

Peanut oil: your questions answered

Q. Will peanut oil cause allergic reactions for people with peanut allergy?

A. Research has shown that refined peanut oil will not cause allergic reactions for the overwhelming majority of peanut allergic individuals, and if anyone does suffer a reaction it is likely to be mild. However, unrefined (crude) peanut oil is more likely to cause symptoms.

The research was published in the British Medical Journal in 1997*. Under strict medical surveillance, 60 peanut allergic adults were fed refined peanut oil and also unrefined (crude) peanut oil. As a result, six of them suffered allergic reactions to the crude oil, but these were only mild reactions. None reacted to the refined oil.

The research was funded by the London-based Seed Crushers and Oil Processors Association (SCOPA), and carried out by a team of prominent Southampton researchers whose work is known to be of a high quality. All papers published in the BMJ are subject to thorough scrutiny by peer groups.

Q. Does peanut oil have to be labelled?

A. Under previous labelling regulations, food companies were allowed to label refined peanut oil under the generic term vegetable oil. But that changed with new European legislation covering the labelling of allergens. The legislation states that all major allergens in a list of 12 must now be labelled whenever they are used as ingredients in pre-packed food. The list includes peanut.

While the new regulations were being debated, the EU agreed that any ingredient derived from an

allergen (such as oil derived from peanuts) could be exempt from mandatory allergen labelling so long as it could be scientifically demonstrated that processing had removed its allergenicity. The European oilseed industry applied for peanut oil to be exempt from mandatory allergen labelling based on the Southampton research and other evidence.

But when the European Food Safety Authority (EFSA) studied the evidence, it said it wanted to see more scientific information made available before it would consider refined peanut oil to be of no risk to the peanut-allergic population. As a result, the European Commission refused to allow refined peanut oil to be exempt from compulsory allergen labelling. Food companies will now have to declare refined peanut oil on food labels (as well as unrefined). They have until November 2005 to comply, although products already labelled and on the shelves will be able to remain there throughout the rest of their shelf life.

Q. Does this mean refined peanut oil is no longer safe for people with peanut allergy?

A. The way peanut oil is refined has not changed and many scientific experts believe the Southampton conclusions are still valid.

In the Anaphylaxis Campaign's 11-year history, reports of allergic reactions allegedly caused by refined peanut oil have been few and far between – in fact our helpline staff cannot recall a single confirmed case. Many of the medical experts we consult agree that refined peanut oil is unlikely to present a problem. But it is up to individuals with peanut allergy (or parents) to weigh the evidence and make up their own minds.

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Q. Who took part in the Southampton research?

A. Sixty adults. All were known to be allergic to peanuts and 36 of them had suffered severe symptoms such as breathing difficulties. In the study, each one was fed refined peanut oil and on a separate occasion each was fed unrefined peanut oil.

Q. Did anyone have an allergic reaction?

A. None of the 60 people tested had a reaction to the refined oil. Six people had a reaction to the unrefined oil.

Q. Why did these six people react to the unrefined and not to the refined oil?

A. Unrefined peanut oil is likely to contain small amounts of peanut protein (the part of the peanut which causes the allergic reaction), but these are believed to be removed during the refining process.

Q. Is there any protein left in refined peanut oil?

A. If any protein solids are left, the amount is so small as to be undetectable by standard laboratory methods.

Q. So is refined peanut oil 100 per cent safe for people with peanut allergy?

A. To prove this would mean testing everybody

with an allergy to peanuts, which is impossible. The sample of 60 people proves to a very high level of statistical probability that refined peanut oil is safe for peanut allergic people.

Q. Were people who had suffered the most extreme form of allergy – anaphylactic shock – included in the study?

A. This would not have been ethical. However, the researchers believe refined peanut oil is highly unlikely to be allergenic to people with peanut allergy, even if their reactions to peanut solids have been anaphylactic.

Q. Wasn't there a French research paper which linked refined peanut oil in infant formulae with allergic reactions?

A. Yes, that paper was published in 1994. But the study did not look at the type of peanut oil used or at the protein level in the oil.

Q. Are there differing degrees of oil refinement?

A. No. The European oilseed industry agreed a common refining standard in 1999 based on the earlier UK SCOPA standard, which itself was inspired by the results of the Southampton study. Thus all refined peanut oil is processed in the same way, going through the stages of degumming, neutralising, bleaching, filtration and deodorisation. There is no such thing as “partially” or “less” refined peanut oil.

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Q. Why did the oilseed industry wish to have refined peanut oil exempted from mandatory labelling?

A. The generic term “vegetable oil” gave the food industry flexibility. Companies could buy blended vegetable oil to meet desired functional criteria, nutritional properties and price. This flexibility enabled refiners to maintain a regular supply of vegetable oil blends to suit customer needs at a reasonable price.

Q. Where exactly is refined peanut oil used?

A. Refined peanut oil could be used in a wide range of manufactured food products such as biscuits, cakes, crisps and ready meals. It could also be present in food eaten in catering establishments. However, it is expensive. Manufacturers are more likely to use other, similar refined vegetable oils such as rapeseed, sunflower or soya.

Some fish and chip shops choose refined peanut oil because it performs well at high temperatures and lasts well. Peanut oil has unique properties. Its stability and long life can make it a preferred choice for frying. The properties also make it useful as a carrier for minor ingredients in food products.

As it is such a stable oil, it is often used as a base for some pharmaceutical products and minor food ingredients such as colours and flavours.

Q. Where is unrefined oil used?

A. In the case of bottled peanut oil, a small quantity of unrefined oil may be blended with refined oil to provide a peanut flavour. This would be sold as

peanut oil or groundnut oil. A code of practice accepted by the UK and European oilseed industry states that the presence of unrefined oil will be indicated as such on the label.

The use of unrefined oil in pre-packed food products is extremely rare but it could be used to impart peanut flavour. A more common use for unrefined peanut oil is in ethnic foods in restaurants, such as Indian or Oriental, or food sold in small ethnic shops. Typical dishes include Thai or Chinese dishes including stir fries where the peanut flavour can be a characteristic of some dishes.

Q. How much peanut oil is used in the UK?

A. Out of an annual vegetable oil production of around 1.3 million tonnes, approximately 6,000 tonnes (less than 0.5 per cent) is peanut oil. Of this peanut oil, the overwhelming majority will be refined. Only 100 tonnes at the most will be unrefined – that’s a maximum of 0.008 percent of the total vegetable oil production.

Q. What are the risks in restaurants?

A. Based on the Southampton research, if a restaurant uses refined peanut oil, it is likely to be safe for the vast proportion of people with peanut allergy.

As a separate important point, if any oil has been previously used to fry a nutty product – for example, peanut cutlets or spring rolls – then the refined oil might be contaminated with peanut allergens. This might not be safe for people with peanut allergy. Incidentally, the same holds true if an oil has been used to cook any allergenic food. An oil used to fry fish would not be safe for someone with fish allergy.

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Q. Has anyone died from eating peanut oil?

A. As far as we know, no deaths have been attributed to peanut oil.

Q. Peanut oil (labelled as arachis oil) is present in some skin preparations (for example, eczema creams). Is that a problem?

A. A few researchers have suggested that there may be a link between the use of these creams and the development of peanut allergy in some children. This may be because tiny residues of peanut protein are present: not enough to cause allergic reactions but enough, in some cases, to “set up” an allergy to peanuts if the cream is applied to damaged skin (e.g. to alleviate eczema). Research is under way to resolve this issue, but meanwhile skin preparations, cosmetics and pharmaceutical products (for example, ear drops) known to contain arachis oil (peanut oil) are best avoided by families in which there is a history of allergy.

**Reference: Randomised, double blind, crossover challenge study of allergenicity of peanut oils in subjects allergic to peanuts. BMJ 1997 Apr 12;314(7087): 1084-8. Hourihane JO; Bedwani SJ; Dean TP; Warner JO.*

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