

Early Gluten Introduction and Celiac Disease in the EAT Study A Prespecified Analysis of the EAT Randomized Clinical Trial

Logan K, Perkin MR, Marrs T et al. JAMA Pediatr Sept 2020 (ahead of print) 10.1001/jamapediatrics.2020.2893

Rationale: Earlier observation based studies suggested higher prevalence of celiac disease if complementary feeding is started <4 months or >6 months of age. Thereafter conflicting evidence regarding time of weaning is associated to gluten allergy in systematic reviews and celiac disease guidelines. No consensus.

Objective: To determine whether early introduction of high-dose gluten lowers the prevalence of CD at age 3 years

Methodology: Enquiring About Tolerance (EAT) Study: open-label randomized clinical trial of 1004 children

from UK. Infants were randomized : 1) consume 6 allergenic foods (peanut, sesame, hen's egg, cow's milk, cod fish, and wheat) + breast milk from age 4 months (early introduction group [EIG]) 2) avoid allergenic foods and follow UK infant feeding recommendations of exclusive breastfeeding until approximately age 6 months (standard introduction group [SIG]).

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



TIME OF WEANING & GLUTEN ALLERGY- IS THERE A LINK?

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Figure 3. Gluten Consumption in the Enquiring About Tolerance Study Standard Introduction Group and Early Introduction Group With Reference to the PreventCD Study Gluten Consumption

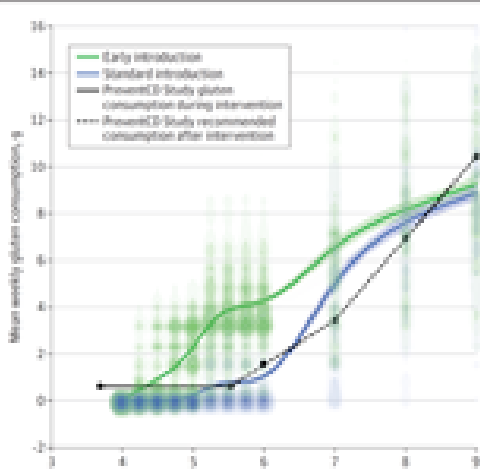


Table 2. Summary of Gluten Introduction in Prevention RCTs

Study	No.	Population	Age at introduction of gluten in intervention vs control groups, mo	Weekly quantity of gluten recommended during intervention period, g	Weekly volume of gluten consumed during intervention period
PreventCD ³	944	High risk (HLA-DQ2 or HLA-DQ8 positive)	4-6 vs >6	0.7	No set quantity recorded; 416/475 received at least 0.53 g/wk
BABYDIET ⁴	150	First-degree relative with type 1 diabetes and a risk HLA genotype	6 vs 12	No set quantity stipulated	No set quantity recorded
CELIPREV ⁵	707	First-degree relative with CD	6 vs 12	No set quantity stipulated	No set quantity recorded; mean, 3.2 g/d at age 9 mo
EAT ¹¹	1004	General population	4-6 vs >6	1.7	7.88

Results:

- Mean (SD) quantity of gluten consumed between ages 4 and 6 months was 0.49 (1.40) g/wk in the SIG and 2.66 (1.85) g/wk in the EIG (P < .001).
- Mean (SD) weekly gluten consumption ranged from 0.08 (1.00) g/wk at age 4 months to 0.9 (2.05) g/wk at age 6 months in the SIG vs 1.3 (1.54) g/wk at age 4 months to 4.03 (2.40) g/wk at age 6 months in the EIG.
- In SIG 1.4% had a diagnosis of CD confirmed vs none in EIG (P = 0.02)

Conclusions (from the authors)

- In this analysis of infants in the EAT Study, the introduction of gluten from age 4 months was associated with reduced CD prevalence.
- These results suggest that early high-dose consumption of gluten should be considered as a strategy to prevent CD in future studies

EXPERT COMMENT



“Exclusive breast feeding in India must still continue for 6 months as per standard guidelines. For celiac disease in India, introduction and quantity of gluten at 4 months is a cautionary advice. Further trials in India will be required due to region-specific diets and diverse ethnicities”

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Reference

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