



Aflatoxin, Peanut Allergy, and Pregnancy

Question: I'm 11 weeks pregnant and remember hearing some time ago that peanut butter should be avoided during pregnancy because some peanut butters contain bacteria. Is this correct, or have you heard or read anything about this? I've been unable to find anything about it, and am having a craving that I really need to satisfy!! Please help.

I believe you are referring to aflatoxin, a natural toxin and carcinogen produced by certain strains of the mold *Aspergillus flavus* and *A. parasiticus*. Crops with the highest risk of aflatoxin contamination are corn, peanuts, and cottonseed, but aflatoxins are detected occasionally also in milk, cheese, nuts, almonds, figs, spices, and a variety of other foods and feeds. Milk, eggs, and meat products are sometimes contaminated due to feeding animals aflatoxin-contaminated peanut, corn, and cottonseed feed. Aflatoxins often occur in peanut crops in the field prior to harvest. Post-harvest contamination can occur if crop-drying is delayed and during storage of the peanuts, where excessive moisture produces fungal growth. Insect and rodent infestations, which often accompany global warming conditions, can worsen the mold problem.

Does all this mean you have to swear off peanut butter? One of my students emailed her favorite peanut butter producer to ask how they handle aflatoxin. East Wind Nut Butters wrote back: "East Wind participates in monthly testing of our nut butters for aflatoxins. This is required by OCIA, our organic certifier, and we are happy to have our nuts tested. Our nuts have tested negative for all aflatoxins. If our nuts do test positive (which they have not) we would throw away all nuts affected as well as pull all corresponding butter out of our inventory." Sounds good to me.

The U.S. government tests crops for aflatoxin and doesn't permit them to be used for human or animal food if they contain levels over 20 parts per billion. However, while heavily contaminated food supplies are not permitted in the market place in developed countries, concern remains over potential long-term exposure to low levels of aflatoxins in the food supply.

Unfortunately, the question of safety regarding peanut consumption in pregnancy is not limited to aflatoxin. As a peanut butter lover, you obviously do not suffer from a peanut allergy. However about 1% of the U.S. population does, and of that 1%, one out of four people suffers severe allergy or shock when exposed to peanut-containing foods or lotions. Allergic reactions include everything from rashes or bumps, itching, wheezing, or swelling to respiratory and gastrointestinal difficulties that rapidly can lead to death. America's growing and serious food allergy problem is the reason why the can of soup or bag of cookies in your cupboard must have allergen information on its label, e.g. "this product is manufactured in a facility that processes foods containing peanuts, soy....."

In 1998, the British Journal of Medicine published research showing that a tiny amount of peanut protein crosses the placenta. In 2001, the Journal of the American Medical Association reported research showing that peanut protein is secreted into breast milk of lactating women who eat peanuts. The BMJ and JAMA reports hypothesized that exposure to peanut protein during pregnancy and breastfeeding may result in sensitization of predisposed infants. In other words, before an allergy can develop, a child first has to come into contact with small traces of peanut. Since allergic reactions to peanuts in children usually appear by the age of 3, it was proposed that initial exposures in pregnancy

and breastfeeding sensitize a child so that later on, he or she has a severe allergic reaction when eating peanuts or peanut-containing foods.

Although the BMJ and JAMA reports admitted there was “no definitive evidence” linking maternal ingestion of peanuts with later allergies in children, many national guidelines urged women to avoid peanuts during pregnancy and breastfeeding, and avoid feeding their children peanuts during the first 3 years of childhood. Some guidelines recommended avoidance of peanut-containing products in infants with eczema. The March of Dimes continues to instruct parents with severe food allergies in general and/or close family histories of nut allergies to avoid early infant exposure to formulas or foods made with peanut products, and these same mothers to avoid peanut consumption while breastfeeding.

However, Dr. Gideon Lack, a researcher at Kings College in London, asserted in 2006, “The evidence to support these guidelines is lacking.... Despite ongoing efforts to prevent food allergies in childhood, acute food allergies are on the rise, now affecting 4-7% of infants in western countries..... Prospective, controlled interventional studies that have attempted to remove food allergens such as peanut from the maternal diet during pregnancy, breast feeding, and the infant’s diet in the first year of life, have failed to show a reduction in food allergies.”

Recent studies comparing peanut allergies in different parts of the world suggest that avoidance of peanuts may be the exactly wrong strategy for preventing allergy! Dr. Lack and his colleagues found an inverse association between consumption of peanuts in the first year of life and the development of peanut allergy. This means that children who eat peanut-containing foods before 1 year of age appear to be protected against peanut allergy. Randomized controlled research is underway to further explore this finding. At a global level, the World Health Organization’s strategy to prevent food allergies is to promote exclusive breastfeeding during the first six months of the infant’s life.

An allergic reaction takes place when the body over-responds to a particular substance. Each subsequent exposure tends to cause a larger self-protective over-response in the body. There is evidence indicating that the particular substances in question – typically derivatives of soy, wheat, cow’s milk, corn, and peanuts – are over-abundant in our adulterated food supply. Peanuts show up not only in snack jars and peanut butter, but also in the forms of oil and fillers in packaged cereals, cakes, cookies, crackers, breads, salad dressings, ice cream, toppings, restaurant foods, and many skin care and hygiene products, not to mention the feed our farm animals eat. Moreover, compelling research indicates a cross-sensitivity problem with soy. Peanuts are in fact a legume and not actually a nut and share protein molecule properties with soybeans. Infants fed soy formula have a statistically increased incidence of childhood peanut allergy. Last but not least of questionable “coincidences” – our most common food allergens occur in crops that bear big burdens of pesticides. Peanuts are often grown as a rotation crop with cotton, a heavily sprayed commercial commodity. I have been unable to find any research exploring the role of organic vs non-organic peanut sources.

As with all foods: Avoid too much of a good thing and choose organic whenever possible! The fact is, peanuts remain a cholesterol-free, protein-rich, healthy fat source in a diverse diet. Look for brands containing only peanuts or peanuts and salt. Avoid raw peanuts and peanuts with hydrogenated oils, sugar and other additives. And don’t forget delicious almond butter and cashew butter, which boast a better fatty acid profile, as well as heart-healthy walnuts, which provide a good omega-3 source.

The March of Dimes and CDC recommend 400 micrograms (mcg) of supplemental folic acid daily in pregnancy and a folic acid-rich diet for all women. Peanuts contain 40 mcg of folate, or natural folic acid, per 1 oz. serving (approximately 30 peanuts.) Two tablespoons of chunky peanut butter contain 30 mcg. of folate (smooth has 25 mcg). One peanut butter sandwich contains 76 mcg of folic acid

(including the bread). Peanuts are an excellent source of niacin, pantothenic acid and biotin as well as other B vitamins, vitamin E, iron, calcium and potassium. Peanuts are rich in tryptophan, an amino acid that promotes a healthy nervous system. Peanuts are the richest source of boron, followed by almonds and hazelnuts. Boron is a trace mineral that plays an important role in bone health. It is thought to reduce calcium and magnesium loss and increase concentrations of circulating estrogens.

Go ahead and satisfy your pregnancy craving!

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