



The BMJ

Cite this as: *BMJ* 2022;376:o164<http://dx.doi.org/10.1136/bmj.o164>

Published: 21 January 2022

Peanut allergy: one in five children achieved lasting remission after oral immunotherapy, study reports

Elisabeth Mahase

Seven in 10 young children with peanut allergy achieved desensitisation after two and a half years of treatment with immunotherapy, a US trial has reported,¹ although the effect waned over time, with just one in five still in remission 26 weeks after treatment ended.

Peanut allergies affect 2% of children in western countries and are one of the most common causes of food related deaths in the UK. Standard care is dietary avoidance and access to self-injectable adrenaline (epinephrine), although a new treatment called Palforzia, containing peanut protein powder, was recently made available to about 600 children in England.² Patients receive a monthly increasing dose that should enable tolerance to build over time.

Of the 146 children who took part in the trial, 96 were randomly assigned to peanut oral immunotherapy treatment and 50 to a placebo group. They were supervised to receive small quantities of peanut protein powder or a placebo (oat flour), increasing gradually from 0.1 mg to 2000 mg daily (equivalent to six peanuts).

Desensitisation was defined as safe consumption of 5000 mg peanut protein powder (equivalent to 16 peanuts) after two and a half years of daily treatment, while remission was defined as the ability to successfully repeat this food challenge 26 weeks after treatment ended. The children were required to avoid eating peanuts between the two food challenges.

Quality of life

The study, published in the *Lancet*,¹ reported that the median tolerated dose after 2.5 years was 5005 mg in children given peanut oral immunotherapy and was 5 mg in the placebo group ($P<0.001$). However, 26 weeks later the median tolerated dose was 755 mg with peanut oral immunotherapy and 0 mg with placebo, showing that the benefits of treatment had waned.

The researchers also reported an age-response relation, with more of the youngest children aged 12-24 months likely to achieve remission (71%) than those aged 24-36 months (35%) and 38-48 months (19%).

Most participants (98% with peanut oral immunotherapy v 80% with placebo) had at least one reaction to treatment, this mainly being mild to moderate and occurring more frequently in the children receiving peanut oral immunotherapy.

Wesley Burks, study coauthor and dean of medicine at the University of North Carolina, USA, said, "The serious and unpredictable nature of food allergic reactions can be worrisome for affected children and their parents . . . Exploring safe and effective therapy

options for children with peanut allergy is crucial to improving quality of life for this group of patients, particularly as most children remain allergic for their lifetime."

The authors noted some limitations to their research, including a high dropout rate between the end of treatment and the remission test (12 in the placebo group, 11 in the treatment group), which they said may have affected the accuracy of the treatment efficacy results. In addition, 27% (22/81) of children in the treatment group and 20% (7/35) in the placebo group did not reach the 2000 mg maximum dose of treatment, potentially leading to an underestimate of the treatment response.

1 Jones SM, Kim EH, Nadeau KC, 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;399:359-71. doi: 10.1016/S0140-6736(21)02390-4. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)02390-4/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02390-4/fulltext).

2 NHS England. New treatment to reduce effects of peanut allergy to benefit thousands of children. 23 Dec 2021. <https://www.england.nhs.uk/2021/12/new-treatment-to-reduce-effects-of-peanut-allergy-to-benefit-thousands-of-children/>

Published by the BMJ Publishing Group Limited. For permission to use
(where not already granted under a licence) please go
to <http://group.bmj.com/group/rights-licensing/permissions> 2022 BMJ