

What you need to know about new treatments for children with peanut allergies

March 19 2024, by Dr Li Huang, et al.



Credit: Unsplash/CC0 Public Domain

For many people peanuts are a healthy snacking option, but for those people with an allergy, peanuts can be a serious, or even deadly, health risk.

Interestingly, [Australia has quite a high rate of peanut allergies](#). At one year of age, about three in 100 children are allergic to peanuts.

And if you're a parent of a child with [peanut allergy](#)—or any allergy for that matter—it can be incredibly stressful.

Parents need to constantly be one step ahead: Scrutinizing food labels, planning shopping lists, monitoring [school lunches](#) and letting other people know about their child's allergies.

Then there's the EpiPen—a life-saving medication used in an emergency when someone is experiencing a severe allergic reaction, known as anaphylaxis—which always needs to be on hand.

But despite all of these precautions, parents and children often live in fear of an allergic reaction.

Over the past 10 years, an increasing number of peanut allergy [treatment](#) options that aim to either desensitize people or induce remission of an allergy (previously known as [sustained unresponsiveness](#)) have been tested.

When talking about desensitization, it refers to a temporary increase in allergic reaction threshold, meaning an increase in the amount of allergen that triggers a reaction. Desensitization requires ongoing therapy to maintain protection.

Remission refers to a longer-lasting protection—allowing patients to eat the allergen (in this case, peanuts) freely without ongoing treatment.

Understanding the treatments available

Oral immunotherapy (OIT) is perhaps the most widely known peanut

allergy treatment, with [Palforzia](#) the first and only [US Food and Drug Administration](#) (FDA) approved treatment for children with a peanut allergy aged four to 17 years.

Following its FDA approval in 2020, Palforzia was approved in the European Union (EU) and [recommended by the UK's National Institute for Health and Care Excellence \(NICE\) in 2022](#).

Palforzia is effective in [desensitizing around 50% of children](#) with a confirmed peanut allergy, increasing their temporary reaction threshold to around four peanuts.

But it carries a risk of additional allergic reactions to the treatment itself, and patients are required to stay on a regular dose indefinitely to maintain protection.

These factors lead some physicians, patients and regulatory agencies to question whether treatment provides greater benefits than strict avoidance.

The [US Institute of Clinical and Economic Review](#) has expressed [concerns](#) that Palforzia may not be cost-effective. In other words, the clinical benefits may not justify the monetary cost nor the cost of additional adverse events and the uncertainty around patient quality-of-life.

And here in Australia, the Australasian Society of Clinical Immunology and Allergy [currently states](#) that OIT is not yet ready for routine clinical care outside of [clinical trials](#).

Remission with improved quality-of-life

A type of oral immunotherapy, known as the Combined Probiotic and

Peanut Oral Immunotherapy (PPOIT), has been tested through a series of Australian clinical trials particularly aimed at children.

PPOIT is a one-off treatment that spans 1.5 years (as it takes some time to build up protection) and these [clinical trials](#) have shown that the addition of probiotic to OIT may reduce mild treatment reactions like gastrointestinal side effects.

A clinical trial team recently published long-term follow-up results which indicated that [PPOIT led to remission in approximately 50 percent of treated children four years after they completed the treatment](#)

In this case, remission means that there is no allergic reaction when consuming peanut, even if peanut has not been regularly consumed for weeks or months, which removes the need for strict ongoing dosing.

Most importantly, the [results shows that](#) remission offers significant quality-of-life benefits. For those who did not achieve remission, their quality of life was not reduced likely due to the added beneficial impact on coping skills from being involved.

Weighing up the cost

While PPOIT works for a considerable proportion of children with peanut allergy, a pivotal question remains: is the cost worthwhile given the benefit?

The University of Melbourne's latest cost-effectiveness study looked into whether PPOIT provides good value for money when compared to the current standard care of strict peanut avoidance. They used data from the [PPOIT-001](#) clinical trial and its [long-term follow-up](#).

They found that although PPOIT costs more at the outset including medical staff time to supervise patient up-dosing, cost of PPOIT itself and the food allergy test, the added remission and improved health-related quality-of-life may be worth it.

More specifically, the cost of managing adverse events in the group of children receiving PPOIT is the same compared with strict peanut avoidance.

This is great news for parents concerned about risk.

Overall, the treatment cost per child was estimated to be approximately \$A5,000.

Governments often use a measure called cost per quality-adjusted life year gained to work out the value for money of different treatments. This measure helps with resource allocation decisions by calculating the cost of gaining one year of life with full quality.

When looking at PPOIT in particular, the total health care [cost per one additional quality-adjusted life year gained](#) , if comparing PPOIT to strict avoidance, was an estimated \$A20,000. This is well below the threshold at which Australia tends to fund new pharmaceuticals which sits at around \$A50,000 per quality-adjusted life year gained.

So it looks like PPOIT is good value for money.

To analyze the cost-effectiveness of PPOIT, researchers used a 10-year time line. This included 1.5 years of actual clinical trial data, four years of post-trial follow up, and 4.5 years of modeling. They included all eligible participants, whether they achieved remission or not.

Assessing value and effectiveness

The researchers say their research is an important step towards finding a longer-term solution for children with peanut allergy.

While the PPOIT won't work for every child, around half of children will receive a long-lasting remission.

They aim to continue assessing the value and effectiveness of new treatment options, as well as looking at how to better provide information to parents to help them make decisions about assessing the short- and long-term risks and benefits.

Provided by University of Melbourne

Citation: What you need to know about new treatments for children with peanut allergies (2024, March 19) retrieved 28 April 2024 from <https://medicalxpress.com/news/2024-03-treatments-children-peanut-allergies.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.