

# LEAD Action NEWS

## Citizen Science Project: Lead exposure from dust, soil, paint, water, backyard eggs, incense & cassava puffs/chips!

By Grandma Lead, aka Elizabeth O'Brien, Lead Scientist and Lead Advisor, The LEAD Group Inc, Australia. 16<sup>th</sup> June 2024. Backyard chickens photo by Elizabeth O'Brien.

A LEAD Group Kit purchaser sent me the news story: [Two brands of 'healthy' chips are found to contain high levels of toxic metal that can lower people's IQ | Daily Mail Online](#) and I replied....

If your children eat a lot of cassava puffs or cassava chips, it would be great if you'd have their blood lead levels checked and if they're above 1 microgram per decilitre (1 ug/dL) and you've tested all the other more likely lead exposure sources (dust, soil, paint, water, backyard eggs & even incense), The LEAD Group would certainly set up a **Citizen Science Project of Cassava Snack Foods Lead Test Results via LEAD Group Kits** and ask the government to lead test cassava-based puffs/chips/toddler snack foods available in Australia.

I see at

<https://www.consumerreports.org/health/food-safety/lesser-evil-serenity-kids-cassava-puffs-high-lead-levels-a2654657249/> that Consumer Reports USA (who lab lead tested the cassava puffs in the Daily Mail UK article) use the same Californian Maximum Allowable Dose Level (MADL) of 0.5 micrograms of lead per day that I use when interpreting backyard chicken egg lead results lab tested through LEAD Group Kits.



The worst cassava puffs by Lesser Evil had 112% of that Californian MADL per serving (ie **0.56 µg/serving**) and Consumer Report thus recommended allowing toddlers less than half a serving per day (equivalent to 17 puffs), but they also reported, at the URL above that:

*"Lesser Evil announced on June 13, 2024, that it would [phase out the use of cassava flour](#) in its Lil' Puffs line of products..."*

Interestingly, today (16<sup>th</sup> June 2024),

<https://www.doorsteporganics.com.au/product/Paleo-Puffs-Himalayan-Pink-Salt-Lesser-Evil-140g> is out of stock of these cassava chips/puffs but you may still wish to send the Daily Mail article and original Consumer Report report to Door Step Organics and ask them if they know that Lesser Evil was the brand that Consumer Reports found had the highest lead content of the four organic cassava (root vegetable) puffs they tested.

---

# LEAD Action NEWS

---

It is quite common for LEAD Group Kit backyard chicken egg lead results to be **more than 0.5 micrograms per egg** ( $\mu\text{g}/\text{egg}$ ) and even up to **4.5 $\mu\text{g}/\text{egg}$**  to which my Comment [Lab Results, Comments and Interpretation are included in the cost of LEAD Group Kits] was:

"...your lead result per egg is **9.0 times** [900%] the daily lead intake level at which consumer products sold in California have to be labelled, under Proposition 65 legislation, with a warning about the hazards of lead ingestion. If the product could contribute only 0.5 micrograms per day to a person's lead intake, in California, it would require the following label:

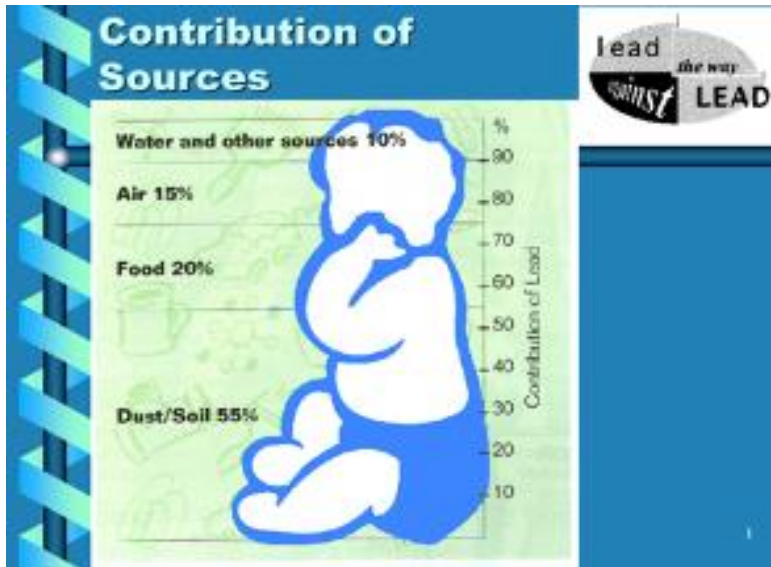
**WARNING:** Consuming this product can expose you to chemicals including lead, which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov/food](http://www.P65Warnings.ca.gov/food)

We therefore recommend you don't allow pregnant women or children or anyone wishing to conceive to eat the eggs until you follow the Spliethoff et al (2013) study's recommendation to reduce lead in your eggs, test for lead in your commercial chicken feed/s and then test for lead in another egg from the youngest hen."

So if you want to spread the word about backyard egg lead and get more lead testing done on foods sold in Australia, please keep in mind that there's no Lead in Consumer Products database for Australia and with no government funding The LEAD Group's Kits are still the best way for Australian consumers to have foods (it costs an extra \$90/sample to test lead in food samples) but especially backyard eggs (it only costs an extra \$30/sample to test eggs) tested for lead.

Importantly, I still recommend first testing the "big four" most likely child-lead exposure sources of the early 21<sup>st</sup> century: dust, soil, paint (if sanded/heatgunned or degraded, child-accessible and being ingested or inhaled) and water (if taps are new or you drink rainwater). Plus always test backyard eggs if eaten! Late last century, leaded petrol vehicle emissions contributed 90% of lead in air which in turn raised food lead levels which explains why this 1997 graphic (at right) lists the "big four" lead sources for young children then as dust/soil (contributing 55%), food (20%) and air (15%) [and water and other sources (10%)].

# LEAD Action NEWS



Graphic: Slide 7 Contribution of Sources [1997] from

Dr Ben Balzer's "Lead Poisoning" Slide Show at

[https://lead.org.au/bblp/Ben\\_Balzer\\_Lead\\_Poisoning\\_files/v3\\_document.htm](https://lead.org.au/bblp/Ben_Balzer_Lead_Poisoning_files/v3_document.htm)

Original reference: "Lead Safe - A Guide For Health Care Professionals" (1997) by Lead Reference Centre (LRC) - a now defunct part of NSW Environment Protection Authority (EPA)

[https://www.lead.org.au/fs/lead\\_safe/A\\_Guide\\_For\\_Health\\_Care\\_Professionals\\_Lead\\_Safe.pdf](https://www.lead.org.au/fs/lead_safe/A_Guide_For_Health_Care_Professionals_Lead_Safe.pdf)

Tom Neltner of Unleaded Kids in the US, said in his 13 June 2024 blog "Lead in Products: Local Efforts Shine Critical Light; Benefits Could Drive Larger Change" at <https://unleadedkids.org/open-data/2024/06/13/> (you can subscribe to the blog for free on the homepage) that:

*"While these **professionals [who investigate child elevated blood lead levels (EBLLs)] usually track the source of exposure to lead-contaminated dust [see slide above] in the home from lead-based paint, many go beyond the obvious and look for lead pipes [which we apparently don't have in Australia], consider soil carried into the home, check for nearby industrial sources, or test for consumer products.**"*

Neltner also noted that 45% of 5,700 consumer products tested in New York City since 2011 via studies or child EBLL investigations where lead was detected were spices.

Neltner points out a second useful database at [https://data.kingcounty.gov/Health-Wellness/Lead-Content-of-Consumer-Products-tested-in-King-C/i6sy-ckp7/about\\_data](https://data.kingcounty.gov/Health-Wellness/Lead-Content-of-Consumer-Products-tested-in-King-C/i6sy-ckp7/about_data) which gives lead results in parts per million (ppm) by either XRF screen (eg keys, jewellery, cookware, dishware, toys) or the far more accurate and reliable laboratory analysis (eg spices, cosmetics, supplements).

# LEAD Action NEWS

I caution anyone reading lead results in consumer products to consider not only how much lead is in the product but HOW the lead could get from the consumer product into the person, frequency of use, how much of the product is consumed and how much of the lead is actually going to be absorbed.

For example, it is obvious that food lead is ingested but the absorption rate can vary from 10-64%, cosmetics lead is potentially ingested and/or absorbed via the skin (see <https://www.fairtrading.nsw.gov.au/news-and-updates/news/hashmi-eyeliner-recall> where you will find information in community languages: Arabic, Punjabi, Hindi, and Urdu re: Leaded eyeliner/kohl from India poisons Sydney children July 2018) and for leaded products that are intended to be burned, the lead is inhaled and typically 100% absorbed.

Picture: 2013 Volcano Art Prize (VAP) Entry.

Title: Kajal Eyes.

Lead-safety message: Make sure your black eye make-up like Kajal / Kohl / Surma is lead-free. You can test it with a LEAD Group test kit and ask your doctor for a blood lead test.

Artist: Swetha Lingala.

<https://volcanoartprize.com/portfolio-item/kajal-eyes/>



The most interesting results I found from the [Lead Content of Consumer Products tested in King County, Washington](#) database were for incense which it says in the **USA Lead Limits for Consumer Products** pdf (from the site) should have a zero or undetectable lead level, yet of 10 samples tested, results ranged from 0.5-**83** ppm lead! My conclusion, **NEVER burn incense!**

---

# LEAD *Action* NEWS

---

Picture: 2013 VAP Entry

Title: *Incense Smoke Dangerous to Your Health*

Lead-safety message: *Incense sticks (agarbatti) could come with a health risk.*

Artist: Rama Veeraghanta.

<https://volcanoartprize.com/portfolio-item/incense-smoke-dangerous-to-your-health/>



I'm really glad you're still on the lookout for news about lead, and I hope you and every other parent, chook-owner, renovator and Building Biologist in Australia continues to always use LEAD Group Kits to collect dust wipe, soil, paint, water, ceiling dust and egg samples if they have backyard eggs!