

## Why Peanuts, Why Now?

*How did the innocuous peanut butter sandwich turn so deadly.*

*By Janice Paskey*

---

Lilly Byrtus knows the worries of parenthood. She has three children with allergies; and the middle one is allergic to peanuts—a condition with deadly consequences. But worse of all, Byrtus believes she is responsible.

“I ate a lot of peanut butter during that pregnancy and while I was nursing,” says the Edmonton mother, who is Regional Coordinator of the Allergy Asthma Information Association for Alberta/NWT/Nunavut. Her theory that her daughter was predisposed to the allergy in utero and through breast milk reflects the latest debate among among researchers.

New research indicates that early exposure to peanuts—most commonly peanut butter—and increasing consumption of it may be contributing to the prevalence of the allergy. Although there are no hard statistics in Canada, most agree the allergy is on the rise. “It’s almost impossible to find a classroom today without a child with a peanut allergy,” says Dr. Stuart Carr, a pediatric allergist in Edmonton, “There’s no Alberta (diagnostic) health code for food allergy, so there’s no way to track the peanut allergy on a broad population basis.” He estimates that one to two percent of Canadians has food allergies and this may be as high as five percent in children.

Calgary’s Dr. Joel Doctor, Assistant Professor of Allergy and Clinical Immunology says, “There is a lot of speculation about the cause of the allergy. I think the reason is unknown, but whoever finds it is unlocking the mysteries of the immune system.

Most of the peanut allergy study comes from the United States, Britain and France. In a 1996 editorial in the *British Medical Journal*, Dr. Hugh A. Sampson of the Mount Sinai Medical Center writes, “The prevalence of peanut allergy seems to have increased over the past two decades. In comparable groups of children referred to us for evaluation of severe atopic dermatitis and possible food allergy, peanut sensitization (positive skin prick test) increased by 55 percent while allergic reactions increased by 95 percent over a 10 year period.” The skin prick test can detect peanut sensitivity but can’t predict how severe someone will react to it.

His colleague Dr. Scott Sicherer, a pediatrician at Mount Sinai School of Medicine and the Jaffe Food Allergy Institute comments: “There isn’t any really hard evidence that peanut allergies have increased, although allergies in general have increased. But if you ask families and schools they all feel like they are seeing more of it.”

Nancy Wiebe, leader of the Calgary Allergy Network says, “ In my opinion, the higher incidence may be due to higher consumption of peanuts and nuts (just look in your cupboard), better diagnosis and awareness, and a willingness to "let it be known" to others. I have met many adults who have anaphylactic allergies who were told when they were young not to say anything to others lest they stand out. Health problems were not as openly discussed as they are today. People didn't want to "rock the boat". “

Peanut butter is the champion of comfort food. So how did comfort turn so lethal? Some note that the immune system is seemingly a busybody in need of something to do. For instance, allergies are most common in areas where traditional childhood diseases have been eradicated.

“The immune system is like a balance,” says Dr. Sicherer, “On one side are allergies and on the other are infections. When one side is fighting bacterial infections, the other side making allergies is quiet. For instance, since we vaccinate people, they have less polio and diphtheria. But some studies suggest now that the immune system isn’t fighting all these bacteria and viruses, the side that causes allergy is causing more trouble.”

In Britain, Southampton University's Dr. John Warner issued a statement: "The increase in allergy generally may be explained by better hygiene. Fetuses used to respond to parasites present in the maternal blood. Now that these have been eliminated they are reacting to other things in the blood, such as antigens."

Another common hypothesis for the peanut allergy is its popularity. The peanut seemingly falls victim to a nasty allergy reality: allergies tend to develop in reaction to popular foods.

Edmonton's Dr. Carr notes, "Japan has rice allergies whereas here that food is considered hypoallergenic." Rice cereal is recommended as the first fed to Canadian infants.

In Canada, few foods are as common to childhood as peanut butter, a tasty and inexpensive cheap source of protein, which is consumed in increasing quantities. "Peanut butter is an 80 million pound per year business," says Frank Duyvelschoff, of Best Food Canada which sells the Kraft and Skippy brands of peanut butter. The amount is increasing by five percent a year, he says, despite the peanut allergy. "It's changed people's consumption patterns: they eat it at home, not necessarily at school."

"Peanut butter is a cheap source of protein," agrees Lily Byrtus, "It doesn't need to be refrigerated; it's given out at the food banks." An American study of 185 infants showed that 80 percent had been exposed to peanut products by their first birthday and 100 percent by their second birthday. Peanut butter has long been considered a perfect weaning food for infants and a staple food for vegetarians.

Ironically, it's this very popular and inexpensive protein—scientists have identified 19 peanut proteins--that can trigger anaphylaxis, a deadly allergic reaction in which several parts of the body react at once. It works this way: those with the allergy develop specific antibodies, known as Ige antibodies, which react to the peanut proteins. This triggers the release of histamine and other chemicals which cause facial swelling, and constrict the lungs airways and throat making it difficult to breathe. Without a shot of adrenaline, the reaction can cause death.

This severe reaction is causing near hysteria in day cares and classrooms across both Canada and the United States. Airlines and passenger trains are bending to lobbies and becoming peanut free. "Today peanuts are believed to be one of the leading causes of food allergic reactions in the United States and, together with tree nuts, are probably the leading cause of fatal and near fatal anaphylaxis induced by food," writes Dr. Sampson. He believes the allergy can be stemmed, especially in families with allergy history. "Their parents should be advised to eliminate all peanut products from the child's diet for at least three years, and mothers who are breast feeding should eliminate peanut products from their own diet."

The issue of breast-feeding is a touchy one. "We never, never, want to be seen as discouraging breast feeding, we don't want the La Leche league after us," says one physician. The matter is somewhat confusing, as breast-feeding is known to protect babies from allergies by transmitting antibodies from the mother. But new evidence shows that when a mother eats peanuts, the peanut proteins flow into breastmilk and cause infants to develop the allergy antibodies, as well. These exposed infants are inclined to an allergic reaction when the offending food is introduced later on. In response, Britain's Chief Medical Officer, Sir Kenneth Calman, advised: "Maternal consumption of peanuts and peanut products seems to be associated with earlier onset and increasing prevalence of allergy. An ounce of prevention is worth a pound of cure." In Canada and the United States, professional physicians' associations have avoided issuing such a forthright statement. Dr. Stuart Carr says he recommends breast-feeding mothers still include the staples of eggs and milk, but avoid nuts and shellfish, "something easier to do." But women with a history of allergies are advised to avoid eating the foods most likely to cause allergy: eggs, milk, wheat, soy, shellfish and tree nuts.

But Mount Sinai's Dr. Scott Sicherer, believes the jury could still be out on this issue of sensitization through breast-feeding. "We don't know for sure if it's a bad thing that babies are exposed to minute amounts of peanut protein in breast milk."

Even more controversial is the belief that pregnant mothers can sensitize their unborn babies. British studies on aborted fetal samples showed that from the second trimester onwards fetuses are capable of producing an allergic reaction. The researchers hypothesize that the antigens from the mother cross the placenta, or that the fetuses swallow IgE antibodies from the amniotic fluid. But this isn't enough proof for the medical community. "At this point there is no evidence that avoiding high-risk foods during pregnancy adds any clinical benefit over avoidance while breast-feeding and in early infancy or childhood," says Dr. Carr.

A remedy for the peanut allergy is in the works. One approach is to change the peanut protein itself through genetic engineering: researchers hope to develop a protein that won't bind with the allergy antibody and cause anaphylaxis.

The other tact is to develop a vaccine, and desensitize people through gradual introduction of peanuts. This type of research is extremely high risk and was dealt a severe blow when one subject died in a Denver study. Due to a pharmaceutical error, a placebo subject received a peanut injection. Results from that study, however, showed that de-sensitization was possible.

The struggle that goes on in the laboratory is equaled by the struggle in individual homes every day. For parents such as Lily Byrtus, the peanut allergy reared its ugly head with the kindest of gestures. Her eldest daughter had just eaten a peanut butter sandwich when she gave her younger sister a kiss. "She broke out in hives and blotches." If current thinking continues, eating a peanut butter sandwich during pregnancy or nursing might fall under the same veil of disapproval as drinking alcohol.

Sources:

Lily Byrtus Email: [prairies@aaia.ca](mailto:prairies@aaia.ca)

Allergy/Asthma Information Association 1-800-611-7011 Web site: [www.aaia.ca](http://www.aaia.ca)

Dr. David Carr

Dr. Scott Sicherer

Dr. John Warner

Nancy Wiebe, Calgary Allergy Network: <http://www.calgaryallergy.ca>

---

*This article is provided courtesy of the Calgary Allergy Network web site at <http://www.calgaryallergy.ca>.  
Used with author's permission. May be reproduced for educational, non-profit purposes only.*