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Nuts on Planes: myths, media and facts

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By Dr. Andrew Craig

Two big stories about serious allergic reactions allegedly due to nuts being consumed on airplanes had widespread British media coverage during August and were picked by worldwide media. This stoked up the familiar myths and real fears about anaphylaxis occurring at 30 thousand feet. There was plenty of speculation about what had really happened on board, the risks of eating nuts in confined spaces, who was responsible and what should happen to avoid this in future. Coincidentally, information also appeared at the same time from very reliable sources to counter the biggest myths with facts. I've highlighted this factual evidence about nuts on planes in this article because it specifically addresses the myths and fears many have about nut snacks on planes and puts the risks of allergic reactions occurring because of snacking on nuts during flight into perspective.

The news story of most interest from the standpoint of what are the risks of something adverse happening when a bag of snack nuts are opened and consumed in a confined space of an airline cabin happened in mid-August as a family was travelling on a UK budget airline back from a holiday in Spain. A 4 yr old girl with a known peanut allergy was on board. Her parents alerted the cabin crew in advance and they made an announcement asking passengers to not open or consume any nut snacks they had brought on board. Obviously the airline did not distribute any bagged nut snacks either. Nonetheless, the girl's mother reported that about 20 minutes after the announcement her daughter began to show signs of swelling around her face, had throat constriction and increasing breathing difficulty. She lost consciousness. The mother had an adrenaline (epinephrine) auto injector and a paramedic passenger administered it. Afterwards the little girl regained consciousness and was stable enough for the plane to continue to London where she was given medical assistance.

The media handling of the story when it broke in the tabloid Mail on Sunday newspaper and online was interesting, if predictable. All reporting focused on the "selfish passenger" sitting four rows in front of the family who had thoughtlessly endangered the child's life by failing to heed requests not to open and consume a package of nuts – said later to be "mixed nuts" – when asked to do so. The media reported that his actions had obviously caused her potentially fatal allergy attack. The airline later banned the nut-eating passenger for two years but no further action was taken. (1)

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The scenario sounds simple enough, but was it? Something serious did happen to this child in mid-flight and contact with nuts in some way seems to have been involved. But what? Some media morphed the bag of "mixed nuts" into "peanuts" in their reports, simply because the child was reported to have a peanut allergy. In fact, there is no evidence that the "mixed nuts" included any peanuts at all.

Very quickly, however, the "nuts on planes" myth machine was in high gear, not helped by a prominent UK allergy organisation commenting on the incident on its website that, "Airborne particles from nuts have the potential to kill those who are allergic to them. These particles are even more readily inhaled from the recycled conditioned air in an aircraft." That certainly sounds pretty frightening. But is it true?

Just at the height of the media wave (the main tabloid story attracted 2730 comments), a voice of sense and reason from Dr. Matthew Greenhawt (paediatric allergist at the University of Michigan) was heard in the allergic consumer magazine Allergic Living. (2) He began by tackling the thorny question, With a food allergy to peanut or tree nuts, is it likely for an allergic reaction to occur from one person opening a bag of nuts on a plane, four rows ahead?

The expert's short answer is that "it is highly unlikely for a passenger to inhale nut protein from someone consuming nuts a few rows in front of him/her. There is no evidence that has been able to show that such dust circulates." Five studies in the past 10 years had investigated this question and found favourable conclusions which should reassure any airline passenger with a nut allergy. Briefly they are:

- close (12 inches) exposure to inhaling peanut butter aroma produced no reactions in severely peanut allergic people. Smelling peanuts may make concerned passengers uncomfortable, but there are no active proteins involved in breathing in the aroma of re-heated or pre-roasted nuts;
- peanut particles (dust) could not be detected in the air from stomping on peanuts on the floor or from opening an airline-style bag;
- peanut dust and peanut butter residues are both easily cleaned from hands and surfaces using soap and warm water or hand cleansers (but hand sanitisers and plain water don't work).
- Inhaling (thereby ingesting) a dose of an airborne allergen is very unlikely on an airplane because there is little "recirculation" and commercial jets are required to frequently refresh the cabin air and subject it to HEPA filtration and there is no evidence to show that peanut or tree nut circulates in the air, as opposed to it quickly settling on surfaces.





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Helpsheet

So the widespread and often repeated belief about dangerous particles becoming airborne from opened nut packets (known as aerosolisation) is a myth. But that is not the end of the story, for Dr. Greenhawt cautioned that the problem such as the little girl experienced coming from Spain back to London could be from nut allergens in peanut or tree nut dust and residues that may accumulate on surfaces such as tray tables, seats, carpets and surrounding areas. A nut allergic person – such a small child - could potentially touch a surface that hadn't been wiped down first, and theoretically ingest some level of allergen thus presenting far more risk than nut particles, if they even get into the air, being inhaled. Wiping down seats and tray tables first may be a way of countering this theoretical risk of unintentional and unnoticed ingestion. Of course, regular and thorough cleaning of airline interiors is an obvious answer but with high volume, quick turnaround budget flying that is not going to happen easily.

Another positive and reassuring feature on the nuts on planes issue appeared shortly after Dr. Greenhawt's, this time by Dr. Steven Stukas, allergist at Nationwide Children's Hospital in Columbus, Ohio. (3) Writing on a well-known allergy website "Don't Pass the Nuts"™, Dr. Stukas answered a wide range of questions including the vexed one about nut encounters on planes. Pointing to many reports of in-flight reactions, with anaphylaxis occurring in up to 1/3 of all reactions, Dr. Stukas said the evidence was that these were "not believed to be due to airborne food allergen, but from contact with seats, pillows, seat trays, etc. The universal theme with almost all cases of reported anaphylaxis is lack of use of epinephrine, either due to no availability or improper recognition/treatment." And he gave this good advice to allergic travellers: "The focus should be on preparation and awareness rather than fear of risk from unlikely sources of contact. However, there are a few steps passengers can take to help mitigate risk, including wiping the tray table with a cleaning cloth, avoiding use of airline supplied pillows and blankets."

The evidence about the perceived risks of eating nuts on planes has been clearly presented by Drs. Greenhawt and Stukas writing in well-known allergy consumer publications. But the comments of nut allergic individuals following their articles show that many simply do not believe the evidence and are very ready to offer contrary and passionate views based on personal or family experiences of nut reactions while on airplanes. Just presenting the facts isn't going to make this opinion go away. There is currently an online petition on the US website "No Nut Traveler" calling for a Bill of Rights for Food Allergic Children/ Adult Passengers which has attracted thousands of supporters and growing media attention. (4) Citing the policy of Air Canada, the petition asks that once cabin crew are informed that a nut allergic person is traveling, "the crew create a buffer zone at least three rows in front and three rows behind the allergic person. The crew member should ask customers seated in the buffer zone to refrain from consuming any nut containing products that they have brought onboard and the crew will not serve any nut containing products to these rows." Whether this petition will have political clout and result in regulations remains to be seen.



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Nothing in this article is meant to denigrate the concerns of people and families affected by serious nut allergies. Quite the opposite. At the moment, the evidence and expert clinical opinion based on it all points to very low to negligible risks from fellow passengers opening packets and consuming nuts on airplanes. Where large groups of people, such as airline passengers, are concerned the question of rights versus risks has to be carefully negotiated and balanced. Simply repeating myths about the supposed dangers of inhaling nut particles or the aroma of nuts on airplanes is part of the problem and does not help find the solution.

You can see APC London's tweets on this story and its media consequences @USA_peanuts_UK

1. www.mailonsunday.co.uk/news/article-2724684/Nut-allergy-girl-went-anaphylactic-shock-plane-passenger-ignored-three-warnings-not-eat-nuts-board.html
2. <http://allergicliving.com/2014/08/21/anaphylaxis-in-the-air-two-recent-airline-incidents/1/> based on data in Greenhawt M et al 2013. "International study of risk-mitigating factors and in-flight allergic reactions to peanut and tree nut". J Allergy Clin Immunol: In Practice 1:186-94. <http://dx.doi.org/10.1016/j.jaip.2012.01.002>
3. <http://allergicgirl.blogspot.co.uk/2014/07/food-allergy-counseling-interview-with.html>
4. www.nonuttraveler.com/Default.aspx and www.forbes.com/sites/tedreed/2014/08/30/united-alters-policy-on-peanut-allergies-as-mom-pushes-airlines-for-change

Dr Andrew Craig is the European Health Consultant for the American Peanut Council. This article has been reprinted with permission. ■



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