

# Two-step egg introduction for prevention of egg allergy in high-risk infants with eczema (PETIT) : A Summary

## BACKGROUND

- The complex protocol of the EAT study had low adherence and the results suggest that a safe and practical approach for introduction of allergenic foods to high-risk infants with eczema is still very much needed.
- Results of an RCT that investigated the effect of egg introduction at 4 months of age highlighted

that infants with moderate-to-severe eczema might have sensitisation and clinical reactivity to egg by 4 months of age.

- A two step- method of early introduction of hen's eggs to infants with eczema to prevent egg allergy was designed to address these issues

## METHODS

- Randomized, double-blind, placebo controlled trial of infants 4- 5 months with atopic dermatitis. Participants were excluded if they had a prior exposure to eggs or shown allergy to egg.
- Participants consumed the trial powder from 6 months of age daily, for 6 months. The egg group ate 25mg heated egg protein and 100mg squash from 3 months to 6 months and 1g of

heated egg protein and squash. The placebo group ate two different doses of powder containing squash, 150 mg from 6 months of age and 250 mg from 9 months of age.

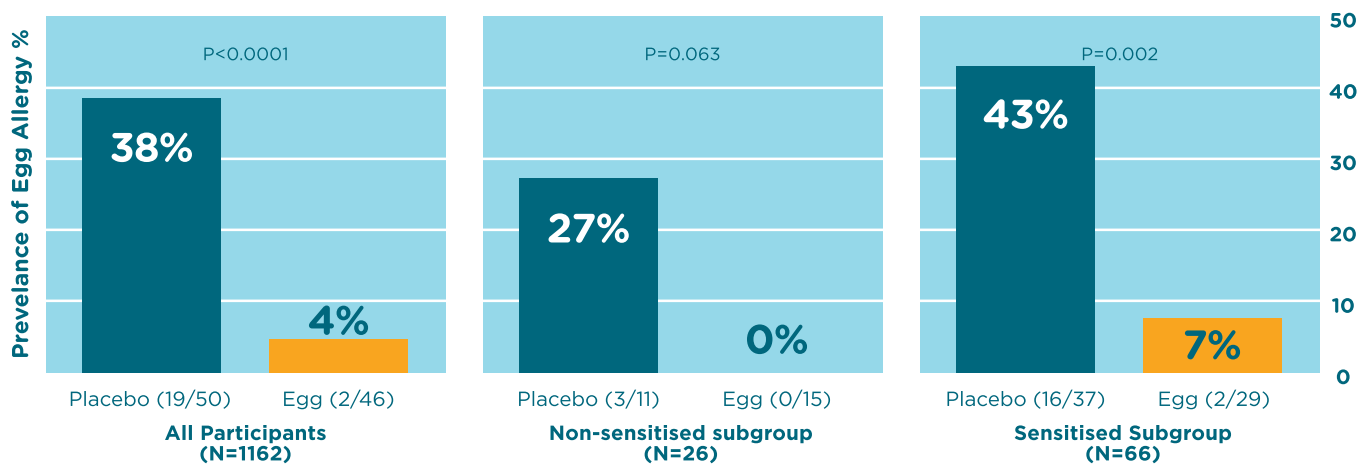
- Participants' eczema was treated attentively, aiming to achieve remission, and given proactive therapy to some patients with moderate-to-severe eczema to prevent flare-up.

## RESULTS

- 147 infants participated (73 to egg and 74 to placebo). This trial was terminated on the basis of the results of the scheduled interim analysis of 100 participants, which showed a significant difference between the two groups (9% had an egg allergy in the egg group vs 38% in the

placebo group; risk ratio 0.222 [95% CI 0.081–0.607]; p=0.0012).

- Introduction of heated egg in a stepwise manner along with eczema treatment is a safe and efficacious way to prevent hen's egg allergy in high-risk infants.



**Figure 2: Prevalence of egg allergy.** (A) Primary analysis population. (B) Per-protocol analysis. The left panels show all participants. The middle and right panels show the subgroup analysis that stratified by concentration of egg white-specific IgE at baseline into lower (non-sensitised subgroup; middle panels) or higher (sensitised subgroup; right panels) than 0.35 kU/L. We used  $\chi^2$  tests for all participants and Fisher's exact tests for subgroup analyses.

Images and text taken, lightly edited, from: Natsume O, et al.; PETIT Study Team. Two-step egg introduction for prevention of egg allergy in high-risk infants with eczema (PETIT): a randomised, double-blind, placebo-controlled trial. *Lancet*. 2017 Jan;389(10066):276–86.

Summarized by

