

IMPACT: Efficacy and safety of oral immunotherapy in children aged 1–3 years with peanut allergy¹

A multicentre, randomised, double-blind, placebo-controlled study

Jones SM, et al. Lancet. 2022;399(10322):359–371.

Aim: To assess whether peanut oral immunotherapy (OIT) can induce desensitisation or remission in children aged 1–3 years with peanut allergy

Participants: 146 children with peanut allergy across 5 US academic medical centres



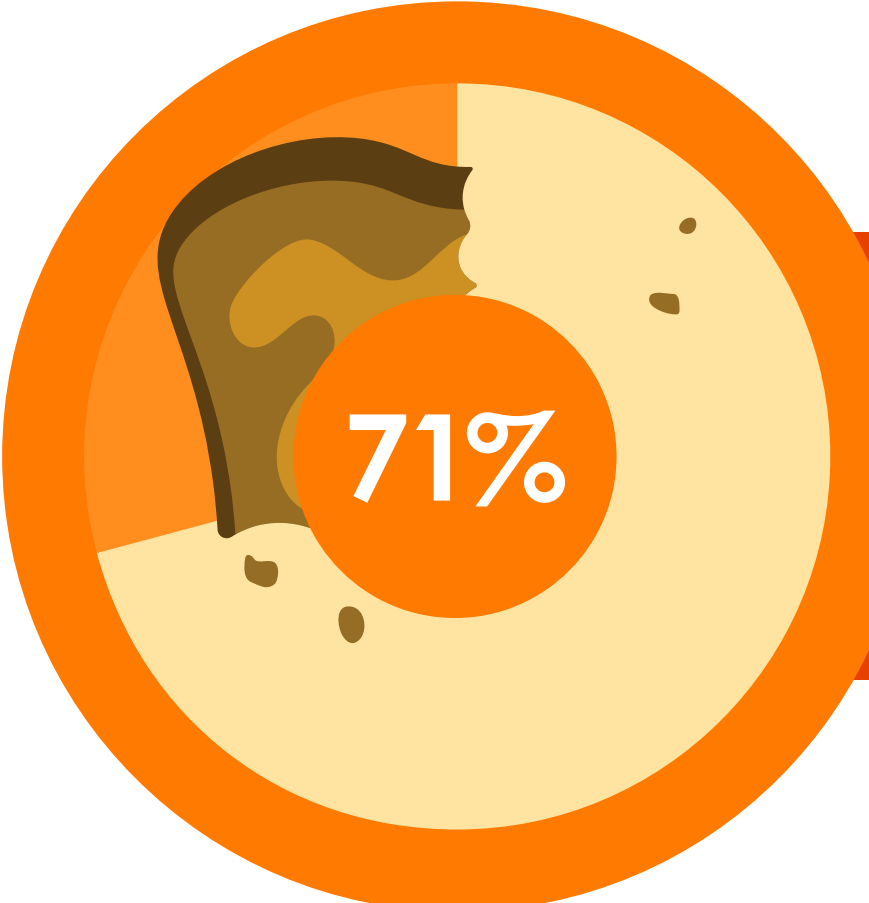
Reactive to ≤ 500 mg of peanut protein in a DBPCFC

Aged 12 to <48 months; median age 39.3 months (IQR 30.8–44.7)



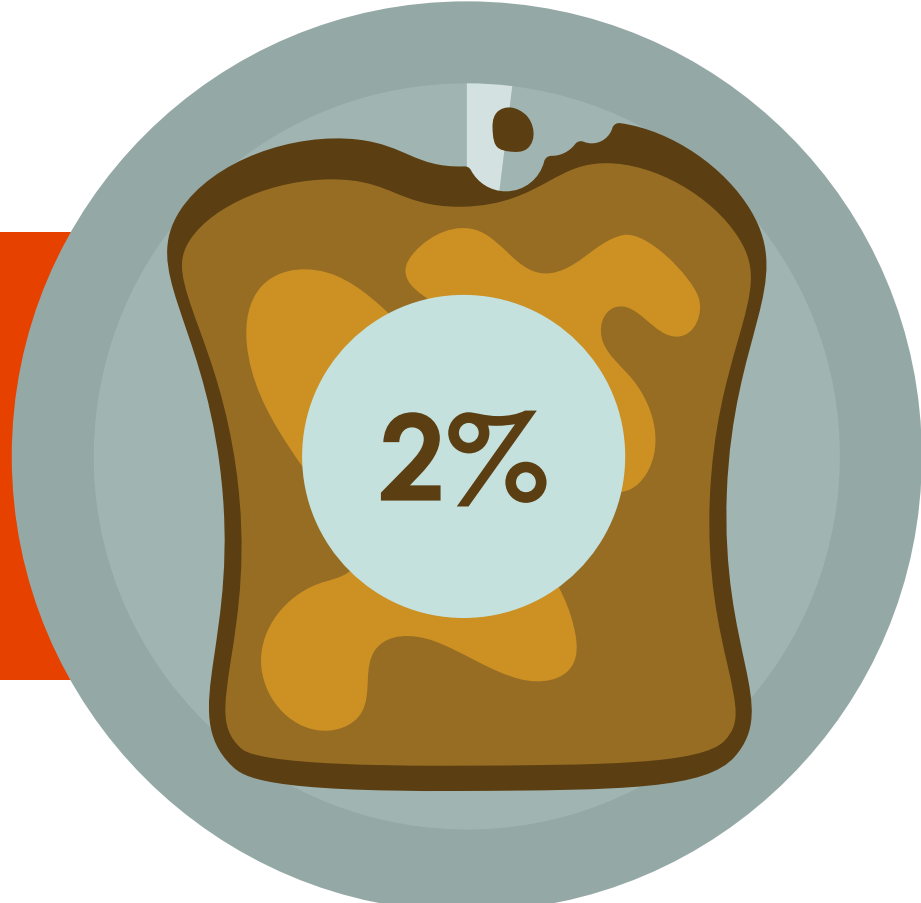
Randomisation (n = 146)



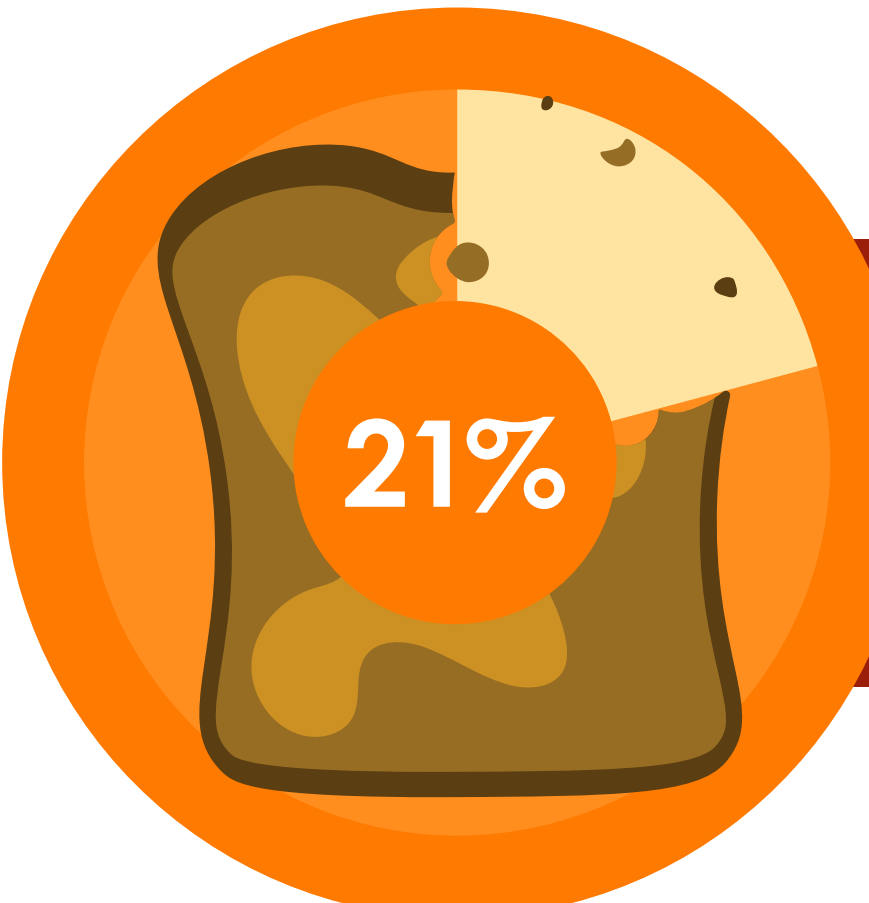


Primary outcome

Desensitisation at Week 134[†]
RD 69%; 95% CI, 59–79; P<0.0001
(95% CI, 61–80)

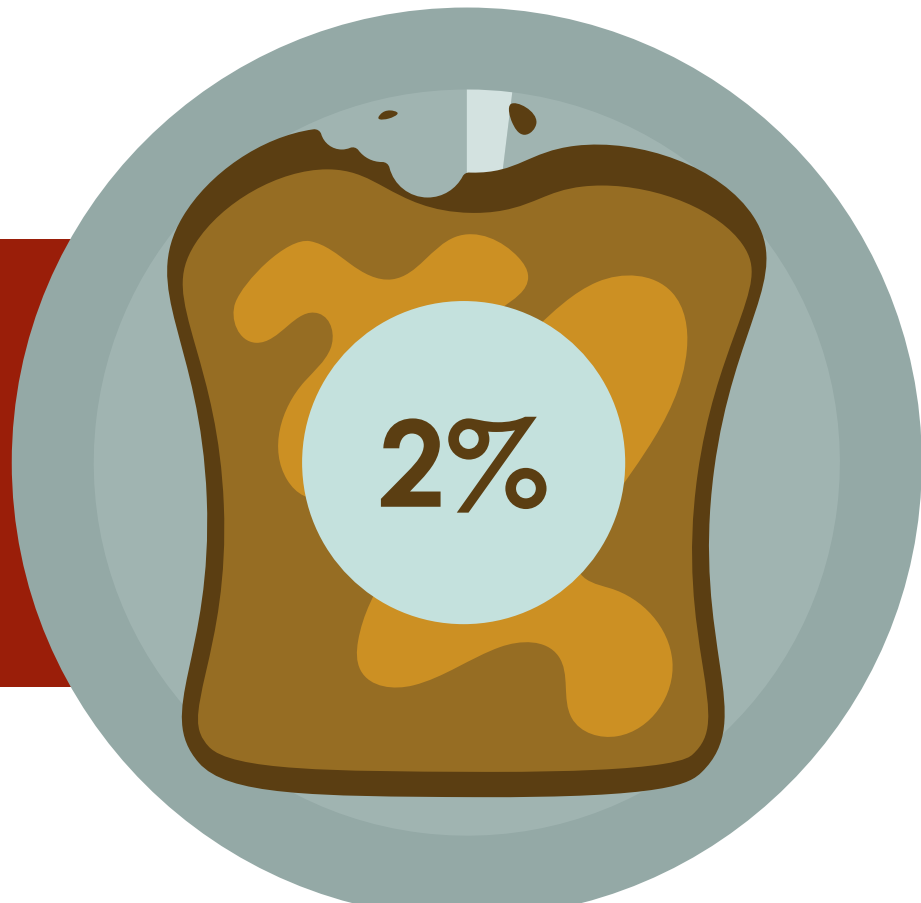


(0.05–11)



Secondary outcome

Remission at Week 160[‡]
RD 19%; 95% CI, 10–28; P=0.0021
(95% CI, 13–30)



(0.05–11)



Among patients receiving peanut OIT, factors that were predictive of remission included:

younger age

lower baseline peanut-specific IgE



Safety: Dosing reactions were reported in **98%** and **80%** of the **OIT** and **placebo** groups respectively, though most were mild or moderate.

In total, **five reactions with severe symptoms** occurred in participants **during at-home peanut OIT.**



Conclusions: In most children, peanut OIT resulted in desensitisation.

Remission also occurred in a larger proportion of participants compared to placebo. Future research could help identify a therapeutic window of opportunity, during which intervention with OIT could induce remission.

CI, confidence interval; DBPCFC, double-blind, placebo-controlled food challenge; IQR, interquartile range; OIT, oral immunotherapy; RD, risk difference.

1. Jones SM, et al. Efficacy and safety of oral immunotherapy in children aged 1–3 years with peanut allergy (the Immune Tolerance Network IMPACT trial): a randomised placebo-controlled study. Lancet. 2022;399(10322):359–371.

*at study entry, DBPCFCs were carried out up to a cumulative dose of 500 mg of peanut and up to a cumulative dose of 5000 mg of peanut at Week 134 and Week 160

[†]defined as an increased allergic reaction threshold while on therapy and assessed by DBPCFC to 5000 mg in the intention-to-treat population

[‡]defined as a state of non-responsiveness after discontinuation of immunotherapy and assessed by DBPCFC to 5000 mg in the intention-to-treat population