

# TWO TOP TIPS IN FAMILY PRACTICE

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## LEAD POISONING IS STILL A SIGNIFICANT PROBLEM IN LANCASTER COUNTY

Almost 10% of Lancaster County children under age seven are found to have lead poisoning! Did you know that this is a higher percentage of the total population than in any other county in the state of Pennsylvania, according to a report from the Pennsylvania Department of Health?<sup>1</sup>

I believe many of us have been “lulled to sleep” over the years as leaded gasoline and lead in paint has been more strictly controlled. Yet, we obviously still have a significant problem in Lancaster. A new coalition concerned with lead poisoning is beginning to meet to further evaluate the situation here. Stay tuned for further information.

There are hundreds of sources of lead poisoning in our environment, but in Lancaster County, old lead paint in our buildings is undoubtedly the most important. (Regardless of which history book one reads, we are one of the oldest cities in the country, and we claim to be the oldest inland city.) In most houses built before 1978, if paint peels or is scraped off inside a home or apartment, there is underlying lead. There are many other sources, of course, including: lead in water service lines; contaminants in supplements like calcium; some school water fountains; clay pottery; children’s toys made of vinyl or made in countries that don’t control lead in paint; ethnic home remedies such as Azarcon, Albayalde, or Greta used for the treatment of upset stomach; and certain cosmetics and jewelry. This list just mentions a few sources, and almost every month we are made aware of another one.

Why is this so important? Because infants and children with developing brains can be permanently affected. IQ levels are lowered, which in some circumstances can create the need for “special needs” classes and loss of ability to economically support oneself later in life. A 1990 study of lead poisoning in children of various ages showed “the persistence of toxicity of lead was seen to result in significant and serious impairment of academic success, specifically

a seven-fold increase in failure to graduate from high school, lower class standing, greater absenteeism, impairment of reading skills sufficiently extensive to be labeled reading disability (indicated by scores two grades below the expected), and deficits in vocabulary, fine motor skills, reaction time and hand-eye coordination.”<sup>2</sup> A study done in Ohio showed that teenagers whose blood level of lead exceeded 10 µg/dL during the first 6 years of life had higher rates of delinquency and aggressive behavior.<sup>3</sup>

This is a huge problem! As a medical community we can’t solve all of the issues surrounding this toxin alone, but we can screen our patients. Those with blood levels >10 µg/dL are automatically reported to the Pennsylvania Department of Health. Due to state financial constraints, Pennsylvania will automatically investigate only those children with lead levels >20µg/dL and all their family members, but if a physician specifically calls the state lead nurse for our area (Lisa Ulsh at 610-655-6450), she will investigate those with levels >10 µg/dL. Even studies in children with blood levels <10 µg/dL have shown cognitive defects. In other words, there is no definite “safe” level of lead in our bodies. Since up to 50% of lead ingested by a child in an entire lifetime may be absorbed in utero from its mother, some are calling for lead levels to be measured in all newborns.

Lead can also damage multiple systems in adults; among other problems it can cause hypertension and increased stroke rates. A recent prospective study by The Department of Veterans Affairs showed elevated lead concentration in bone, leading to increased rates of cardiovascular disease and death from all causes.<sup>4</sup> This study suggests that elevated levels of lead accumulated from prior decades of high exposure continue to significantly affect mortality rates despite recent declines in exposure to lead in the environment.

Anyone wishing to borrow a 27 minute DVD of a nationally acclaimed work recounting the human impact of childhood lead poisoning entitled “Jimmy’s Getting Better,” please contact me.

**LET'S GO NUTS.**

The fact that various nuts are health foods is not a new finding, but I believe it is worth reiterating.<sup>5,6</sup> A recent review of 25 studies in the Archives of Internal Medicine showed that eating an average of 2.5 ounces of nuts daily lowers total cholesterol by 5.1%, LDL by 7.4%, and triglycerides by 10.2%.<sup>7</sup> Nuts also lower Lp(a), a genetic component of cholesterol that can increase stroke and heart attacks. In the review, cholesterol fell the most in those with the highest levels of LDL, those who consumed western style diets, and those with the lowest body mass index. Also, the more nuts consumed, the lower the cholesterol.

Nuts are a significant source of monounsaturated fatty acids. LDL cholesterol must be oxidized before it can form arterial plaques, and LDL derived from monounsaturated fat resists oxidation.

An earlier review of 5 large epidemiologic studies and 11 clinical studies showed that eating nuts decreases risks of heart attacks.<sup>8,9</sup> The most improvement came from eating 2 ounces (4 tablespoons) of nuts 5 or more times/week. Eating just one ounce of nuts more than 5 times/week can result in a 25-39% reduction in heart attack risk. The nuts in these studies included almonds, Brazil nuts, cashews, hazelnuts, macadamia nuts, pecans, pistachios, walnuts and peanuts. Among Americans, peanuts account for approximately 1/2 of all nuts consumed. (Peanuts are really legumes like beans, but most of us consider them nuts.)

Yet there are some drawbacks to making nuts more available to more family members. Allergies to peanuts and tree-nuts are increasingly common among children.<sup>10</sup> These investigators reported that the prevalence of peanut and/or tree-nut allergy in children younger than 18 years of age was 2.1% in 2008, up from 1.2% in 2002, and up from 0.6% in 1997. This means that over 3 million children in the United States are at risk of these allergies. There are many theories to explain the increase, but as yet no one has definite evidence of a cause.

Let's remember that severe anaphylaxis from food allergies, including nuts, can be fatal. A recent article reminds us that we should make sure that children at risk for food allergies are prescribed TWO doses of epinephrine at a time, as 12% of children in this study required 2 doses to treat the anaphylaxis adequately.<sup>11</sup> In regard to peanut allergy, I would like to relate a personal experience that I had several years ago during a transatlantic flight. The dreaded "would any physician please report to the nearest flight attendant" was

announced. I found a two-year-old child suffering a severe allergic reaction (at that point, cause unknown). The girls' eyes were nearly swollen shut, although she was breathing normally and had no obvious hives. The emergency kit only had intravenous medications available, without appropriate equipment for an infant. Luckily I had an oral antihistamine in my carry-on bag that I crushed in some applesauce and got the child to swallow. The captain sent back a question asking if I felt the plane should land in Iceland before we started heading over the Atlantic. I had 10 minutes to make the decision to turn around or not, which obviously would have forced all of us to stay in Iceland at least overnight. Luckily the child responded and we did not have to make an emergency landing. After the fact, I learned from the mother that the child had ingested peanuts shortly after takeoff.

Nuts contain, in addition to monounsaturated fat, vitamin E, folic acid, magnesium, copper, protein, and fiber, and abundant antioxidant phytochemicals. However, salmonella-contaminated peanut butter products recently sickened more than 700 Americans and caused at least 9 deaths, as pointed out by the Food and Water Watch group. Thus, as with many nutrients, obtaining unprocessed nuts directly from the source is usually best, if feasible.

Nuts may have still more benefits. For example, walnuts might help to fight prostate cancer (as if males needed yet another reason to eat nuts)! Findings were presented at the National Meeting of the American Chemical Society in March 2010 by Dr. Paul Davis, who studied a colony of laboratory mice programmed to develop prostate cancer. They were fed the equivalent of about 14 walnuts daily (net 2.5 ounces of nutmeat after shelling) for two months. The prostate cancers that developed in walnut-fed mice were about 50% smaller than in controls, and they grew 30% more slowly.

One caveat about going too "nuts" over nuts - their high caloric content. A small "fistful" (about 1 ounce) of nuts has about 160-200 calories. For those calorie "scientists" among our readers, 30 peanuts = 24 almonds = 20 cashews = 14 walnut halves = 7 Brazil nuts. Therefore, adding nuts to your present diet can cause weight gain. To obtain the full nutritional benefit of nuts, you should decrease other calories (either from saturated fat or carbohydrates) and replace them with nuts.

Dieters who eat nuts tend to stick to their diets because the monounsaturated fat and fiber makes nuts seem filling. When dieters are not as hungry,

they obviously eat less. Psychologically, when nuts were allowed dieters did not feel they were dieting, which helped them stay on the diets longer.

Women in a Harvard School of Public Health study who reported eating 5 or more 1oz. servings of nuts/peanuts per week reduced their risk of type 2 diabetes by almost 30%, compared with those who rarely or never ate nuts.<sup>12</sup> Women in this study who ate 5 tablespoons of peanut butter each week (equal to 5 or

more ounces of peanuts per week) reduced their risk of type 2 diabetes almost 20%.

Nuts consumed by the handful can lead to “eating amnesia” (hand to mouth without much thought) and can add extra calories. It’s a good idea to prepare small bags of pre-proportioned amounts, or just to take one handful and put the rest away. And make sure the nuts are unsalted. Americans get enough salt from other foods!

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