

# LEAD Action NEWS

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The newsletter of The LEAD (Lead Education and Abatement Design) Group Inc.

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Editorial Team: Elizabeth O'Brien and Hesaan Sheridan

## Leading the way on lead free drinking water

### Plumbing the depths of 'lead free' water

*By Hesaan Sheridan, LEAD Group UK Branch Committee Member, and Elizabeth O'Brien, Co-founder and President of The LEAD Group*

The LEAD Group has reached out to 20,000+ professional plumbers in a major step towards achieving lead free drinking water, in the article "Lead in Drinking Water: Up to 720,000 Homes Affected" (<http://plumbingconnection.com.au/wp-content/uploads/flipbooks/PC-Winter-2017/files/assets/common/downloads/untitled.pdf>) which was published in the *Plumbing Connection* Magazine Winter 2017 Edition.



Photo of Elizabeth O'Brien, by Peter Kozaitis, which appeared in the *Plumbing Connection* article.



The problem of lead in drinking water was brought to the fore by Dr Paul Harvey and Professor Mark Taylor's recent study (Ref: Harvey, P., Taylor, M., August 2016. Widespread Copper and Lead Contamination of Household Drinking Water, New South Wales, Australia. *Environmental Research*, 151, 275-285, <http://www.sciencedirect.com/science/journal/00139351>) and the much publicised lead in water contamination problem that prevented the opening of a new multi-million dollar hospital in Perth.

The source/s of lead contamination in water are remarkably difficult to identify, however, the new Harvey and Taylor study provided scientific evidence of the link between lead in water and plumbing tapware and fittings.

The excellent *Plumbing Connection* article by John Power says:

“[Harvey and Taylor’s] study involved the sampling of potable water drawn from the kitchen taps of 212 homes across the entire State, and detected lead in 56% of samples; some 8% of the total test samples exceeded recommended lead thresholds of 0.01mg/L of water, as stipulated in the Federal Government-approved advisory document [Australian Drinking Water Guidelines](#)<sup>2</sup>. A straightforward extrapolation of the findings at a national scale, based on Australia’s nine million dwellings, equates to approximately 720,000 households with unsafe levels of lead in their drinking water....

“At present there are no systematised checks of lead levels in water (drawn from the tap) in Australian buildings. This observation forms a good starting point for the obvious question: What checks and balances, if any, DO exist to tackle the issue of lead in drinking water?

“At present there is no requirement on anybody to test water at the tap, and there should be,” Elizabeth says. “And if there were then we could a) do a baseline of what percentage of Australian homes have too much lead in their water at the tap, and b) we would know which plumbing products, particularly new ones, were to be taken off the market.”

Achievement of certification or “WaterMark” (which is often valid for 5 years) for a plumbing fitting does not provide process control and therefore doesn’t guarantee that the water will have non-detectable lead levels (The LEAD Group’s only recommended level) due to fluctuations in raw materials and component supply. Clearly, there is a need for in situ testing of the system as a whole, rather than piecemeal.

“Furthermore, Elizabeth says existing WaterMark certifications lack credibility because they fail to address ‘full system’ plumbing installations. In other words, fittings or components that receive certification ‘individually’ might breach water quality guidelines when installed collectively as a system.



“Russell Kirkwood, Director and Forensic Plumber, Metropolis Solutions, agrees that this concern is legitimate, particularly in relation to larger buildings, where lead concentrations in fittings become elevated overnight, in particular, due to prolonged contact between still water and surrounding fittings. This point reinforces the dangers of using first-draw water in the morning, as noted above in relation to the Macquarie University study. NB: thorough flushing is by no means a panacea, and cannot be relied upon to mitigate lead leaching in all circumstances....

Testing first draw water and flushed water at the tap for lead (at a lab), before drinking it, is the only way forward to achieving undetectable lead in water. By forming Partnerships (see below) with makers/importers of stainless steel taps and pumps and non-lead flashing, The LEAD Group is leading the way to non-detectable lead levels in drinking water in Australia.

By promoting a possible ban on leaded brass in plumbing fittings, or at the very least a regulated and drastic reduction of the lead content of plumbing brass, we hope to move Australia’s plumbing regulators to take action towards this new vision.

**Lead Free Partners of the Lead Safe World Partnership of The LEAD Group:**



[Vinco stainless steel tapware](http://www.vinco.com.au) (visit [www.vinco.com.au](http://www.vinco.com.au)) is lead-safe and carries full endorsement from The LEAD Group.



DEKS Industries Pty. Ltd., - distributors of lead-free flashing made in Denmark. DEKS became a Lead Safe World Partner in the Lead Free products category on 7 April 2017. See DEKS article in this newsletter.

**LEAD FREE FLASHING**

Evo Building

Products imports from Germany and distributes WAKAFLEX Lead Free Flexible Flashing in Australia and New Zealand. Evo Build was a founding Partner of the Lead Safe World Partnership, launched 26th October 2013.



See <http://www.lead safeworld.com/partners/lead-free/>



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## Editorial

By Elizabeth O'Brien, BSc, Grad Dip Health Edn, President, The LEAD Group Inc, Australia

The fifth WHO International Lead Poisoning Prevention Week of Action (ILPPWA) or “Lead Week of Action” will be held from Sunday 22<sup>nd</sup> to Saturday 28<sup>th</sup> October 2017 so please take action today by:

Ordering a Lead Safe World Poster made from any Volcano Art Prize (VAP) entry, at [www.lead safeworld.com/shop](http://www.lead safeworld.com/shop) and give it to any place in your community where lead-safety messages are needed.

1. Entering your own artwork, photo or short film in VAP 2017 – open now at [www.volcanoartprize.com/submitentry/](http://www.volcanoartprize.com/submitentry/) - closing date Monday 24<sup>th</sup> July 2017;
2. Buying a LEAD Group Kit, test your home, childcare centre, workplace, etc and let others know that you have followed any recommendations received with the kit- results to make your place lead-safe/heavy metal-safe;
3. Planning how you personally (and your friends and family overseas too) can encourage your council and other government agencies, to mark the fifth International Lead Poisoning Prevention Week of Action in 2017.
4. Letting The LEAD Group know what steps you've taken so we can report them in *LEAD Action News*.

First up in this issue, we have four articles in our continuing series on lead free drinking water, including an article by a new Lead Free Partner of the Lead Safe World Project, DEKS Lead Free Flashing. We traverse various issues such as lead poisoning from DIY renovations and lead shot, and end with another new Partner, Oldfield's ceiling dust vacuuming service, and an obituary to the founder of Australia's (and the world's first) cavity dust vacuuming industry.

Thanks go to our Spanish and French Translator volunteer Orlando Aguirre-Lopez for more translations, and our Web and Network Administrator (and Committee Treasurer) Ankit Patel.



2017 Volcano Art Prize Entry. Title: Peeling lead paint polluting patios and potato patches, Lead-safety Message: Use a LEAD Group Kit to test for lead in peeling paint, dust, water and soil before you plant your potatoes or let your children play on the patio.  
<http://volcanoartprize.com/portfolio-item/peeling-lead-paint-polluting-patios-and-potato-patches> Artist / Photographer: Isla MacGregor



## DEKS easy to work with - lead free flashing



By Grant Brown, DEKS Industries Pty. Ltd. [www.deks.com.au](http://www.deks.com.au)

DEKS was established in 1947 by George Cupit, since then Deks has provided the Australian plumbing and construction markets with high quality, innovative products ranging from roof flashing to civil pipe fittings. In 2003 Deks became part of the Skellerup Group of companies. Established in 1910 and based in Christchurch New Zealand, Skellerup Holdings has forged a strong reputation in the agricultural industry, distributing their products across the globe.

For many years DEKS have led the way in innovative solutions to roof penetrations. We have now focused our development efforts to assist the building industry in delivering lead free solutions for roof flashings.

The negative health impacts of lead have been well documented. Over the years its use has declined, no longer is it legal to use lead in paint, fuel or piping, so why do we still use lead to flash our roofs?



### TOXIC LEAD FLASHING SHOWING SIGNS OF DETERIORATING

In 2002 the Danish Environmental Protection Agency (EPA) recognised the dangers posed by lead roof flashings and banned its use entirely in December 2002. In the years prior to 2002 the Danish government collaborated with a number of companies to develop a



safe, high quality replacement for lead. That replacement was Perform. Perform and the next generation product Fast Flash carry all of the positive characteristics of lead (workable and durable) without any of the negative (100% non-toxic). Fast Flash and Perform are manufactured from the highest quality polymer rubber, incorporating a fully infused aluminium mesh, thus making them the strongest lead replacement flashings on the market. Fast Flash additionally has a fully adhesive backing, protecting you even further from driving rain. Both products come with a 20 year warranty.



### **DEKS LEAD REPLACEMENT FLASHING - 100% NON-TOXIC**

Despite the availability of lead replacements products, Australia has been slow to follow suit. One study has revealed that 5 out of 11 homes in Sydney with water harvesting facilities have harmful levels of lead in their potable water supply. The recent availability of lead replacement flashings on the market has prompted the Department of Health to recommend the use of these alternative materials in the construction of new dwellings and the renovation of roofs. Although this falls well short of a total ban, these recommendations are a good starting point for key bodies in the Australian building and construction industry.



Deks Industries is passionate about providing Australia with a lead free alternative for your flashing needs. Deks range of lead free flashings are 100% non-toxic, giving you the peace of mind that your family is safe from the harms posed by lead. With a collaborative approach, Deks is confident that we can eventually ban the use of lead, stemming the harm caused to future generations.



DEKS head office is based in Melbourne Australia, we also have offices in the UK and USA. With an extensive range of distributors across the globe we can definitely provide a lead free solution for your roof flashing.

## Does your Plumbing include Lead Soldered Yorkshire Fittings?



**Local plumber Geoff Davey with an example of the old lead soldered Yorkshire fittings (the elbow bends). PHOTO: Geoff Walker. Volcano Art Prize (VAP) 2017 Entry.**  
<http://volcanoartprize.com/portfolio-item/lead-soldered-yorkshire-fittings/>

*This article is a re-write with corrections by Elizabeth O'Brien, of an article by Geoff Walker, originally published as: "Advice for Lead Soldered Fittings" in News of the area: Tilligerry Peninsular, NSW, Australia at <http://www.newsofthearea.com.au/advice-lead-soldered-fittings-24590> on 17 March 2017*

### **Test your water for lead if you have lead soldered fittings, non-stainless steel taps or valves, or rainwater**

THE decline and fall of the Roman Empire has been thought by some to have been caused by lead. [Ref: Rome's Ruin by Lead Poison (book) by Colum S Gilfillan, PhD, Wenzel Press, California, 1990.]

That's right! You see, Romans loved their lead which was a by-product of silver production and also mined in its own right.

A 1966 article in Time magazine, "Toxicology: Lead Among the Romans" says that in Roman times, lead was important in the manufacture of wine, pots, water pipes, cups,



sieves, cosmetics, external medicines, paint, and, ironically, coffins. [Ref: <http://www.time.com/time/magazine/article/0,9171,842832,00.html> ]

Only wealthy Romans could afford to have their water pipes made out of lead, as well as cooking utensils, plates, mugs, wine preservative cooking vessels (the wine preservative, grappa, was made by boiling grapes in lead vessels and the lead was drawn out of the pot, into the grapes which when added to wine, killed the bugs which would have otherwise turned the wine into vinegar), cosmetics, bread whitener, paints and jewellery.

There have, however, been studies of skeletons from these ancient times as bones and teeth are prime indicators of lead poisoning. Lead-preserved wine was shipped all over Europe [Ref: "History of Lead Use" by Katarina Lah, Toxipedia (2011) <http://toxipedia.org/display/toxipedia/History+of+Lead+Use> ] to wealthy Romans everywhere.

Results have concluded that the wealthier you were in ancient Rome, the more lead poisoned you became because you could afford preserved wine, lead pipes, cosmetics, jewellery, etc. Lead poisoning causes infertility and insanity. It is argued that wealthy Roman leaders were not able to replace themselves with children and died of dementia. Thus, the fall of the Roman Empire may well have been due to lead.

"In more modern times, the durability of lead made it an excellent paint additive, but the sweetness made it tempting to young children. Childhood lead poisoning was linked to lead-based paints in 1904... The addition of lead to gasoline is one of the greatest public health failures of the 20th century." [ibid]

In Australia, we no longer get lead poisoning mainly from the vehicle emissions of vehicles using leaded petrol, because The LEAD Group succeeded in banning leaded petrol in Australia in 2002. And along with the Australian Paint Manufacturers Federation, The LEAD Group also succeeded in banning the addition of lead to new paints in 2010.

Building and demolition contractors, DIY renovators, children, pets, chooks, etc, continue to be exposed to lead via all the dust that ever accumulated from leaded petrol emissions fallout in buildings and on the ground and from all the pre 2010 lead paint that has fallen off structures or been dry-sanded, dry-scraped, water-blasted, or otherwise disseminated into building dust and soil.

But there is also a degree of concern about lead in our drinking water.



In the USA, lead based solder was banned nationwide from use in domestic water supply fittings by the Safe Drinking Water Act (1986). [Ref: [https://en.wikipedia.org/wiki/Safe\\_Drinking\\_Water\\_Act#1986\\_amendments](https://en.wikipedia.org/wiki/Safe_Drinking_Water_Act#1986_amendments)]. In 2011, the US Congress enacted a law reducing the definition of "lead free" for pipes, pipe fittings, plumbing fittings, and fixtures from 8% to 0.25% by weight, effective 2014. In other words, you can go to a store in the US and buy taps etc labeled "lead free", and know that it contains less than 0.25% lead.

By contrast, in 1994 in Australia, plumbers were expected to find out or know that they should not use lead solder for drinking water plumbing. It was not banned. To this day, lead solder for plumbing and other purposes is available at all hardware and plumbing supply stores in Australia and is not required to carry a warning label such as: "not suitable for potable water supply". The Safe Drinking Water Regulations of South Australia for instance, do not mention the word "solder" or the word "lead". Even though plumbing fixtures are permitted to contain up to 4.5% lead, they are not required to be labeled as containing lead.

If you live in a house built at any time in Australia, you could very well have lead soldered copper pipes and if the taps are new, or you have a pump, ball valves or lead in your rain water collection area, you may well have lead in your drinking water.

The lead can also be found in 'Yorkshire' fittings (see photo) which release the inbuilt lead solder when heated, for example, by sunshine.

Just scratch the grey oxide around a joint (for example, on either side of an elbow bend) and if it comes up soft and shiny, it's lead. It can leach into the pipes.

If you have these types of plumbing fittings in your home, you can protect yourself to a degree by flushing the kitchen tap for about a minute before filling the electric jug or using the water for cooking or drinking.

Never drink water from the hot tap or the first flow of water from a mixer tap (after the hot water has been run) or a rarely used tap. Give it a good flush first. If your drinking water is rain water, flushing will not eradicate any lead in the tank, so always test rain water for lead, before drinking it.

If there is a water shortage and you can't afford to flush the tap, or you have children or other residents who cannot be relied upon to always remember to flush the tap, or if you have new non-stainless steel taps, you should definitely test your water for lead before drinking it. The best way to test water for lead is by using a LEAD Group Water Kit available from [www.lead safeworld.com/shop](http://www.lead safeworld.com/shop)





## Why I tested my chicken broth for lead using a LEAD Group Water Kit

*By Tony McConnachie, LEAD Group Kit Purchaser*



Photo of homemade organic chicken broth, by Tony McConnachie

“You know chicken bone broth contains lead, don't you” says my doctor after I describe my current diet. I confess I didn't believe him at first. I went home and immediately started googling. All I found was one UK study completed in 2013 that found large doses of lead in organic chicken broth. This was quite alarming. But I also found several articles about the study that were less than complimentary. The study itself also seemed to lack some information about the details it was tested under. I was dubious. But because I consume chicken bone broth everyday I felt it important to know the truth and had to find out for myself.

So I contacted The LEAD Group charity and ordered one of their easy to use Water Test Kits containing 2 samples.



The first sample was filtered tap water unflushed for 7 hours. The second sample was the chicken broth itself made with filtered tap water and 2 organic chicken leg bones and some organic vegetables.

The results:

Water: 0.001 mg/L (0.001 milligrams of lead per litre of water)

Broth: 0.002 mg/L

So the bad news is the doc was right! There is indeed lead in chicken broth, in fact double the amount of filtered tap water! The good news is it's not that much – two tenths of the allowable lead in Australian tap water.

Also there could likely be other influencing factors such as boiling the broth which can concentrate existing lead and adding vegetables which may contain trace amounts of the nasty stuff.

In any case some would argue that the benefits of good nutrients (including those with chelation properties) found in broth outweigh the negatives of lead and is therefore still worthwhile to consume. Maybe they are right and maybe they are not.

But to be honest, this test has kind of ruined chicken bone broth for me. When I'm eating it I can't help thinking about the extra lead I am knowingly ingesting into my system, so I've just recently decided to stop consuming bone broth altogether.

Final thoughts, we live in a very toxic world that our bodies have not yet evolved to handle effectively. It's important to eliminate as much of these toxins from our diet and environment as possible. Knowledge is power. Know what you are putting into your body and what your body is coming into contact with in your environment. Then you can make an informed decision, one that is right for you and your family.

Peace and good health to you.

**Ref:** *The risk of lead contamination in bone broth diets*, by J.A. Monro, R. Leon and B.K. Puri, in *Medical Hypotheses*, April 2013 Volume 80, Issue 4, Pages 389-390.  
[http://www.medical-hypotheses.com/article/S0306-9877\(13\)00013-3/fulltext](http://www.medical-hypotheses.com/article/S0306-9877(13)00013-3/fulltext)

Extract of abstract from the reference above:

*A small, blinded, controlled study of lead concentrations in three different types of organic chicken broth showed that such broths do indeed contain several times the lead concentration of the water with which the broth is made. In particular, broth made from skin and cartilage taken off the bone once the chicken had been cooked with the bones in situ, and chicken-bone broth, were both found to have markedly high lead concentrations, of 9.5 and 7.01 µg/L [micrograms per litre], respectively (compared with a control value for tap water treated in the same way of 0.89 µg/L.)*



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## Quotable Quote

“...”

The following three paragraphs are from a 2<sup>nd</sup> May 2017 email from the first United Kingdom-based member of The LEAD Group Committee, Hesaan Sheridan:

Following on from what Elizabeth O’Brien\* and Michelle Kilburn\*, said about aspiring towards blood lead levels below 1 µg/dL [microgram per decilitre] and not accepting a level of 5 µg/dL as 'ok':

"The measurement of lead in the remains of pre-industrial humans has shown that the natural levels of lead were 0.016 µg/dL (Flegal and Smith, 1992), 625 times less than the current recommended public health goal in Australia (10 µg/dL)". (Source: *Australia's leading public health body delays action on the revision of the public health goal for blood lead exposures*, (September 2014) by Mark Patrick Taylor\*, Chris Winder\* [posthumously], and Bruce P. Lanphear, in *Environment International* 70:113-117, Elsevier, <http://www.sciencedirect.com/science/article/pii/S0160412014001482> )

Apart from the Romans: THIS IS A POST-INDUSTRIALISATION PROBLEM!!

Notes: \* Elizabeth O’Brien, Michelle Kilburn (a.k.a. Michelle Calvert) and Professor Mark Taylor are current members of The LEAD Group Committee, and Professor Chris Winder is a former member of The LEAD Group Committee.

The full reference for Flegal and Smith 1992 is: *Lead levels in preindustrial humans*, by Flegal AR, Smith DR. *New England Journal of Medicine* 326:1293-1294 May 7, 1992 <http://www.nejm.org/doi/full/10.1056/NEJM199205073261916#t=article>



## Lead in Literature – David Whyte poem

### Introduction

By Elizabeth O'Brien, Editor-in-Chief, *LEAD Action News*, President, The LEAD Group Inc



I've just been watching bonus videos and listening to bonus audio and radio broadcasts from a fabulous online 8-week course called The Happiness Project, and I came across this gem of a poem: *Everything is Waiting for You*, by David Whyte.

The Happiness Project is put together and mainly presented by Dr Robert Holden and available via Hay House and the bonus radio broadcast which included David Whyte's poem, was broadcast globally via the Hay House Radio show "Shift happens!" in the episode titled: Love, Healing and Happiness.

I've been involved with lead safety for so long, I can't read the word "weight" without thinking of "lead weight" and that's how I first connected lead to this poem. But when the line itself goes:

"...Put down the weight of your aloneness and ease into the conversation..."

I had another thought: I would dearly love to put down the burden of putting together each issue of *LEAD Action News* almost entirely on my own, and throw the process open to the whole global lead-aware community and to everyone involved with The LEAD Group. So here's the beginning of the conversation I'm having with *LEAD Action News* readers: submit your contributions – articles, Q&As (or just Questions), other people's photos or links to videos (submit your own to Volcano Art Prize of course!), Facebook posts, Tweets, your lead-safety-related product or service reviews/feedback, links to great fact sheets or articles, etc, so *LEAD Action News* can be better than ever!

Finally, this poem inspired me to ask a Committee Member and wonderfully skilled writer, for his help with the next issue of *LEAD Action News*. Thanks for the inspiration David Whyte!



## EVERYTHING IS WAITING FOR YOU

*Printed with permission from Many Rivers Press, [www.davidwhyte.com](http://www.davidwhyte.com)*

*Author: David Whyte*

*Title of poem: EVERYTHING IS WAITING FOR YOU*

*Source book: **Everything is Waiting for You***

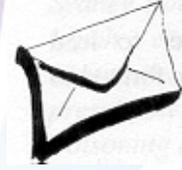
*©2003 Many Rivers Press, Langley, WA USA*

Your great mistake is to act the drama  
as if you were alone. As if life  
were a progressive and cunning crime  
with no witness to the tiny hidden  
transgressions. To feel abandoned is to deny  
the intimacy of your surroundings. Surely,  
even you, at times, have felt the grand array;  
the swelling presence, and the chorus, crowding  
out your solo voice You must note  
the way the soap dish enables you,  
or the window latch grants you freedom.  
Alertness is the hidden discipline of familiarity.  
The stairs are your mentor of things  
to come, the doors have always been there  
to frighten you and invite you,  
and the tiny speaker in the phone  
is your dream-ladder to divinity.

Put down the weight of your aloneness and ease into  
the conversation. The kettle is singing  
even as it pours you a drink, the cooking pots  
have left their arrogant aloofness and  
seen the good in you at last. All the birds  
and creatures of the world are unutterably  
themselves. Everything is waiting for you.



## Perspective of a Veterinary Pathologist on Lead Shot



*By Dr Michael Hindmarsh, Member of The LEAD Group Committee, retired Veterinary Pathologist*

[Editor's note: Dr Michael Hindmarsh was from Condobolin when he first contacted us about mine dust and cattle deaths in March 1996. His first veterinary lab was at Glenfield. Michael next contacted The LEAD Group 20 years later! Here's what he reported by phone and email in June 2016.]

You have to put on lots of lime because weak plant, soil and bedrock acids will leach lead shot into the soil & water.



James with a mixed tucker bag. He was my best friend and helper at Aurukun.

2016 Volcano Art Prize Entry by Dr Michael Hindmarsh. <http://volcanoartprize.com/portfolio-item/aurukun-shooter-with-spoonbills-barramundi-mixed-tucker-bag/> Title: **Aurukun shooter with spoonbills & barramundi mixed tucker bag**. Notice: Mr James Kalkyorta (pictured here) is deceased. Lead-safety Message: Australian hunters take care not to eat lead shot in your tucker!



I worked as a cattle ranger pilot at Aurukun in the 1960s and saw an old lead acid battery that the cattle were eating. I don't know why they were attracted to it. I've seen batteries on cattle farms in Victoria too. Its very simple to identify a leaded area because all the cattle mill around it - just like they are attracted to blood. That's how you attract wild cattle and infuse them with domesticated cattle. They make a churned up area full of hoofs and you can check it out later = look for the lead source or other thing that attracted them.

When they have a Cobalt Vit B12 deficiency they will lick bark and the treatment is to use a salt lick and add the appropriate minerals. Salt (sodium chloride) is the carrier for cobalt across the rumen wall so I use epsom salts mixed in.

A friend at the North Parks Mine lost 300 head of cattle to lead poisoning and I said on the Helen Wellings show that the lead was coming from the sky. I was the Vet there in Condobolin and I lost thousands of dollars of work out of that. The govt vet put my article about the 7 metals I found in their hides on Wikipedia.

After reporting on lead toxicities in Stock & Birds we published our Ground breaking Bool lagoon= Lead incrimination Swamp article. [Ref: *Lead Poisoning in Magpie Geese Anseranas semipalmata from Ingested Lead Pellet at Bool Lagoon Game Reserve (South Australia)*, by Michael Harper & Michael Hindmarsh, Aust. Wildl. Res., 1990, 17, 141-5. [https://www.researchgate.net/publication/248883097\\_Lead-Poisoning\\_in\\_Magpie\\_Geese\\_Anseranas-Semipalmata\\_From\\_Ingested\\_Lead\\_Pellet\\_at\\_BooL-Lagoon-Game-Reserve\\_South-Australia](https://www.researchgate.net/publication/248883097_Lead-Poisoning_in_Magpie_Geese_Anseranas-Semipalmata_From_Ingested_Lead_Pellet_at_BooL-Lagoon-Game-Reserve_South-Australia) ]

The next paper by Dr Lindsay Best quantified the lead shot per hectare in the sediments. (Ref: *An overview of lead poisoning in Australian waterfowl and implications for management*. By Sharley, A.J.; Best, L.W.; Lane, J.; Whitehead, P.. IWRB Special Publication Pages:73-77 Supplement:No. 16. Published:1992.)

It is shocking how my finding of the lead shot tinkling upon my post mortem room table could lead to Steel Shot being introduced into Australia's wetlands due to the work of Michael Harper under his Churchill Fellowship!!! He was working for South Australia's National Parks Dept at Berri.

But now the stupidity is still allowing Lead Shot after 26 years to be used across Australia!

The stunning fact in the Best et al paper was the finding of only one (1) agate-like rock in transits across Bool Lagoon!!!! Therefore birds are forever searching/assessing for total grinding material and their exit gizzard valve is regulating the total grit content - releasing excess when required!!!!



Therefore birds could be visiting firing ranges for a topup!!!! = a hidden Avian Mortality!

A USA paper explained how dead birds in the environment are quickly predated away. My luck was that the Bool Lagoon geese were pinioned = unable to fly, and grandparent birds lived within a fox proof compound!!! Hence I received the first dead from Lead Carcasses!!

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## How does workplace safety and health align with sustainability?

*Editor's note: The article below, and additional links added, are largely US-based, but I thought they might be interesting regardless. OSHA is the United States' Occupational Safety and Health Administration.*

OSHA's 2012 toolkit for "transitioning to safer chemicals":  
[https://www.osha.gov/dsg/safer\\_chemicals/index.html](https://www.osha.gov/dsg/safer_chemicals/index.html).

AFSCME International Union (public service employees' union) toolkit "Green Cleaning for Healthy Schools":  
[http://www.cleaningforhealthyschools.org/green\\_cleaning.html](http://www.cleaningforhealthyschools.org/green_cleaning.html)

Best,  
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twitter: @ToxicsFree  
[ipen.org](http://ipen.org)

Interview with OSHA's Dr. David Michaels about engaging companies and advocates working on business sustainability about worker health and safety.

<https://www.greenbiz.com/article/how-does-workplace-safety-and-health-align-sustainability>

## How does workplace safety and health align with sustainability?

[John Davies](#)



Wednesday, January 4, 2017

In May, we were contacted by representatives from the U.S. government's Occupational Safety and Health Administration (OSHA) to discuss how they might engage in efforts that bring the agency's work into broader sustainability discussions and initiatives. We had a good discussion, connected them with corporate representatives we thought they should talk with, and asked them to let us know what they found.

The result is the recently published report [Sustainability in the Workplace: A New Approach for Advancing Worker Safety and Health](#). It's a deep dive into how OSHA's worker advocacy provides an important contribution to the social aspects of any organization's triple bottom line.

I was particularly intrigued by how this federal agency had taken the journey from regulation to "beyond compliance" to sustainability, so I arranged a conversation with David Michaels, assistant secretary of labor for Occupational Safety and Health. The following has been edited for length and clarity.

**John Davies: What was the impetus for your organization to study corporate sustainability and how it could help advance worker safety and health?**

**David Michaels:** OSHA has a very important mission, which is to do everything we can to encourage employers to make workplaces safe. We know that new strategies are needed to help us achieve that mission. Just by setting and enforcing standards, we won't be able to prevent all of the millions of work injuries and illnesses that occur every year, and so we have to engage employers differently.

**Davies: Where does sustainability fit into that equation?**

**Michaels:** The sustainability movement has a tremendous amount of traction right now. It's focused on leadership, innovation and going beyond simple compliance. It also provides a connection to new stakeholders and partners for us. So by leveraging these forces, we think we can help employers do a better job protecting workers.

I'm impressed by the breadth of stakeholders and types of sustainability efforts they were involved in, and their willingness to consider safety and health was really refreshing.

**Davies: While you were doing research and conducting interviews, what did you find surprising?**

**Michaels:** When we were speaking with people around the country currently engaged in sustainability – whether their focus was metrics, reporting, standards and certifications, procurements, research, education or investing – all of them recognized that worker safety and health should be an essential component of sustainability efforts.



However, there were far fewer ideas and a lot less action about how this can be operationalized within their ongoing work. I'm impressed by the breadth of stakeholders and types of sustainability efforts they were involved in, and their willingness to consider safety and health was really refreshing. We began with a focus on our typical stakeholders in the safety and health and business community, but we learned that many of the activities around sustainability are not focused on safety and health, and the safety and health community is not that involved with sustainability activities.

So discussions about procurement, investing, reporting, certifications, research and metrics all provide new and interesting connections for us to pursue.

**Davies: One of the things we see in sustainability is a goal to achieve more employee engagement, to get employees more involved. Do you see this ability to partner between OSH and sustainability as a way to drive employee engagement?**

**Michaels:** Absolutely. Worker engagement is one of the fundamental tenets of a comprehensive safety and health program, so that same engagement can help identify opportunities for innovations at the employer. Worker engagement can improve not only safety and health, but also business performance. Workers have hands-on, close-up expertise, and they can provide insight into product and process design to minimize hazards and to improve efficiency. We absolutely see that.

**Davies: What is the message you'd like to share with sustainability professionals? What's the outreach that you're looking for?**

**Michaels:** We're hoping they will read our report and embrace this approach as part of their sustainability efforts. As we move toward integrating safety and health metrics into reporting, for example, that they get onboard with that and help us move that forward.

Worker engagement can improve not only safety and health, but also business performance.

For example, based on a regulation that came out last July, we will be collecting and posting injury rates from several hundred thousand employers on the web. That's a lagging indicator, but we think will be a useful part of an organization's sustainability reporting.

However, we'd like to see more leading indicators reported such as the presence of an active safety and health program, worker engagement, management commitment, things like that. We think once employers go down that road, they're going to find it very valuable and rewarding.



**Davies:** One of the things I really took out of the report that I think might be missed by some sustainability professionals is that when you look at the triple bottom line, a lot of focus is placed on environmental issues, but the role of OSHA and the social side of that triple bottom line is missing in a lot of reporting and discussions around sustainability.

**Michaels:** It's interesting. It's almost always given lip service, but then it doesn't go beyond that. We think it's worthwhile for corporations to go beyond that, and we're going to try to help them get those tools so they can do that.

**Davies:** In many corporate sustainability reports, the social component is limited to volunteerism or philanthropy. I think this is much more key to the operation of the business.

**Michaels:** So do we. We think all of this links together very well, especially the integration of occupational safety and health into sustainability. And it will also provide a feedback loop to show employers that this focus will improve their performance — not just around safety, but overall.

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## Cómo la seguridad en lugar de trabajo se compagina con la sostenibilidad?

**How does workplace safety and health align with sustainability?** *Translated into Spanish by Orlando Aguirre-Lopez, for The LEAD Group Inc.*

*Traducido al Castellano por Orlando Aguirre-López, para "The LEAD Group Inc."*

El artículo siguiente, los enlaces agregados, están en gran manera basados en EE.UU, pero creo que podría ser interesante independientemente. OSHA es la Administración de la Seguridad Ocupacional y la Salud en EE.UU.

Conjunto de utensilios para "transición hacia más seguros elementos químicos":  
[https://www.osha.gov/dsg/safer\\_chemicals/index.html](https://www.osha.gov/dsg/safer_chemicals/index.html).

Conjunto de herramientas, "Limpieza Verde para Escuelas Saludables", del Sindicato Internacional AFSCME (sindicato de empleados del servicio público):  
[http://www.cleaningforhealthyschools.org/green\\_cleaning.html](http://www.cleaningforhealthyschools.org/green_cleaning.html)



Lo mejor para usted,

Jennifer

(Ms) Jennifer FEDERICO, Secretariado IPEN, Teléfono + 1 510 704 1962

twitter: @ToxicsFree

[ipen.org](http://ipen.org)

Entrevista con el Dr. David Michaels acerca de atraer compañías y abogados que trabajan en sostenibilidad de negocios hacia la salud y la seguridad del trabajador.

<https://www.greenbiz.com/article/how-does-workplace-safety-and-health-align-sustainability>

## **En qué forma la seguridad en el lugar de trabajo y la salud se compaginan con la sostenibilidad?**

John Davies, Miércoles, Enero 4, 2017

En Mayo fuimos contactados por representantes de la Administración para la Seguridad Ocupacional y la Salud (OSHA, por su sigla en Inglés) del gobierno estadounidense para discutir de qué manera podrían comprometerse en esfuerzos que llevaran el trabajo de la agencia a más amplias discusiones e iniciativas. Tuvimos una buena discusión, los relacionamos a ellos con representantes corporativos con quienes pensamos que ellos podrían hablar, y les pedimos que nos hicieran saber sobre los resultados del contacto.

El resultado es el informe recientemente publicado, Sostenibilidad en el Lugar de Trabajo: [Un Nuevo Acercamiento para el Impulsar la Seguridad del Trabajador y la Salud](#). Es una inmersión profunda en cómo la defensa de los trabajadores de OSHA proporciona una contribución importante a los aspectos sociales de los tres niveles inferiores de cualquier organización.

Estuve particularmente intrigado en cómo la agencia federal había tomado la jornada de regulación a “más allá del cumplimiento” hacia sostenibilidad, de tal modo que preparé una conversación con David Michaels, secretario asistente del “Trabajo para la Seguridad Ocupacional y la Salud”. Lo siguiente ha sido editado por su longitud y para claridad.

**John Davies: Cuál fue el ímpetu de su organización para estudiar la sostenibilidad corporativa y cómo ello podría ayudar en el avance de la seguridad del trabajador y su salud.**

**David Michaels.** OSHA tiene una misión muy importante, cual es hacer todo lo que podamos para estimular a los empleadores a hacer seguro el lugar de trabajo. Sabemos que se necesitan nuevas estrategias que nos ayuden a lograr esa misión. Solo definiendo y haciendo cumplir estándares, no podremos prevenir todos los millones de daños por trabajo y enfermedades que ocurren cada año, y entonces tenemos que comprometer a los empleadores en forma diferente.



**Davies: En qué lugar la sostenibilidad encaja en esa ecuación?**

**Michaels:** El movimiento de sostenibilidad tiene una tremenda cantidad de atracción ahora. Está enfocada en liderazgo, innovación e ir a más allá de simple cumplimiento. Ella provee también una nueva conexión con las partes interesadas y los asociados con nosotros. Así, apalancando estas fuerzas, pensamos que podemos ayudar a hacer un mejor trabajo protegiendo a los trabajadores.

Estoy impresionado por el entusiasmo de las partes interesadas y los tipos de esfuerzos de sostenibilidad que estuvieron involucrados, y su voluntad de considerar la seguridad y la salud fue realmente renovadora.

**Davies: Mientras que usted hacía investigación y realizando entrevistas, qué encontró sorprendente?**

**Michaels:** Cuando estábamos hablando con la gente en el país comprometidos al momento en sostenibilidad – ya fuese su enfoque en medidas, informes, estándares y certificaciones, adquisiciones, investigación, educación o inversión – todos ellos reconocían que la seguridad del trabajador y su salud eran componentes esenciales de los esfuerzos de sostenibilidad.

Sin embargo, hubo mucho menos ideas y mucha acción acerca de cómo podía esto entrar en operación dentro del trabajo corriente. Estoy impresionado por el ánimo de los participantes y los tipos de esfuerzos de sostenibilidad involucrados, y su voluntad para considerar la seguridad y la salud era realmente refrescante. Empezamos enfocándonos en nuestros participantes típicos interesados en la seguridad, la salud y la comunidad de los negocios, pero aprendimos que muchas actividades alrededor de la sostenibilidad no están enfocadas en la seguridad y la salud, y que la comunidad de la salud y los negocios no está involucrada en actividades de sostenibilidad.

Así, las discusiones sobre obtención, inversión, informes, certificaciones, investigación y medidas proveen todas nuevas e interesantes conexiones para perseguir.

**Davies: Una de las cosas que vemos en sostenibilidad es un objetivo para alcanzar más compromiso del empleado, para hacer que se involucren más. Usted ve esta capacidad para asociación entre OSH y sostenibilidad como una forma de manejar el compromiso del empleado?**

**Michaels:** Completamente. El compromiso del trabajador es uno de los principios fundamentales de un programa integral de seguridad y salud, de tal forma que el mismo compromiso puede ayudar a identificar oportunidades de innovación al empleador. El compromiso del trabajador puede mejorar no solo la seguridad y la salud, sino también el desempeño de la empresa. Los trabajadores tienen experiencia práctica, cercana, y pueden proveer información sobre diseño de producto y proceso para minimizar riesgos y mejorar la eficiencia. Lo vemos completamente.



**Davies: Cuál es el mensaje que a usted le gustaría compartir con los profesionales de la sostenibilidad? Cuál es el objetivo que usted busca?**

Michaels: Esperamos que ellos leerán nuestro informe y tomen este enfoque como parte de sus esfuerzos de sostenibilidad. A medida que nos movemos hacia la integración de las medidas de seguridad y salud en los informes, por ejemplo,

El compromiso de los trabajadores puede mejorar no solo la seguridad y la salud, sino también el desempeño del negocio.

Por ejemplo, con base en la regulación que apareció el pasado Julio, estaremos recolectando y enviando en correos las tasas de accidentes de varios cientos de miles de empleados por la red. Eso es un indicador de retraso, pero pensamos que será una parte útil para la información sobre la sostenibilidad de una organización.

Sin embargo, nos gustaría ver más indicadores importantes informados, tales como la presencia de un programa activo de seguridad y salud, compromiso del trabajador, compromiso administrativo, cosas como esa. Pensamos que una vez que los empleadores tomen esa ruta, la encontrarán valiosa y gratificante.

**Davies: Una de las cosas que deduje del informe que pienso podría pasar por alto para los profesionales de la sostenibilidad es que cuando usted mira hacia la triple línea de la base, hay mucho de enfoque puesto en cuestiones del medio ambiente, pero el papel de OSHA y el lado social de esa triple línea de la base están haciendo falta en muchos informes y discusiones alrededor de la sostenibilidad.**

Michaels: Es casi siempre el hablar por decir algo, pero no va más allá de eso. Pensamos que es útil que las corporaciones vayan más allá, y vamos a tratar de ayudarlas a obtener las herramientas para que puedan hacer eso.

**Davies: En muchos informes de sostenibilidad corporativos, el componente social está limitado a voluntarismo o filantropía. Pienso que esto es mucho más clave para el funcionamiento de la empresa.**

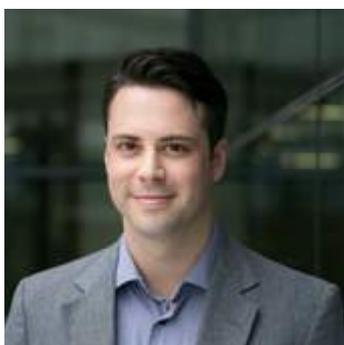
Michaels: Nosotros también lo creemos. Pensamos que todo esto enlaza muy bien en conjunto, especialmente la integración de la seguridad ocupacional y la salud dentro de la sostenibilidad. Y ello suministrará también un lazo de retroalimentación para mostrar a los empresarios que este enfoque mejorará su desempeño – no solo alrededor de la seguridad, sino en general.



## Elevated lead levels in Sydney back yards: here's what you can do

Reprinted from *The Conversation*, <https://theconversation.com/elevated-lead-levels-in-sydney-back-yards-heres-what-you-can-do-68499> - January 17, 2017 6.05am AEDT

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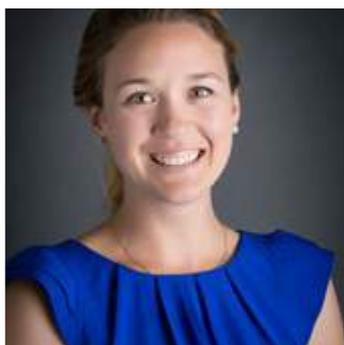
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## Disclosure statement

Mark Patrick Taylor is affiliated with: Broken Hill Lead Reference Group. LEAD Group Inc. (Australia). NSW Government Lead Expert Working Group - Lead exposure management for suburbs around the former Boolaroo (NSW) Pasminco smelter site, Dec 2014–ongoing. Appointed by NSW Environment Minister to review NSW EPA’s management of contaminated sites, October 2015–ongoing. The VegeSafe project receives funding support via voluntary donations from the public. The VegeSafe study published in the journal *Environmental Pollution* was completed during a period of cash and in-kind support for a broader evaluation of the use and application of field portable XRFs for the assessment of environmental contamination. This funding support came from two sources: Olympus Australia Pty Ltd and the National Measurement Institute, North Ryde, Sydney.

Louise Kristensen, Marek Rouillon, Paul Harvey, and Steven G George do not work for, consult, own shares in or receive funding from any company or organisation that would benefit from this article, and has disclosed no relevant affiliations beyond the academic appointment above.

## Partners



**MACQUARIE**  
University

[Macquarie University](#) provides funding as a member of The Conversation AU.



Testing soils in back yards. Mark Taylor, Author provided

In [our recent study](#) we found that 40% of 203 Sydney homes we sampled contain lead in garden soil above the Australian health guideline of 300 milligrams per kilogram (mg/kg).

This presents a hazard because soil lead can adhere to or get absorbed into edible plants. An additional pathway of exposure occurs when contaminated soil dust enters homes and is [accidentally ingested](#). Lead is a potent neurotoxin that affects [childhood development](#).

## Urban agriculture and [VegeSafe](#)

[Urban agriculture is becoming more popular](#) across Australia. [Almost half](#) (48%) of all households in metropolitan areas are now growing some form of edible produce.

Most lead contamination is a result of the historical use of lead petrol and lead-based paint (now phased out) and previous industrial emissions. [Scientists and regulators](#) are well aware of these legacy issues, but the general public remains underinformed about the potential risks.

To help urban gardeners assess contamination risks associated with their garden soils, we started the community science initiative [VegeSafe](#) in 2013. This program offers free soil metal screening to participants.

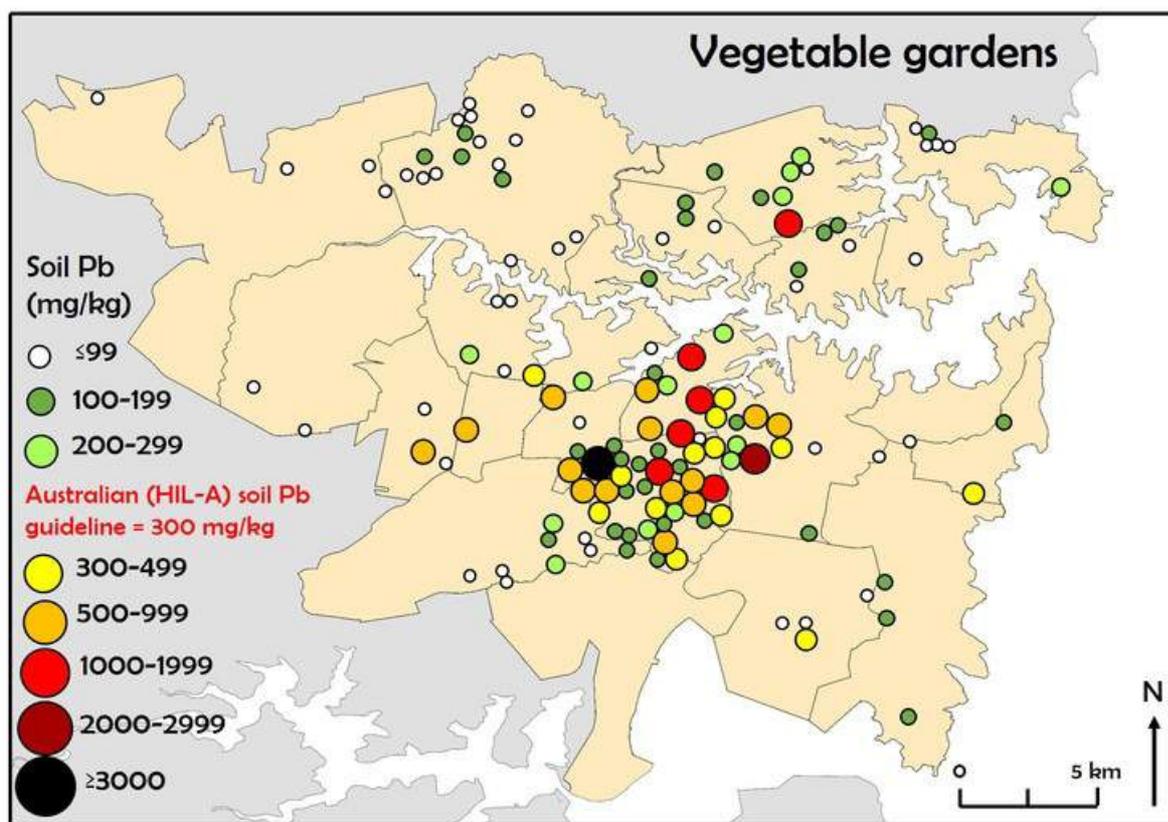


Each participant receives a formal report on their soil metal results and advice about what to do next if soils contain elevated concentrations of metals. We have provided 5,500 free soil metal tests to over 1,300 homes and community gardens (Australia-wide), the largest program and study of its kind in Australia.

## What did we find?

As well as the 40% of Sydney gardens containing soil above the 300 mg/kg Australian health guideline, approximately one in seven homes had soils lead levels greater than 1,000 mg/kg. Soil metal concentrations were typically greatest around drip lines.

Soil lead concentrations were greatest in the City of Sydney and former local government areas of Leichhardt Municipal Council and Marrickville Council, which had mean soil lead concentrations of 883 mg/kg, 960 mg/kg and 689 mg/kg, respectively.



Soil

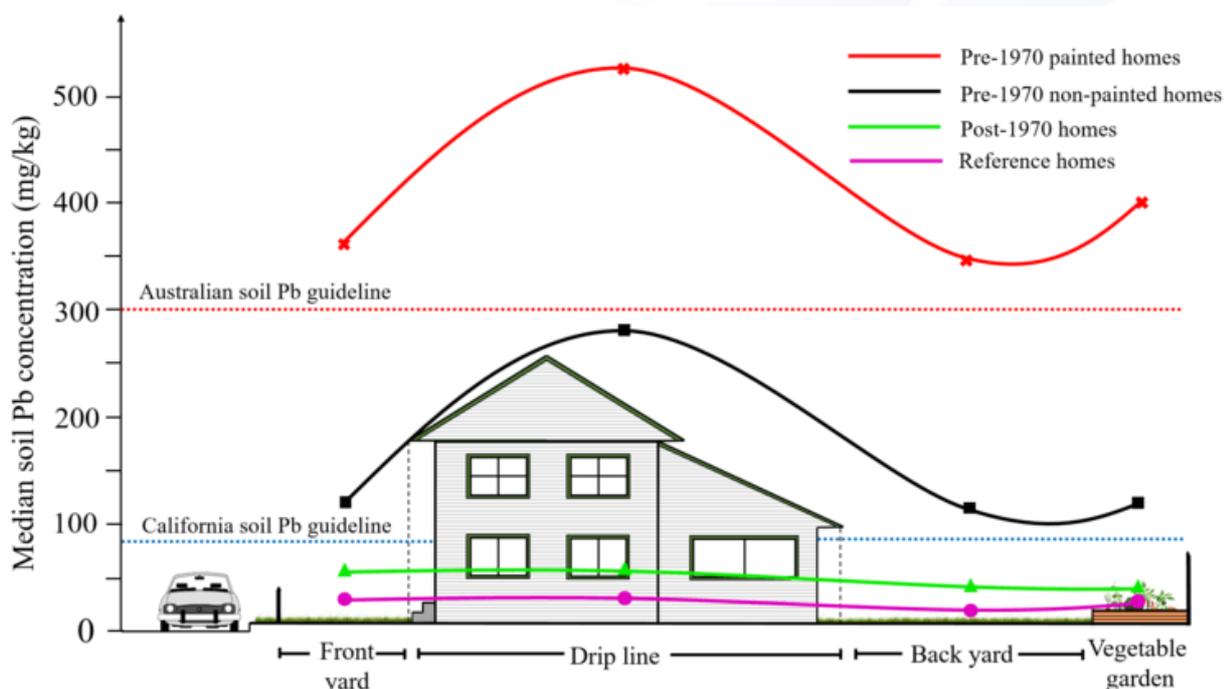
lead concentrations of vegetable garden soils from 141 Sydney homes. Map represents one of four areas around homes (front yard, drip line, back yard and vegetable garden) in this study. Source: **Rouillon et al. 2016**

Homes with painted exteriors built before 1970 were more likely to have soils contaminated with lead. The highest levels are at homes 80 years or older. This is likely to have been caused by lead-



rich paint, which contained up to 50% lead prior to 1970. Lead in paint was reduced to less than 1,000 mg/kg (0.1%) by 1997.

We observed the environmental benefit of the withdrawal of lead from paints and leaded petrol (removed in 2002) in our study. Garden soils at newer homes contain the least lead. Soil lead concentrations decrease with distance from Sydney’s city centre, where there are more old homes and greater density of traffic and industry.



Cro

ss-section schematic of a typical inner-Sydney residential home with median soil Pb (lead) concentrations for painted pre-1970 homes, non-painted pre-1970 homes, post-1970 homes and reference homes. The vegetable garden is displayed at the rear of the back yard, as this was the case for the majority of homes. Source: **Rouillon et al. 2016**

## Public health

Lead exposure is especially detrimental for [children](#) because their neurological and skeletal systems are developing. [Adults](#) are also adversely affected, with studies showing increased [blood pressure and hypertension](#) associated with sub-clinical exposures.

[Toxicological evidence](#) also shows that exposure reduces semen quality and extends the time to pregnancy. In short, lead is detrimental to all human systems and exposures should be avoided or minimised at all times.

Our study demonstrates lead contamination in garden soils is greater at painted homes than non-painted homes. Many pre-1970 Australian homes still contain paint with up to 50% lead on exterior walls, fences, eaves, doors and window frames.



The main risk of exposure arises when lead-based paint deteriorates or is [removed improperly](#). Indeed, many home renovators unwittingly expose themselves and others due to a lack of knowledge of lead hazards.



Paints containing lead are no longer used in Australia, but remain on countless homes.

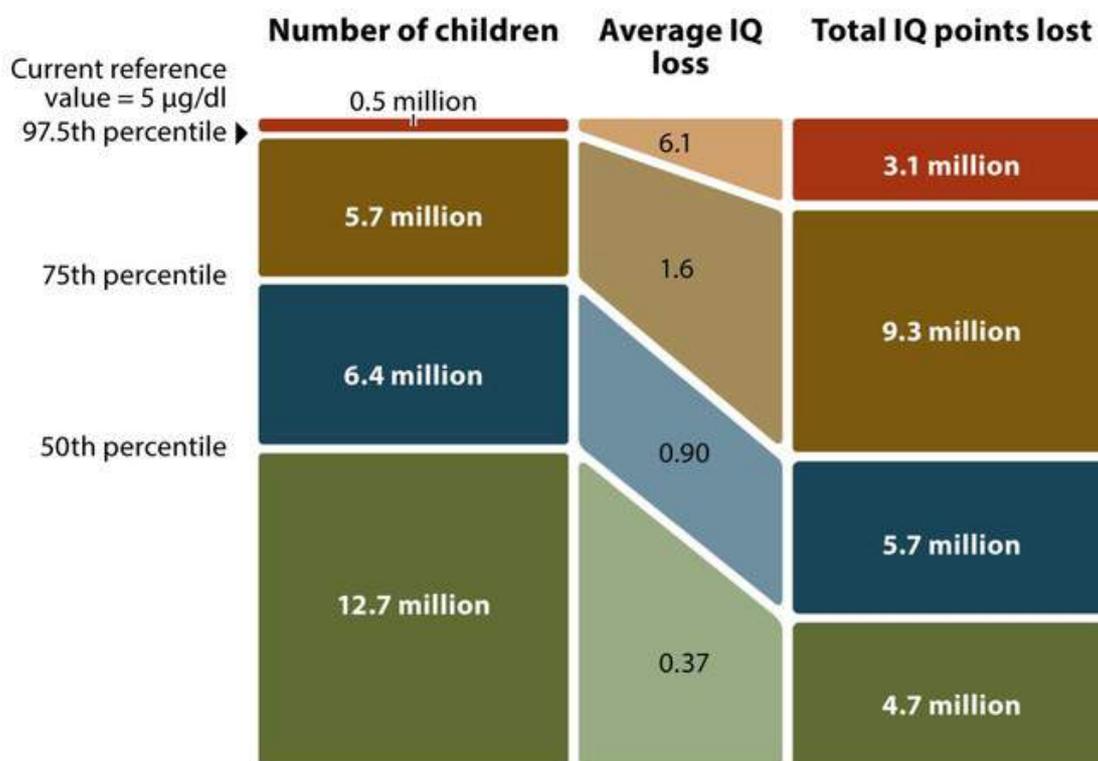
## Reducing exposure

The [United States Environmental Protection Agency](#) introduced legislation specifically targeting houses with lead paint to prevent contamination and to minimise avoidable lead exposures.

Unfortunately this regulatory gap has not been filled in Australia. Despite the widespread historic use of lead-based paints and the high proportion of [exposure related to it](#), our data reveals a concerning legacy of soil lead contamination in older suburbs.

We recommend that people residing at or planning to purchase or renovate homes built before 1970 should get their soils and paint tested for lead. Using a qualified [lead-abatement decorator](#) in older homes would also [help prevent exposure](#). Where parents and homeowners think they may have caused exposure, their GPs can provide a blood lead test.

[Reducing even low-level exposures](#) is critical, as demonstrated by Bruce Lanphear's "[prevention paradox](#)" (see the image below). The graphic illustrates that the most IQ points across a population are lost from low-level lead exposures.



 Lanphear BP. 2015.  
Annu. Rev. Public Health. 36:211–30

Bruce Lanphear’s prevention paradox. The majority of IQ points lost to lead exposure occurs in children who have low-to-moderate exposure to lead. Adapted from Reference (Lanphear 2015)

### What can gardeners do?

Where non-food-growing soils exceed the Australian soil metal guidelines, we recommend maintaining year-round cover of lawn or mulch to minimise dust generation.

Where metal guidelines are exceeded in food-growing soils, we recommend either replacing existing soil with new, uncontaminated soil, or relocating the food garden to an above-ground vegetable plot (again with new soil).

In this way, gardeners can exercise our motto, which is to *carry on gardening* knowing their soils are clean.

The [VegeSafe program](#) is ongoing for all Australians. Gardeners can send their soil samples to Macquarie University for free soil metal screening of their soil. We do, however, take donations to help sustain our program – so please support your citizen science.



## **How does lead exposure affect our eyes? FRENCH: Comment l'exposition au plomb affecte-t-elle nos yeux?**

*By Daisy Shu, Optometry student, University of New South Wales, Australia, January 2010. This version edited by Elizabeth O'Brien, November 2016. Translated into French by Orlando Aguirre-Lopez, The LEAD Group Inc.*

*Par Daisy Shu, étudiante en optométrie, Université de Nouvelle Galles du Sud, Australie, Janvier 2010. Cette version est éditée par Elizabeth O'Brien, Novembre 2016. Traduit en Français par Orlando Aguirre-López. Le LEAD Group Inc.*

**GLASS provides information & referrals on lead poisoning & lead contamination prevention & management, with the goal of eliminating lead poisoning globally & protecting the environment from lead. GLASS is run by The LEAD Group Incorporated ABN 25 819 463 114**



**GLASS fournit des informations et des références sur l'intoxication au plomb et la prévention et la gestion de la contamination par le plomb, dans le but d'éliminer l'intoxication au plomb et de protéger l'environnement contre le plomb. GLASS est géré par le 'The LEAD Group Inc.**

L'exposition au plomb est connue pour perturber une myriade de processus du corps en raison de sa toxicité pour nos organes vitaux, en particulier nos os, le cœur, les reins et le système nerveux (1). Cependant, il-y-a eu peu de recherches sur ses effets sur la vision, un processus fondamentalement cognitif. En raison de l'association directe entre nos yeux et le système nerveux central (SNC), il ne fait aucun doute que la capacité du plomb à entraver le développement du système nerveux va inévitablement affecter notre vision. Des études ont montré que l'exposition au plomb peut entraîner une sensibilité réduite des photorécepteurs (2), de la tige, une vision floue (3) et des yeux irrités (4), ainsi qu'une sensibilité accrue à la cataracte (5) et à la névrite optique (6). [Photorécepteurs : terminaison nerveuse, cellule ou groupe de cellules spécialisées pour détecter ou recevoir la lumière, [www.answer.com](http://www.answer.com). Les tiges ne sont pas sensibles à la couleur, contrairement aux cônes, mais sont beaucoup plus sensibles à la lumière.]



### **Déficits visuels.**

La vision humaine est provoquée par les photorécepteurs de la rétine, à savoir les tiges et les cônes. Les cônes sont responsables de la vision sous des niveaux lumineux élevés tandis que la vision scotopique, qui est la vision sous un éclairage faible, est médiée par la tige. Fox et Katz (2) ont mené une étude électro physiologique sur des rats, révélant des changements à long terme dans la sensibilité des tiges suite à une exposition faible et modérée au plomb (pic de plomb dans le sang de 19 et 59  $\mu\text{g}/\text{dL}$ , respectivement (2). Des électroretinographiques observations (ERG) ont montré que ces altérations sont présentes au niveau de la tige. Ils ont constaté une augmentation du calcium du segment externe de la tige (SET), une diminution de la teneur en rhodopsine (photo pigmentation trouvée dans les tiges) par œil et une réduction de la sensibilité des tiges dans fonction d'adaptation sombre, ce qui suggère que les tiges sont directement influencées par le plomb. Évidemment, le plomb peut affecter gravement la capacité de nos yeux de fonctionner dans des conditions de faible luminosité, en particulier dans l'adaptation à l'obscurité.

Le développement du SNC et de la rétine se produit pendant la gestation chez l'homme et donc l'exposition au plomb pendant cette période peut avoir un effet préjudiciable (2). Une étude sur les singes rhésus par Bushnell et al (8) a révélé que l'exposition au plomb de  $85\mu\text{g}/\text{dL}$  pendant la première année de vie altère la discrimination visuelle sous un éclairage faible par rapport à leur performance sous un lumière vive. Bien que l'étude ait été menée sur des animaux, les données ont des conséquences pour les enfants exposés à des niveaux élevés de plomb pendant le développement. Il a été suggéré que les niveaux temporaires de plomb dans le sang dans la proximité de  $200\mu\text{g}/\text{dL}$  au début de la vie et une exposition chronique à  $85\mu\text{g}/\text{dL}$  peuvent par la suite causer des altérations similaires de la vision scotopique chez l'homme (8).

L'intoxication par le plomb induit une déficience chronique et nocive de la vision nécessaire sous un éclairage faible, une condition connue sous le nom de cécité nocturne (8) et il a été proposé que cela se produise par l'intermédiaire de dommages provenant du cerveau. Les tiges sont très mal représentées dans une région du cerveau responsable de la vision, appelée le cortex visuel, car il y beaucoup moins de tissu neural dédié au traitement de l'information par rapport aux photorécepteurs du cône (8). Puisque le plomb induit des lésions cérébrales par démyélinisation (8), c'est-à-dire la perte de la gaine de myéline autour des fibres nerveuses, les déficits visuels apparaîtront d'abord dans la vision médiée par la tige.



### Susceptibilité à la cataracte

La cataracte est un trouble de la lentille cristalline de l'œil, causant une obstruction en le passage de la lumière à notre rétine. Shaumberg et coll. (5) ont constaté que l'exposition cumulative au plomb peut augmenter le risque de cataracte liée à l'âge. Ils ont mesuré les niveaux de plomb osseux dans le tibia et la rotule d'une sélection d'hommes âgés de 60 à 93 ans (âge moyen de 69 ans) de Boston (5). Il a été constaté que les hommes ayant les niveaux les plus élevés de plomb dans le tibia ( $7.78 \pm 4.85 \mu\text{g/dL}$ ) présentaient un risque de cataracte supérieur à 2.5 fois plus élevé que les hommes ayant le plomb le plus faible ( $4.49 \pm 2.65 \mu\text{g/dL}$ ) (5). Après contrôle de l'âge, la fraction attribuable approximative de la cataracte due à l'exposition au plomb était 42.5% (5).



2016 Volcano Art Prize (VAP) Entry.  
Title: Tiger - Even big cats get cataracts. **Lead-Safety Message: Nearly half of all cataracts in humans are caused by lead exposure. Prevention is the best cure.**

<http://volcanoartprize.com/portfolio-item/tiger-even-big-cats-get-cataracts/> Artist: Alice Ju.

Le plomb a été trouvé présent dans les lentilles avec la cataracte dans diverses études (9). On pense que l'invasion de plomb dans les lentilles peut altérer son statut

redox et causer des changements conformationnels dans la protéine, réduisant ainsi la clarté de l'objectif (9). Le plomb est connu pour perturber le métabolisme du glutathion dans les lentilles (9) et augmenter la teneur en glutathion liée aux protéines et la cystéine (5). De plus, le plomb peut entraver l'équilibre biologique du calcium dans notre système.

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transparentes (9-11). [Redox : une réaction chimique réversible dans laquelle une réaction est une oxydation et l'inverse est une réduction. (Le Dictionnaire Gratuit)].

### **Quelques autres symptômes visuels**

Depuis l'Antiquité, l'empoisonnement au plomb a été trouvé pour causer des dommages au système visuel et même la cécité chez l'homme et les animaux (6). Ces effets sont collectivement appelés 'atrophie optique' ou 'vision floue', apparaissant seulement dans les cas d'empoisonnement au plomb suffisamment grave pour causer des lésions cérébrales (5). L'importation du plomb dans la vinification, la cuisine et les bijoux dans l'aristocratie de Rome vers 150 av. J.-C. peut avoir contribué à sa ruine et à sa décadence ultime (6). Les autorités classiques sur la médecine à l'époque décrivent des symptômes de détérioration de la vue due à la névrite optique, qui est une inflammation du nerf optique (6). En outre, le plomb a également été trouvé pour entraîner potentiellement l'Amaurose qui la perte de la vue due à la maladie du nerf optique ou du cerveau sans pathologie de l'œil même (6).

Plus récemment, l'exposition au plomb a été impliquée dans la névrite oculaire chez les enfants, ce qui les rend déficients visuels ou aveugles en permanence (12). Gibson a constaté que les cas de névrite optique étaient souvent accompagnés d'une augmentation de la pression intracrânienne qui semblait irriter directement la tête du nerf optique (13). Par conséquent, il a inventé les conditions comme 'plomberie oculaire' croire qu'il soit dû à un gonflement plutôt que l'inflammation (13). La cécité induite par le plomb, bien que phénomène maintenant rare et souvent transitoire, peut être tout à fait surprenant, en mettant l'accent sur le fardeau de plomb sur notre bien-être.

D'autres symptômes visuels ont été documentés, y compris le strabisme et la double vision observés chez un enfant atteint d'intoxication par le plomb dans un rapport de santé publique sur les enfants du Queensland (14). ['Strabisme : une condition dans laquelle les yeux ne pointent pas dans la même direction. On peut aussi parler de Tropia o Serrement de paupières.'  
[www.answer.com](http://www.answer.com) ].

Il a été suggéré que l'augmentation de la pression intracrânienne induite par l'exposition au plomb peut également provoquer une paralysie des muscles 'recti' [rectilignes] externes impliqués dans le mouvement des yeux (12). Cela peut contribuer au strabisme et, par conséquent, à la double vision, en raison du manque de fixation des deux yeux sur la cible.

Le plomb tétra éthyle est un composé plus couramment rencontré dans des conditions d'occupation où il est utilisé comme un composé anti-knock dans le pétrole, y compris l'essence d'Aviation plombée ou Aviation ou l'essence d'Aviation ou AvGas (3).

L'exposition au plomb tétra éthyle peut provoquer des symptômes de rougeur et de



douleur dans les yeux, ainsi qu'une vision floue (3). En outre, il peut irriter les yeux et entraîner une perte potentielle de la vision (4).

### **Troubles cognitifs liés à la vision.**

Diverses études suggèrent que l'exposition cumulative au plomb est liée à de nombreux troubles chroniques du vieillissement, y compris le déclin cognitif (5). Une étude menée par Shih et coll. a mesuré les niveaux de plomb du tibia à l'aide de la fluorescence des rayons X à coques K (XRF) (15) induite par  $^{109}\text{Cd}$ . Les sujets étaient alors tenus de compléter une série d'épreuves incluant celles liées à la coordination œil-main, à la mémoire visuelle et à la visu construction (15). Il a été constaté que des niveaux plus élevés de plomb du tibia étaient significativement corrélés à un fonctionnement cognitif moins favorable de la vision (15). [Les capacités de visu construction impliquent la coordination des aptitudes motrices fines avec des capacités visu-spatiales, habituellement dans la reproduction de figures géométriques. Ce domaine regarde non seulement l'aptitude de l'individu à copier un chiffre, mais aussi comme il est bien planifiée et organisée la figure. Les individus qui ont des difficultés avec la visu construction et les capacités spatiales ont souvent des difficultés avec les tâches quotidiennes telles que l'arithmétique, la conduite et l'écriture.]

[http://www.advancedpsy.com/visuoconstruction\\_abilities-page-25.html](http://www.advancedpsy.com/visuoconstruction_abilities-page-25.html)

### **Prévention des lésions induites par le plomb aux yeux.**

La contamination par le plomb est répandue dans notre environnement, principalement en raison du pétrole plombé et de la peinture à base de plomb, ce qui fait que pratiquement tous les adultes ont accumulé un certain degré de plomb dans leur système (5). Dans les milieux industriels, il est particulièrement important d'éviter l'exposition au plomb chez les femmes enceintes, les adolescents et les enfants (3). D'autres mesures préventives comprennent l'évitement de la génération de brouillards (3) [par ex. des gouttelettes liquides d'un acide dans les travaux d'acide sulfurique d'une fonderie de plomb], le respect de règles d'hygiène strictes et la mise en place de fontaines de lavage oculaire dans la zone de travail immédiate (4). Une protection oculaire, comme des lunettes anti-éclaboussures et résistant aux chocs, ainsi que des écrans faciaux est également nécessaire (4). Il est conseillé de ne pas porter de lentilles de contact lorsque l'on travaille avec de plomb tétraéthyle (4).

La prévention des troubles visuels induits par le plomb demeure un objectif important de santé publique et ne peut être atteinte qu'en réduisant la distribution de plomb dans notre environnement. Grâce à des campagnes de santé publique et à l'application de strictes politiques de contamination par le plomb, la charge de plomb peut être considérablement réduite.



## **Le traitement**

La cataracte est couramment traitée par chirurgie qui implique l'élimination et le remplacement de la lentille cristalline opaque avec une lentille intraoculaire plastique (IOL). En Australie, les dépenses pour la chirurgie de la cataracte couvrent le poste le plus important du budget de Medicare (5), révélant le lourd fardeau financier auquel le plomb a contribué. D'autres causes de la cataracte : « Il existe des preuves que l'exposition prolongée au soleil, au tabac et à la forte consommation d'alcool peut être associée à la formation de la cataracte. Certaines recherches suggèrent que les personnes qui ont faible apport alimentaire de fruits et légumes, la vitamine C, la vitamine E et le bêta-carotène sont également à risque plus élevé de la maladie. Les maladies systémiques, telles que le diabète et les maladies vasculaires peuvent augmenter le risque de développement de la cataracte, ainsi que des lésions oculaires, ou l'utilisation de certains médicaments, y compris les corticostéroïdes. »

<http://www.health.gov.au/internet/eyehealth/publishing.nsf/Content/commonprob>

Le traitement des yeux irrités et rouges comprend l'application de collyres de lubrifiant.

## **Conclusions**

Bien que des progrès aient été réalisés dans la limitation de l'exposition au plomb dans les pays industrialisés, la plupart des individus ont déjà accumulé une lourde charge corporelle de plomb (5). Il est particulièrement nécessaire d'approfondir la recherche sur les effets du plomb sur la vision, en particulier si l'on considère récemment que l'accumulation d'exposition au plomb est un facteur de risque non reconnu de cataracte (5), la principale cause globale de cécité et de déficience visuelle. [En l'espèce, la campagne nationale de sensibilisation à la santé oculaire du Département Australien de la Santé et du Vieillessement, citée ci-dessus, sous 'autres causes de la cataracte', ne mentionne pas l'exposition au plomb comme cause de la cataracte.]

La recherche suggère que la réduction de l'exposition au plomb pourrait aider à diminuer le fardeau mondial de la cataracte. Les études futures sur le potentiel de la diminution du risque de la cataracte peuvent impliquer un traitement rapide de l'empoisonnement au plomb en utilisant la thérapie de chélation. En outre, les déficits sélectifs des tiges résultant de l'exposition au plomb pendant la gestation et dans le développement périnatal (6) devraient contribuer à susciter une plus grande inquiétude quant à la nécessité de limiter l'intoxication fœtale et infantile au plomb.



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## LEAD Group Kits in Australia's Nurture Parenting Magazine and Social Media

By Elizabeth O'Brien, Lead Advisor, LEAD Group Kits



### HOW LEAD SAFE IS YOUR HOME?



Are you planning to renovate a pre-1997 home?

Do you have kids, pets, chooks or a vegie garden?

LEAD Group Kits provide accurate lab results AND recommendations for making your home lead safe.

Lead is manageable with the know-how.

Order at [www.leadssafeworld.com/shop](http://www.leadssafeworld.com/shop)

Australia's Nurture Parenting Magazine ad for LEAD Group Kits for *7 Most Toxic Chemicals in Our Homes* article, Autumn 2017 issue. Purchase Kits at [www.leadssafeworld.com/shop](http://www.leadssafeworld.com/shop)

Be sure to join the group, and keep an eye out for Facebook Posts about the above ad, in our kit-centred Facebook Group: DIY Lead (Metal) Test Kit at [https://www.facebook.com/groups/290080511569/?ref=pages\\_profile\\_groups\\_tab](https://www.facebook.com/groups/290080511569/?ref=pages_profile_groups_tab)

The following Facebook posts from Tamara Rubin are evidence of the power of Social Media in promoting laboratory lead testing and the potential for the idea of LEAD Group Kits to be exported to other countries, as they are currently only available to Australians in Australia. The ad below for Certified Kit – lab lead testing of water samples available in the USA, it was the first example of DIY-sampling lab lead testing Kits I've seen apart from the LEAD Group's Kits which have been sold in Australia since 2007.



And clearly, Social Media can also be used to create income via Amazon links (see below)– whatever that means. Is this the same as Shopnate in Australia? You can donate to your favourite charity just by doing your usual online shopping via Shopnate. Check it out here <https://www.shopnate.com.au/> and click to join for free, then choose The LEAD Group to receive your donation while online shopping.

“Shopnate works with hundreds of big name Australian and international online retailers. They have all agreed to donate a commission on every online sale to a good cause of your choice. This commission is already included in the price of what you’re buying. This means you can support your favourite cause, at no extra cost to you.”

20<sup>th</sup> April 2017 Facebook Post from Tamara Rubin:

Hey guys - I found it absolutely fascinating! Guess what the most popular city is for my advocacy work? I thought it would be Portland! But it is not even in the United States! Guess what the third most popular language is for people who go to my Facebook page? Check out how many people from Pakistan (for example) have checked out the page in the last month! Wild numbers! With your help we are really making a huge impact with this message! Thank you!

### **Tamara Rubin’s Facebook Reach (Past 28 days!) #MoreFunFacts**

By **Tamara** on April 20, 2017 in **2017 Stats, Facebook, Facebook Stats, Fun Facts, International Reach, Site Stats, Stats**

Here’s a chart - <http://tamararubin.com/2017/04/fbook/> (see below) - showing the international impact of my Facebook reach for the past 28 days (on just one of my pages)... this is also a super fun set of information! Look at all the countries represented! There are three images below (because I could not capture the full chart in one screenshot) and they each overlap a little so you can see where they go together.

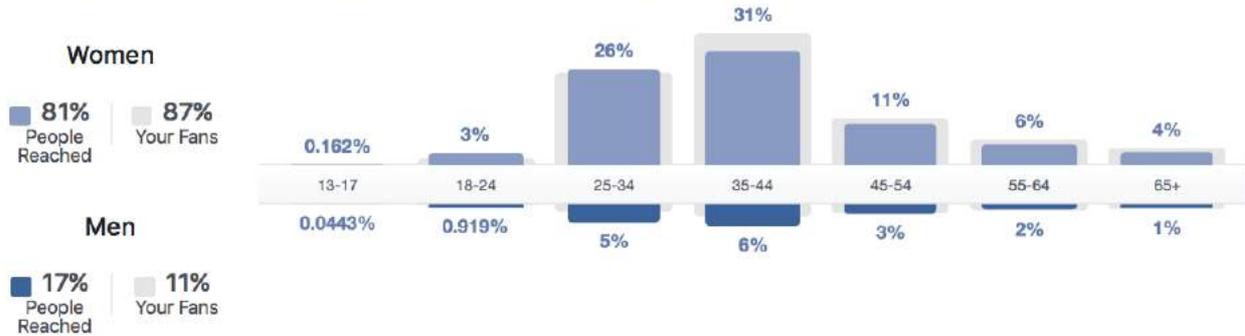
Click on each of the images to see them full size if you can’t quite read them (because you are old – like me and don’t have glasses yet – like me!).

This is the impact that we (together) are having on bringing the message of childhood lead poisoning prevention to the world... and these numbers just represent the past 28 days! Thank you!



Your Fans | **People Reached** | People Engaged

The number of people your post was served to in the past 28 days.



Country	People Reached	City	People Reached	Language	People Reached
United States of America	75,616	Perth, WA, Australia	2,695	English (US)	101,979
Australia	28,968	Brisbane, QLD, Australia	2,683	English (UK)	14,573
Canada	4,024	Singapore, Central Regi...	2,255	Spanish	624
Singapore	2,256	Melbourne, VIC, Australia	1,480	Italian	320
United Kingdom	1,659	Portland, OR	1,395	German	239
New Zealand	936	Adelaide, SA, Australia	1,349	French (France)	236
South Africa	629	Sydney, NSW, Australia	1,301	Polish	201
Italy	360	New York, NY	1,233	Swedish	164
Germany	356	Chicago, IL	925	Dutch	116
Puerto Rico	300	Los Angeles, CA	904	Spanish (Spain)	116
India	273	Gold Coast, QLD, Austr...	746	Portuguese (Brazil)	70



Italy	360	New York, NY	1,233	Swedish	164
Germany	356	Chicago, IL	925	Dutch	116
Puerto Rico	300	Los Angeles, CA	904	Spanish (Spain)	116
India	273	Gold Coast, QLD, Austr...	746	Portuguese (Brazil)	70
Mexico	251	Buffalo, NY	610	French (Canada)	70
Ireland	211	Seattle, WA	549	Danish	69
Sweden	203	San Diego, CA	495	Romanian	68
Philippines	176	Boston, MA	494	Norwegian (Bokmal)	62
Malaysia	168	Toronto, ON, Canada	471	Japanese	60
France	149	Denver, CO	470	Greek	52
Poland	141	Houston, TX	458	Russian	52
Netherlands	139	Phoenix, AZ	399	English (Pirate)	50
Japan	137	London, England, Unite...	390	Finnish	43
Hong Kong	123	Philadelphia, PA	382	Hungarian	40
Spain	114	Minneapolis, MN	362	Arabic	36
Norway	109	Sunshine Coast, QLD, ...	356	Traditional Chinese (Tai...	31
Denmark	98	Austin, TX	347	Traditional Chinese (Ho...	30
United Arab Emirates	97	San Francisco, CA	327	Bulgarian	28
Switzerland	90	Columbus, OH	316	Turkish	27



*Tamara Rubin*

Environmental Activist, Filmmaker, & Mother of Four Sons

Tamara Rubin Environmental Activist, Filmmaker, & Mother of Four Sons



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AMERICA'S SECRET EPIDEMIC

Switzerland	90	Columbus, OH	316	Turkish	27
Romania	89	St. Louis, MO	312	Czech	26
Finland	81	Marietta, GA	309	Korean	25
Saudi Arabia	77	Dallas, TX	300	Portuguese (Portugal)	23
Israel	72	San Antonio, TX	289	Simplified Chinese (China)	21
Thailand	72	San Jose, CA	281	Serbian	19
Brazil	69	Geelong, VIC, Australia	273	Slovak	19
Greece	64	Atlanta, GA	266	Hebrew	19
Indonesia	63	Oklahoma City, OK	265	Vietnamese	18
South Korea	55	Marion, SA, Australia	262	Thai	16
Ecuador	52	Cape Town, Western C...	260	Indonesian	16
Argentina	52	Charlotte, NC	250	Albanian	15
Hungary	50	Indianapolis, IN	245	Croatian	13
Belgium	50	Edmonton, AB, Canada	242	Malay	12
Peru	49	Kansas City, MO	232	Slovenian	9
China	46	Nashville, TN	222	Ukrainian	8
Egypt	46	Suffolk County, NY	218	Afrikaans	7
Taiwan	41	Washington, DC	216	English (India)	6
Colombia	39	Canberra, ACT, Australia	202	Catalan	6
Pakistan	37	Colorado Springs, CO	201	Norwegian (Nynorsk)	6



### **21<sup>st</sup> April 2017 Facebook Post to Tamara Rubin:**

Fantastic Tamara! Your Facebook page is a brilliant connector of lead-aware souls. The LEAD Group has been selling Water Kits, and three sizes of Kits for lab-testing paint, dust, soil, eggs etc for Australians since 2007. See [www.lead safeworld.com/shop](http://www.lead safeworld.com/shop) and we want to connect with labs and lead people who can set up LEAD Group Kits in every other country. Please link us with your followers.

Best regards, Elizabeth O'Brien, Australia

### **23<sup>rd</sup> April 2017 Facebook Post from Tamara Rubin:**

Hi all, I've earned \$475.87 from ur clicks on my Amazon links in April! Thx so much!  
[http://tamararubin.com/2017/04/amazon\\_april/](http://tamararubin.com/2017/04/amazon_april/)

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## **Q&A: DIY lead poisoning of an 18 month old**

**Q: My 18 m.o. daughter has a blood level of 6.8 ug/dL. What should I do?**

**Question** from: a father in Woodville West, South Australia 5011, Australia, January 12, 2017.

I own a 1940s maisonette and we have recently become aware that a number of enamel painted surfaces have undercoats containing lead (confirmed using a 3M spot test). Much of this paint is peeling and cracked. We had our 18 m.o. daughter tested shortly after learning that, and she came up with a blood level of 6.8 ug/dL... After reading some of the linked articles on your website, I am very concerned and want to get her levels as low as possible as quickly as possible.



The major problem is money, I read that some years ago your organisation was quoted at nearly \$300/m<sup>2</sup> for lead paint removal. I simply can't afford that kind of fee and my daughter would be years older before I can.

I have found a tool, "the paintshaver pro" <http://paintshaver.com/paintshaver-pro/>

They state that when attached to a HEPA vaccum they meet EPA RRP recommendations for lead paint removal. Do you have any thoughts on the hire and use of this tool for a DIYer?

I have no affiliation with paintshaver pro or any hire stores in Australia, I am just an out of work lawyer looking to give my daughter a safe environment. Kind regards



**Answer** emailed January 13, 2017:

Dear Sir,

You may be thinking that you've contacted a lead paint management contractor such as Lets Clean in Sydney, but actually, you've contacted Australia's only lead-safety charity (The LEAD Group Inc) which provides a free service to the public (and to government and business), advising on lead problems and their solutions.

After finding your email, [and web-searching the definition of maisonette as I was not familiar with the term - it is "maisonette - a self-contained apartment (usually on two floors) in a larger house and with its own entrance from the outside"] I contacted the South Australian Health Department Environmental Health Section to ask whether they have an action level for blood lead's yet, but sadly, it is still in the works. However, I was advised by a staff member, that when it finally is ready, as in most other Australian states, the new policy will ensure that blood lead levels above 5 micrograms per decilitre will be required to be notified by the lab to the Health Department. And if the South Australian blood lead notification policy is like other states, once notified of an elevated blood lead level, the Health Department will organise an Environmental Health officer to contact the person (or their carer or parent) and advise them on how to respond, and even, to go to the house to collect samples, test them at a lab, and then give more specific advice on how to rapidly bring down the blood lead level, or, if they find no lead hazards in the home, collect samples from other places a child frequents such as their childcare premises.

As a co-founder of The LEAD Group charity and parent of lead poisoned children and main campaigner for national blood lead notification and government response (as well as the ban on leaded petrol and leaded paint and inks), If I were in your situation, I would try contacting the man who is developing South Australia's blood lead notification policy, David Simon, and ask him if he could organise the kind of response that the policy will entail, even though the policy is not yet in place. David's phone number is 82267154.

If David decides not to assist you, then I would highly recommend that you do the next best thing (to having an environmental health officer come to collect samples) and buy a LEAD Group Kit and with it, collect your own samples. Children most often are lead poisoned from ingestion of lead-contaminated dust and soil so unless your daughter actually goes up to the wall and picks off and eats the paint (or picks it up off the floor and eats it) then it is quite conceivable that by "fixing" the lead paint problem that you've identified, you could be worsening the real problem which is quite likely to be your daughter's normal hand-to-mouth activity resulting in lead from soil and dust inside (particularly if there are carpets or rugs) being ingested by her and absorbed from the gut.

I will forward you some very useful Info Packs so you can also plan out whether ceiling dust and drinking water should be sampled - both of these and a number of other sample



types can be tested using a LEAD Group Kit. The analysis is done at a NATA-accredited lab and I write you a report, based on your results, making recommendations about your best lead remediation steps.

A couple of years ago I asked Leadnet egroup of lead poisoning prevention professionals about the "the paintshaver pro" and it was not recommended so I'll forward you an email about that separately.

In the meantime, before you do anything and while you're waiting for other more pertinent sample types to be tested for lead, I recommend that, if the doctor didn't already order iron studies on your daughter's blood, that you phone the doctor and ask them to phone the pathologist and add that as an extra test on the blood sample that will still be at the pathology lab. It is a vital part of bringing down blood lead levels to adequately deal with nutritional deficiencies but most particularly, iron deficiency.

All the best and I look forward to hearing of a fast drop in your daughter's blood lead level. I recommend that the next blood lead test be carried out within a week or two of the first change you make to her likelihood for taking in or absorbing more lead. You need this feedback so you know when to stop taking lead-safety steps. We recommend you can stop when your daughter's blood lead result is non-detectable, that is, when there is a "less than sign" < in the result.

Yours Sincerely

Elizabeth O'Brien

The Lead Education and Abatement Design (LEAD) Group Inc. (environmental health charity)

[www.lead.org.au](http://www.lead.org.au)

Manager, Lead Safe World Project (LSWP) – a collaboration between NGOs and businesses with products or services which help to create lead-safety locally and further afield

[www.leadsafeworld.com](http://www.leadsafeworld.com)

Lead Advisor, LEAD Group test kit results interpretation service

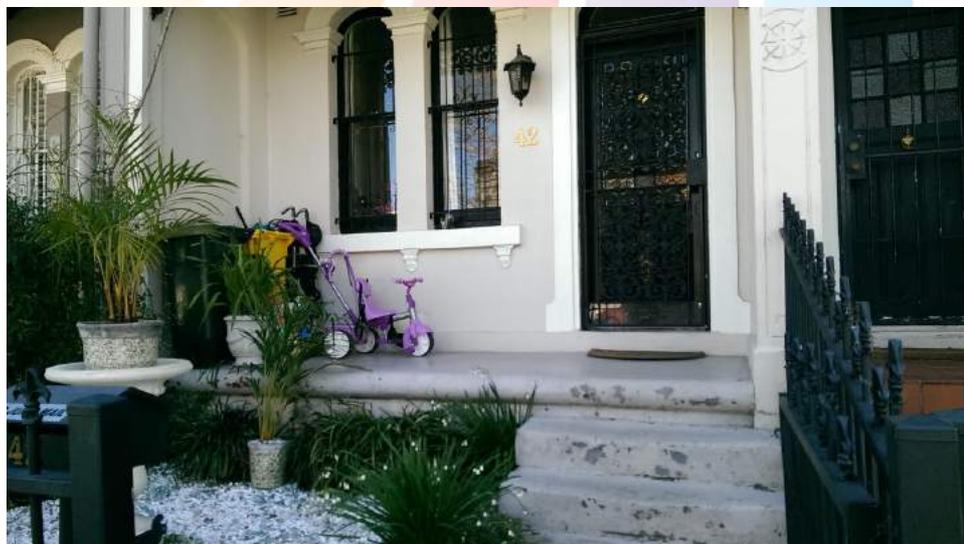
[www.leadsafeworld.com.au/solutions/lead-group-diy-sampling-lab-analysis-lead-test-kits](http://www.leadsafeworld.com.au/solutions/lead-group-diy-sampling-lab-analysis-lead-test-kits)

and LEAD Group test kit advice-via-Skype service, re: type of samples and where to collect them from, for your LEAD Group kit

<http://volcanoartprize.com/portfolio-item/lead-needs-my-attention-for-my-daughters-sake-video/>



2014 Volcano Art Prize (VAP) Entry.  
Title: Lead Needs My Attention for My Daughter's Sake.  
Lead-safety Message: Following this Skype session with Elizabeth O'Brien of The LEAD Group, I will use a LEAD Group kit to have soil, paint, and dust analysed at the lab..



Our Lead-Safety Art/Photo/Film competition is now open for 2017! Volcano Art Prize (VAP) [www.volcanoartprize.com](http://www.volcanoartprize.com) – the entry deadline is Monday 24 July 2017.

Please make your tax deductible donation via our secure payment system at <http://www.lead safeworld.com/donations/>

PO Box 161 Summer Hill NSW 2130 Australia  
Ph +61 2 9716 0014

## Q&A: Cleaning up lead paint flakes after pressure washing

**Question: How do I clean up lead paint flakes everywhere outside from pressure washing Californian bungalow?**

From: Linda, Warragul, Victoria, Australia Sent: Sunday, January 2017



29,

I am sitting in tears as I write this.

We have lived in a Californian bungalow for the past 11 years and have extensively renovated it inside during this time. We had just started to prep outdoors to paint and my husband was pressure washing the walls when he got a metallic taste in his mouth. He then stopped as he was suspicious and we got a lead test kit which came up positive straight away.

Unfortunately paint chips had scattered all through our vegetable garden and kids play area. We have 3 young children, the youngest only 3 months.



We had absolutely no idea that lead is such a horrible substance until I googled it on Friday and I am completely freaking out about the lead exposure that not only my husband and I have been exposed to over the years but also our children.

Where do we go from here?

We want to get someone to come and assess the lead levels both inside and out and to discuss our situation and how we proceed from here??

I am so glad I found your website and so much more needs to be done to make the public aware.

We watch home reno shows all the time and never has lead toxicity been mentioned.

Any help would be very greatly appreciated as I am ready to pack up and leave our beautiful house.

Regards,  
Linda

---

**Answer:** Sent: Tuesday, January 31, 2017

Dear Linda,

I'm so glad you found our websites [www.lead.org.au](http://www.lead.org.au) and [www.leadsafeworld.com](http://www.leadsafeworld.com) in your Google searching, and that you also phoned me for advice yesterday and ordered a Comprehensive LEAD Group Kit from our online shop [www.leadsafeworld.com/shop](http://www.leadsafeworld.com/shop) last night.

While we were talking on the phone I recorded the following extra description of your situation:

"Warragul is about an hour out of Melbourne and this property was a dairy farm and where old petrol tanks may have been, we've put a concrete slab and shed over there. I'm wondering how we clean up the paint chips and dust that has fallen all over the ground outside, the trampoline and into the sandpit. The chook enclosure where the chickens free range is not near any existing or previous building. The chooks are right away from the house. My husband and I and my two older kids were blood lead tested by the GP this morning. We have a vege garden close to the house."

It sounded to me like you will be able to find an enclosed/encloseable area of ground on your property where you can bury leaded waste and cover it over with clean soil and ensure no animal or child ever digs it up. Once you've settled on a secure lead-dump location, use a shovel to take every speck of paint dust out of the sandpit (which may mean removing all the sand or just the surface sand) and dump that at the base of the pit. If you don't have a purchased covered plastic sandpit, or your sandpit doesn't have a frame of any kind to



separate it from surrounding soil, it is time to construct a wooden frame for it and build a wooden frame fitted "lid" securely covered with builders plastic tacked or stapled to the wooden frame (so the wind doesn't blow other paint chips in during the clean-up, and snakes, spiders and vermin can't crawl in under any loosely-laid plastic sheeting frameless cover). Purchase new sand and place that in the sandpit, ensuring that the sandpit also is covered whenever the children aren't playing in it. Whenever the children want to play outside, ensure the sandpit lid is opened/removed by an adult, and closed/replaced by an adult immediately after play.

I hope you received my emailed instructions sent yesterday on the Three Bucket Cleaning System for wet-cleaning up any paint dust or chips which you cannot pick up by hand, and how to remove carpet lead-safely if you decide to remove carpets.

To immediately switch to lead-aware housekeeping and lead-safe renovation, I recommend you read that <Info Pack 3 - VIC Lead paint & ceiling dust management (includes carpet removal instructions)> email I sent yesterday, and also <Info Pack 38 - How to make your home and yard lead-safe> online at <http://www.lead safeworld.com/solutions/make-home-yard-lead-safe/>

Once you receive your Comprehensive LEAD Group Kit in the mail, as I mentioned on the phone, take a dust wipe sample of any floor that your 3-month old will be crawling on later this year.

By sending dust wipes of carpets or rugs to our lab for lead testing, you will know from the results whether rug and carpet removal, before the baby starts to crawl, is recommended as your best option for primary lead poisoning prevention.

Use the Three Bucket Cleaning System on the trampoline and any other play equipment and in case any paint dust has settled on toys, machine-wash the machine-washable soft toys and cloth books and wash hard washable toys in the laundry tub using liquid sugar soap as the detergent, ensuring you rinse with clean water really well eg run the washing machine a second time with no detergent to rinse the soft toys. Curtains and bed-coverings should be machine washed in the same way.

Your beautiful house can be made lead-safe, but I take your point that if any of the renovation shows you watch had mentioned lead, you would not have all this work to make the house and yard lead-safe. Feel free to forward this email to any Renovation TV show and let them know that The LEAD Group aims to prevent lead exposure and much prefers it when people buy our Kits and test:

- their ceiling dust before demolishing ceilings or walls,
- their paint before stripping the paint or preparing it for repainting,
- their soil before they plant vegies or decide where to build a chook run,
- their water as soon as they get a rainwater tank or new taps (unless they sensibly buy stainless steel taps in which case there will be no lead coming from the taps and you would only need to test whether there is lead coming from the tank).



Re: "We want to get someone to come and assess the lead levels both inside and out and to discuss our situation and how we proceed from here??" Private lead assessors are extremely rare in Australia, and expensive. Most families can't afford them even if the lead assessor is willing to travel. That's how (and why) The LEAD Group sells LEAD Group Kits to take the place of lead assessors - the Kit system was donated to us by a lead assessor who found that he couldn't successfully run a home lead assessment business because people are not prepared to pay the full value of the service.

The LEAD Group's volunteers are what make the Kits financially viable - we don't charge for the time it takes us to administer the Kit system and write the reports.

I really hope you can recover quickly from this incident and get back to enjoying family life.

All the best

Yours Sincerely

Elizabeth O'Brien

Lead Advisor

The Lead Education and Abatement Design (LEAD) Group Inc.

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## Q&A: Lead poisoned 22 years ago



**Q: If a person had been poisoned with lead 22 years ago, how do you detect lead in their body now?**

**Question** from Alexandra, King's Lynn, Norfolk, PE31 7PS, United Kingdom. March 1, 2017:

If a person had been poisoned with lead 22 years ago, in enough of a quantity (at 15 years of age) to nearly kill them, would there be any way of detecting the lead in their system now?

Additionally, is it true that the body tries to purge itself of the lead in later years?

Thank you for your help.

Best wishes,

Alexandra.

**Answer** emailed: March 1, 2017.

Hi Alexandra,



Yes the body eliminates a small amount of lead every day so I'll send you our Info pack on nutrition in a separate email. If you regularly monitor blood lead post major exposure, you can learn a lot about what's happening during ageing, but regular bone lead XRF testing in Canada is the ultimate in total body burden assessment so I'll email separately another Info Pack on that.

Please send all blood lead results for graphing, as part of our Blood Lead Challenge (see below).

Best wishes

Elizabeth O'Brien  
Lead Advisor, The LEAD Group Inc, Australia

Take the [Blood Lead Challenge](#). Report blood lead results (for yourself and your children) to The LEAD Group and be part of our survey. In return, you'll receive individualised advice on how to lower blood lead levels, the least well-known but best-researched predictor of your risks of suffering dementia, osteoporosis, brain ageing and early death. Report your blood lead level/s by emailing your scanned blood lead result/s with the date of birth (so we can calculate the age in months at the time/s the blood was taken), to us. Privacy is guaranteed and only a numerical ID for each person, their gender, age and postcode will be included in the blood lead graphs we will web-publish.

---

## **Q&A: Lead pollution of fish/waterways from duck shooting**



### **Q: Are there any studies of lead pollution of fish/waterways from duck shooting in Victoria?**

**Question** from a concerned citizen, Prahran, Victoria, Australia, on January 30, 2017.

Hi Team, Has there been any more recent study into the impact of lead in fish / waterways where duck shooting still takes place? Who monitors lead levels in this way? What is a safe/unsafe level?

Thank you.

**Answer** emailed February 1, 2017.



Dear Madam,

you ask some excellent questions but sadly The LEAD Group is not resourced to carry out this research so I have registered to report pollution incidents at the Victorian EPA portal and forwarded your questions to them.

I shall forward you their response when it arrives.

There are no current guidelines on how much lead is safe to eat in fish; the World Health Organisation simply recommends minimising lead exposure from food. It is expensive to test for lead in fish so that is normally done at government labs by government and the results are rarely released. Australia has standards/guidelines for pollution levels in recreational waters/drinking water/stock water, and you could purchase a LEAD Group Kit (at [www.leadsafeworld.com/shop](http://www.leadsafeworld.com/shop)) and test duck-shooting waterway water samples for lead at a lab, then we would interpret the result/s for you, according to those standards/guidelines. If you've been eating fish/shellfish from duck shooting waterways, the best and cheapest test would be a blood lead test. Just ask the doctor for a pathology referral and send the result to me and I'll interpret it for you and make further recommendations.

Thanks for thinking about people who eat fish, the fish and other aquatic life!

Cheers, Yours  
Sincerely

Elizabeth O'Brien  
Winner of the  
United Nations  
Association of  
Australia (UNAA)  
Award for  
Outstanding  
Service to the  
Environment



2016 Volcano Art Prize (VAP) Entry. Title: Duck, duckling, fish & bulrushes. Lead-Safety Message: Ducks need to eat stones so they can digest their food. Don't let lead shot or bullets get into their water.

<http://volcanoartprize.com/portfolio-item/duck-duckling-fish-&-bulrushes/> Artist: Li-Ke Shi, Age: 9 years.



## **Battle over Lead Ammo at National Wildlife Refuges, USA**

*By Jeff Miller, Conservation Advocate Center for Biological Diversity, California, USA  
[www.biologicaldiversity.org](http://www.biologicaldiversity.org) Date: January 31, 2017*

Please take action to oppose a terrible nomination for Secretary of Interior and defend the recent phase-out of lead ammunition at National Wildlife Refuges.

Read the January 23, 2017 Center for Biological Diversity press release:

On Final Day, Obama Administration Phases out Lead Ammo from National Wildlife Refuges - [http://www.biologicaldiversity.org/news/press\\_releases/2017/lead-01-23-2017.php](http://www.biologicaldiversity.org/news/press_releases/2017/lead-01-23-2017.php)

Read the January 27, 2017 Wall Street Journal article:

Donald Trump Is Likely to Lift Curb on Lead Bullets at Wildlife Refuges - <https://www.wsj.com/articles/donald-trump-is-likely-to-lift-curb-on-lead-bullets-at-wildlife-refuges-1485518406>

NRA calls for confirmation of Interior Secretary nominee Zinke to reverse restriction.

Gun groups are lobbying Secretary of Interior nominee Rep. Zinke (R-MT) to make repealing the lead ammunition phase-out (USFWS Director Order 219) his first action when he is confirmed this week as the new Secretary of the Interior.

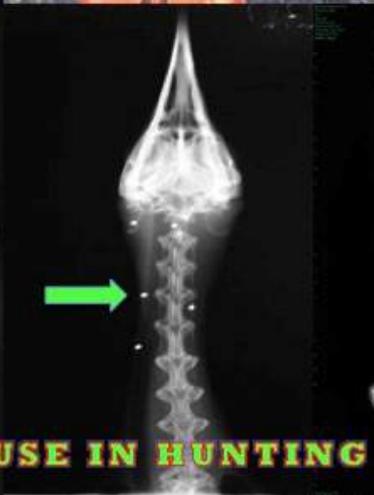
Call your senators and tell them to oppose Zinke's appointment. You can also call Rep. Zinke's offices today, imploring him to NOT make the lead bullet ban a 2nd amendment issue, but rather a wildlife and public health safety issue, and to not repeal the order.

Read the recent in-depth article in Undark Magazine about lead ammo:

Bullet Proof: Lead bullets still dominate the U.S. ammunition market despite ample evidence showing that they pose real environmental and health risks. Why? - <http://undark.org/article/lead-ammunition-bullets-hunting-copper/>



## WHAT DID YOU REALLY CATCH?



**STOP LEAD USE IN HUNTING AND FISHING**

2013 Volcano Art Prize (VAP) Entry. Title: What did you really catch? Stop lead use in hunting and fishing. Lead-safety message: Lead shot and fishing gear are often ingested by wildlife, usually causing fatal toxicity. Choose from the many lead-free alternatives for your sporting needs. <http://volcanoartprize.com/portfolio-item/graham-julia-what-did-you-really-catch/> Artist: Julia Graham.

## Contact Details of Australian Dust Removalists Association (ADRA) Member Companies, May 2017



Also listed at <http://www.lead.org.au/bblp/Ceiling-Dust/tsldo30.htm> and <http://www.adra.com.au/camcos.html> ]

Welcome to the newest ADRA Member and Lead Safe Partner of The LEAD Group – Oldfield’s. All ADRA Members are Lead Safe Partners of the Lead Safe World Project (LSWP).





**Ceiling Alert!**  
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Email: [Ceiling Alert](mailto:Ceiling.Alert)  
Web: [www.ceilingalert.com](http://www.ceilingalert.com)



**Insulvac**  
**Insulation & Vacuuming**

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Leichhardt, NSW, 2040  
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Email: [Insulvac](mailto:Insulvac)  
[www.insulvac.com.au](http://www.insulvac.com.au)



**Oldfield's Environmental Services**

Gwandalan, NSW, 2259.  
Phone: 0415 631 552  
Local: 02 4976 1704  
Email: [Oldfield's](mailto:Oldfield's)  
[www.oldfieldsenvironmentalservices.com](http://www.oldfieldsenvironmentalservices.com)



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## Obituary – Gideon Schuman, the founder of the ceiling vacuuming industry

*By Gavin Clarke, President, the Australian Dust Removalists Association (ADRA), Insulvac – a Lead Safe Partner of the Lead Safe World Project of The LEAD Group*

**Monday 3 April 2017**

Sorry to be the bearer of sad news but Gideon Schuman of Ceiling Suckers (arguably the founder of the ceiling vacuuming industry in Australia\*) is in palliative care and only has a short time left on this earth. I visited him at Westmead Hospital on Sunday. He was unconscious and not expected to resurface unfortunately. As motorbike riding was his passion there is a steady stream of biker visitors who paste his progress on the Hills Ulysses FB site.



PHOTO: Gavin Clarke (standing) (and Sandy) enjoying a coffee break with Gideon Schuman (seated) at Mount Tomah Botanical Gardens in January 2017. Gideon loved riding his motorbike and taking the time to enjoy the scenery.

**Tuesday 4 April 2017**

Sadly I have to inform you that Gideon Schuman passed away today in hospital at 1pm. He was an eccentric and passionate man whom I only made acquaintance with this year after he kindly reached out and invited me to ride with him and his motorcycle club members.

Rest in Peace Gideon.

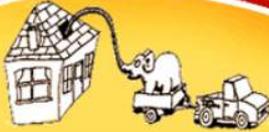
Note: \* as the cavity dust vacuuming industry was founded in Australia (and is still virtually unknown in the rest of the world), by Gideon Schuman in Mount Isa, Queensland in 1988, Gideon can be credited with being the global founder of the cavity dust vacuuming industry.

Gideon was a keen observer and photographer too and the photographs of ceiling voids on his website make up the best visual representation of the industry that exists on one webpage: <http://www.ceilingsuckers.com.au/gallery.html> - as shown below:



29 May, 2017

Home | About Us | Services | Ceiling Gallery | Relevant Links | Contact Us



# Ceiling Suckers®

Call 0416 127149

## Ceiling Suckers® Online Gallery



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10

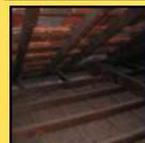


Photo 11



Photo 12



Photo 13



Photo 14



Photo 15

The Ceiling Suckers® Gallery will give you an idea of what could be in your ceiling. The descriptions for each photo are below:

**Photo 1**

Asbestos lagging used on the hot water pipes was found strewn all over the ceiling in this house in Concord. The hot water pipe was directly above the manhole. Anyone entering the roof via this point would have been showered with white asbestos.

**Photo 2**

Electrical work and new timbers installed adjacent to asbestos lagging. Because no one identified the asbestos, those who worked here will die an early death.

**Photo 3**

Asbestos powder still in Hessian bag lying adjacent to where electrician installed halogen down light. A hole would have been made here, with both occupant and tradesman exposed to asbestos.

**Photo 4**

Ceilings are not just vacuumed. They are scrubbed as well. As can be seen, it is difficult and dangerous. In summer the radiant heat coming off the tiles can be 80 degrees. Air temperature is usually 55°.

**Photo 5**

Ceiling being cleaned, with Tontine polyester installed in the background.

**Photo 6**

Dead rat found in fibreglass batt. Probably took bait, and crawled into safety of its nest to die.

**Photo 7**

What is left of a house after cellulose fibre insulation caught fire

**Photo 8**

Cellulose fibre caught fire when air conditioning installers used gas torch to silver solder gas pipes. The fire was put out but unbeknownst to all, continued to smoulder. It reignited two days later, after a change in the weather caused wind to pass through the roof in the early hours of the morning.

**Photo 9**

Remains of a flue above bathroom. A gas hot water system operated with coal gas (or town gas) had been installed below.

**Photo 10**

Hazvac in action. Sucks not only loose fill insulation, but fibreglass batts as well. Insulation is sucked out, pumped into receiver through water cyclone, and taken to licensed tips for disposal as per EPA requirements.

**Photo 11**

Seen at the edge of ceiling is rectangular flue from gas heater built into the wall. Fumes from this were responsible for over 100kg of super fine dust to be deposited on ceiling. The dust was high in PAH's

**Photo 12**

Cutting up disused hot water tank prior to removal. Although this tank was disused it still held about 400 litres of water.

**Photo 13**

Dead rat found after fibreglass batts sucked out. Rats will chew at wiring. PVC used as insulation has lead in it to keep it pliable. Lead is sweet, and is attractive to rats.

**Photo 14**

Typical rats nest. Fibreglass batts systematically pulled apart to make cocoon. Usually found in corners of roof, or perimeter. Sometimes well established rat colonies will take fibreglass into eaves, making them inaccessible

**Photo 15**

Hazvac automatically bags dust

If you are interested in getting a quote from Ceiling Suckers, simply [Click here to make an online enquiry](#)

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Photo Gallery from Gideon Schuman's Ceiling Suckers website. Gideon passed away on 4<sup>th</sup> April 2017.



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2016 Volcano Art Prize (VAP) Entry: Title: Whale washed up to shore. **Lead-Safety Message: Due to rising toxic metal concentration in the oceans, whales are more stressed and more likely to beach themselves. Protect our seas from mercury, cadmium and lead.** <http://volcanoartprize.com/portfolio-item/whale-washed-up-to-shore/> Artist: Ritishaa Sreedhar, Age: 10 years.