

A Study on the Association between Breastfeeding and Allergies in Children 5 Years Old or Younger in the United States

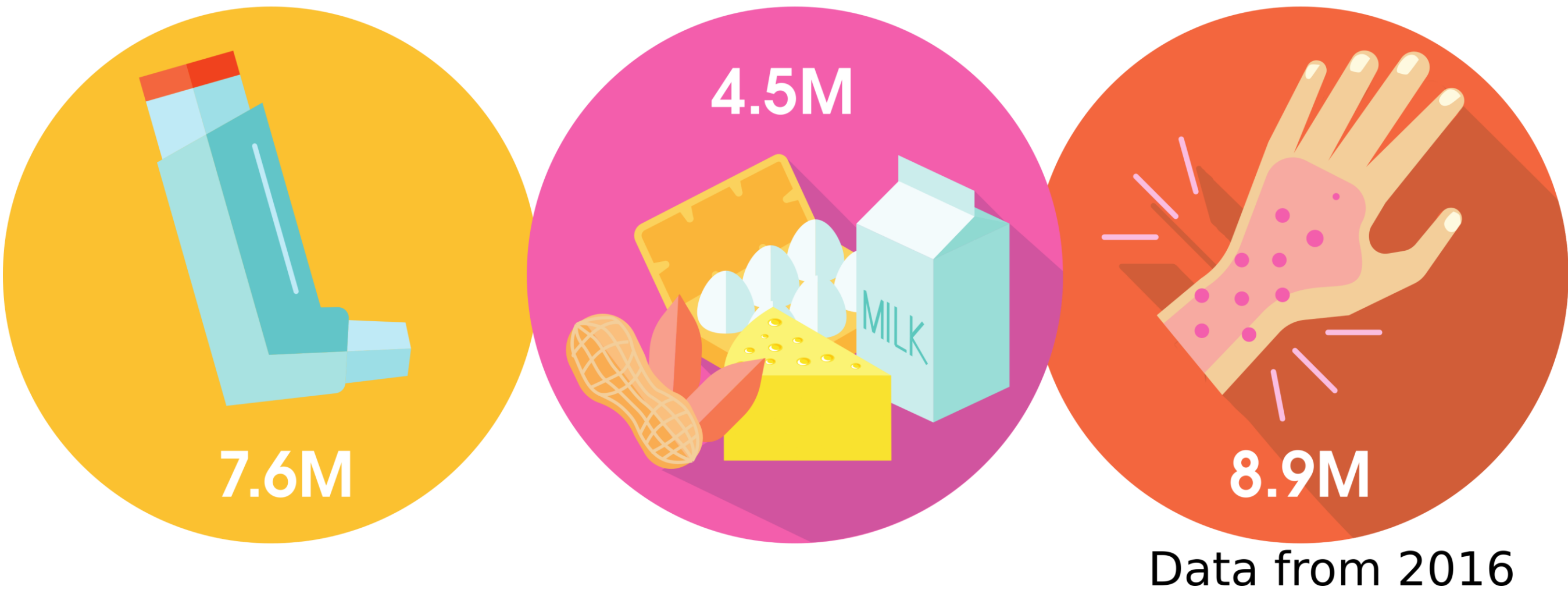
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Background

Allergies occur when your immune system overreacts to an environmental substance called an “allergen” that in most people does not provoke an adverse reaction.

In the United States, respiratory, food and skin allergies cause significant disease burden in children.

Allergies in Children under 18 years



Data from 2016

The bacteria colonizing our gut, or the **gut microbiota**, influences our immune response, and maintaining a balanced diversity is crucial to a healthy immune system.

Food intake is a primary driver of this microbe population, and in newborns and infants, this is mainly comprised of milk.

Objectives



Based on the relationship between food intake, the gut microbiota and the immune system, the objectives were to determine:

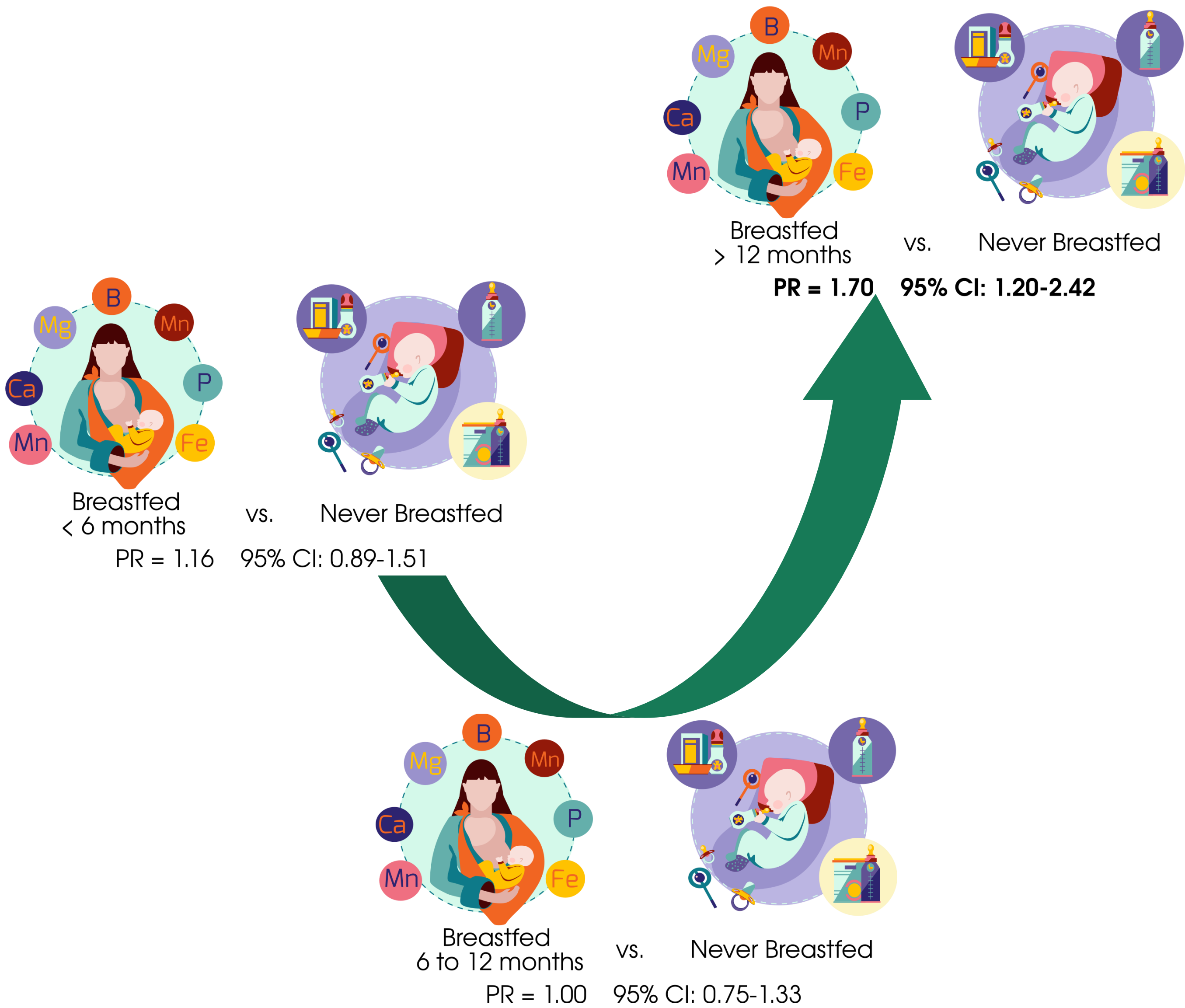
- 1) if breastfeeding results in a lower prevalence of allergies in children 0-5 years old in the U.S, and ...
- 2) if any protection levels afforded changed as children became further removed from breastfeeding

Materials and Methods

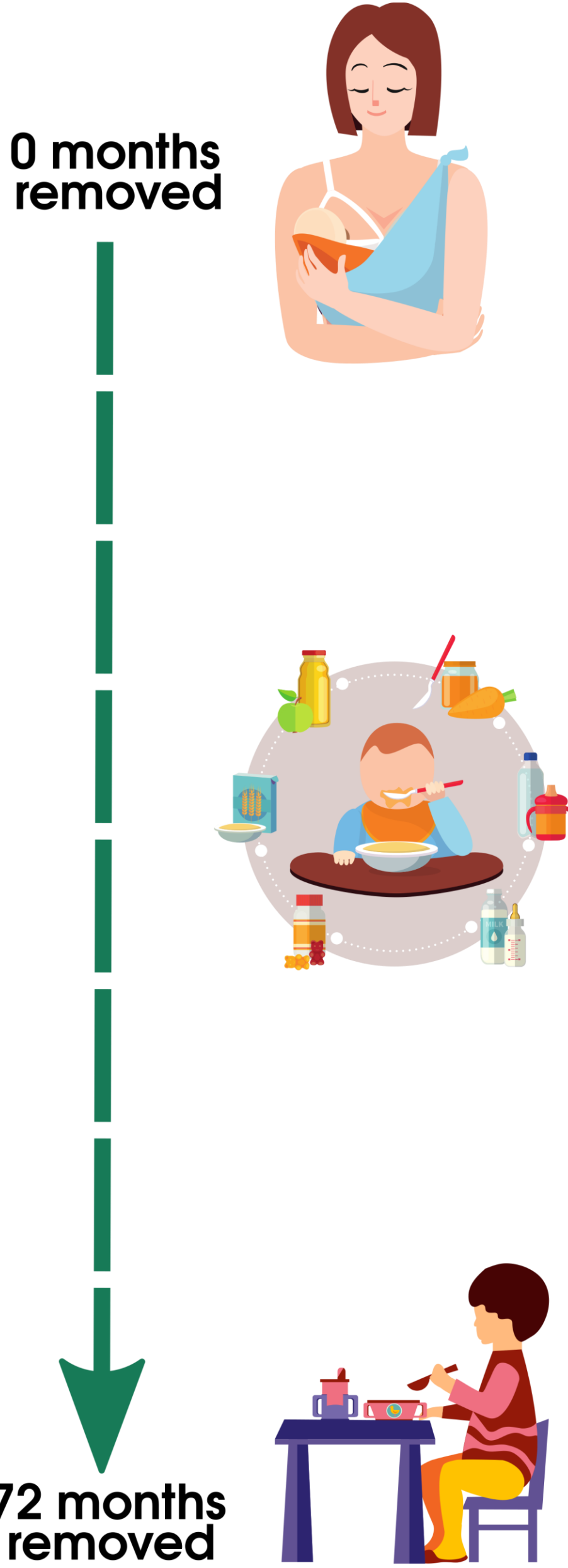
- Data: 2016 National Survey of Children’s Health
- Inclusion criteria:
 - ✓ Subject of the survey was 5 or younger
 - ✓ Answered survey question regarding allergy diagnosis
- 14,458 records were available to build adjusted models using logistic regression.

Results

Main Effects of Breastfeeding Duration on Allergies



Adjusted for time of first solids, race, access to nutritious meals and the number of months since last breastfed.



Presence of Effect Modification

- Significant for children who had a breastfeeding duration of 6 to 12 months ($p = 0.013$)
- At 0 months since last breastfed there is a **40% reduction** in the prevalence of allergies ($p = 0.03$)
- There is approx. **1.0% decrease** in this reduction per each month removed

Conclusions

- Breastfeeding < 6 months does not affect allergy prevalence
- Between 6 to 12 months results in a 40% decrease
 - Protection is reduced by 1.0% per month removed
- Breastfeeding > 12 months appears to be associated with an increased prevalence