

CONCERNS ABOUT LEAD IN EGGS FROM URBAN CHICKENS

Recently, there have been some articles in the press about levels of lead in eggs from urban chicken flocks. Eggs in New York City were tested, and some had relatively high levels of lead. Source: [Worries about lead for New York's garden fresh eggs](#). This problem is not specific to New York City, as I have heard reports of lead in eggs from hens in other cities, including Madison.

The source of lead is likely the soil, as soil tests have shown higher than normal lead levels as well. This lead may come from lead paints used in the past, manufacturing residues, and/or exhaust fumes from leaded automotive fuels, or possibly from other sources.

In one published article a small flock of hens was observed eating paint chips from a barn. One showed symptoms of lead poisoning (including ataxia and central nervous system dysfunction), but others did not. Their eggs contained fairly high levels of lead. Other than this study, very little research has been published on this topic. Source: ([Lead contamination of chicken eggs and tissues from a small farm flock, Trampel, et al., Journal of Veterinary Diagnostic Investigation September 2003 vol. 15 no. 5 418-422](#)).

In the research, and in the New York City case, lead was not detected in the whites of the eggs. Yolks (and shells) were shown to contain lead.

One concern is that ingested lead is deposited in the bones, and then slowly leaches out, so it can be a long-term problem, and one that is not easily corrected. Even if the chickens are removed from the source of lead, they may continue to deposit lead in their eggs for a long time.

So, what should an urban chicken owner do? Eggs, or blood samples from the hens, can be tested for lead levels. If the eggs or hens contain lead, you will have to decide what level of risk you are willing to take. Since lead tends to accumulate over time in a body, many people are especially concerned about children ingesting even small amounts of lead. For this reason, you may not want to use the eggs, or at least the yolks, or you may decide not to feed them to your children.

Here in Madison, the Wisconsin State Lab of Hygiene (www.slh.wisc.edu) can test egg yolks for lead. Soil samples can be tested at the UW-Soil Testing Lab (uwlab.soils.wisc.edu). Costs range from \$15 for soil samples to about \$44 for egg samples.

If your soil has high lead levels, it is probably best to keep the chickens off the soil. Raising your chicken coop (and run) off the ground is one solution. This will have the added benefit of decreasing the incidence of internal parasites (worms, etc.) in the chickens. Some people have added a layer of gravel, sand, or clean soil in their chicken runs. This can be helpful. If the hens are dust-bathing and digging down to the "old" soil, this may not be 100% effective.

It is common to "recycle" egg shells, by feeding them back to the hens as a calcium source. While this is generally very effective, if the eggs contain lead, this is not a good idea. This also recycles the lead, so the hen will continue to ingest lead. The shells should also not be added to a compost pile, if the compost will be used for vegetable production in the future.

Even with these precautions, it is unknown how long a hen will continue to produce eggs with lead, if they have previously been exposed.

Depending on lead levels in the eggs, another option may be to stop eating the eggs. If you have become attached to your hens, as is common with urban flocks, you may decide to just keep them as pets. That will be an individual decision for each household to make.

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