula through Women, Infant and Children (WIC) programs will need a prescription that includes the indication for the formula.

Mary M. Stephens, MD, MPH  
East Tennessee State University, Johnson City

## FAST TRACK

**Breastfeeding during the first 4–6 months of life reduces the risk of atopy in high-risk children when compared with cow's milk or soy formula**

## FAST TRACK

## The American Academy of Pediatrics recommends against introducing solid foods to high-risk infants before the age of 6 months

### Evidence summary

Systematic reviews analyzing the modification of early feeding practices to prevent atopic disease have all been limited by a paucity of double-blinded RCTs of sufficient duration.<sup>1-3</sup>

#### Breastfeeding, hydrolyzed formulas confer lowest atopy risk

Breastfeeding and the use of hydrolyzed protein formulas confer the lowest risk of atopy in high-risk children when compared with cow's milk or soy-based formulas.<sup>1,3</sup> The relative risk for wheeze or asthma in the first year of life was 0.4 (95% confidence interval [CI] 0.19-0.85) for children fed hydrolyzed protein formulas when compared with cow's milk.<sup>1</sup> Studies have not found a significant difference among these forms of milk for infants without a strong family history of atopic disease.<sup>3</sup>

#### Delaying solid food may reduce allergies

There is speculation that introducing certain solid foods early increases the risk of allergies to these foods, as well as causing generalized atopic symptoms. Few studies have examined this, and no systematic reviews focus on atopic disease.<sup>4</sup>

A cohort study (n=1265) comparing children who had been given 4 or more types of solid food before 4 months of age with those whose caregivers delayed solid foods showed an increased incidence of eczema by 10 years of age (relative risk=2.35;  $P<.05$ ) in the early feeding group.<sup>5</sup>

However, a prospective interventional cohort study using a retrospective cohort as a control (n=375) compared children who had strictly avoided fish and citrus products until 1 year of age with those who had an unrestricted diet. There was no difference in the frequency of allergy to these foods as quantified by history and positive challenge test,

although the authors did not include a statistical analysis of their results.<sup>6</sup>

Another study randomized 165 high-risk children into groups with standard feeding practices or an allergy prophylaxis regimen, which included avoidance of milk protein until age 1 year, eggs until 2 years, and fish and peanuts until 3 years. Although prophylaxis decreased the prevalence of atopic disorders at 1 year, there was no difference in any atopic disease between the 2 groups at age 7.<sup>7</sup>

#### Recommendations from others

The American Academy of Pediatrics recommends that for high-risk infants, solid foods should not be introduced into the diet until 6 months of age, with dairy products delayed until 1 year, eggs until 2 years, and peanuts, tree nuts, and fish until 3 years of age.<sup>8</sup> ■

#### References

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