



# Lead Sinker Ingestion and Other Leaded Consumer Products

By Elizabeth O'Brien, National Coordinator, The LEAD Group Inc. This article was written in 2001 and updated in 2018 prior to its first publication.

In the three years from 1998 to 2000, the Lead Advisory Service Australia (former government-funded service run by The LEAD Group) handled over 1,700 calls that included consumer products as a subject of the call. This amounted to 12.7% of the 13,431 calls handled between 1998 and 2000. But some cases and some leaded consumer products stand out as particularly worthy of note.

## Lead Fishing Sinkers Readily Available in Australia



2016 Volcano Art Prize Entry by Elizabeth O'Brien. Title: Made in Vietnam fishing sinkers by SportFisher on display at Kmart, Lead-safety Message: Why can't I find a warning about lead on the packaging of these sinkers or online and why are they placed

where children could open a pack and eat one? <http://volcanoartprize.com/portfolio-item/made-in-vietnam-fishing-sinkers-by-sportfisher-on-display-at-kmart/>

While lead sinkers for fishing have been banned in some states in the United States and parts of the European Union, they are still readily available in Australia. Lead Advisory Service Australia (LASA) callers have commented that they are not even kept out of the reach of children where they are sold - which includes some supermarkets. One Australian manufacturer of non-lead fishing sinkers said in 2001 that there are four and a half million people in Australia who go fishing yet due to the lack of regulations banning lead sinkers, he had to concentrate on the American market for sales of his alternative product, and he eventually went out of business.

## Lead Fishing Sinker Ingestion Case Study

It was nevertheless a shock to hear about Theo Murray, a four year old who swallowed the lead fishing sinker he found while on holidays and who reached a blood lead level of 97 micrograms per decilitre (97



ug/dL) or nearly 20 times the current Australian “action level”, within three days. The Australian goal between 1993 and 2015, was to have a blood lead level below 10 ug/dL but the “action blood lead level” was made more stringent, at 5 ug/dL in 2015.

Theo's rapid lead poisoning following the ingestion of the sinker and it's failure to pass despite the predictions of the emergency paediatric team at Sydney's Royal North Shore Hospital, were reported by Matthew Bennis in the Sun Herald on 29<sup>th</sup> October 2000. [see <https://web.archive.org/web/20001202210800/http://www.smh.com.au/news/0010/29/national/national.6.html> ]. Though Theo was fortunate enough to have told his mother that he had accidentally swallowed the sinker (children who could not or did not do so have died of lead poisoning in the past), and fortunate enough to have been taken to hospital within minutes of the ingestion - the system fell down after this.

The hospital confirmed by x-ray that the 2.5 cm long sinker was lodged in the stomach and then sent Theo home without a blood lead test. Three days later his mother took him back to the hospital and a second x-ray re-confirmed that the sinker was lodged in the stomach. Still the hospital did not think to take a blood lead level to monitor the situation, but rather were dependent on Theo's mother asking for a blood test. Theo's level was so high he was immediately taken to another hospital where the sinker was removed by endoscopy.

Due to having such a high blood lead level, Theo also had to endure 36 hours of chelation therapy in hospital in order to remove some of the lead from his bloodstream. Even then, on day 11 after swallowing the sinker his blood lead level rebounded to 37 ug/dL. Because the hospital had not ordered a blood test when Theo first presented, it was not possible to know what Theo's blood lead level might have been before he swallowed the sinker and therefore to ascertain how quickly his blood lead level might return to below the acceptable level without further chelation.

The NSW Health Department's protocol for ingestion of lead sinkers by children apparently includes blood lead monitoring and the Royal North Shore Hospital has ensured future cases will be better managed, but protocols in some European countries centre around an immediate endoscopy.

### **Australian Government Policy on Lead Fishing Sinkers and Other Leaded Consumer Products**

When you look at lead strategies in Australia you see inadequacy at both ends of the leaded consumer product spectrum. Both in what is allowed to be sold and in the management of lead poisonings when the inevitable occurs. Most Australian states do not even collect data on ingestion of lead foreign objects and in those states where data was collected (Queensland and Victoria), the management is not recorded. It is possible that Theo is one of dozens of Australian children who are sent home from hospital having swallowed lead foreign objects each year. If their parents do not return them to hospital and request appropriate management, then it's anyone's guess what becomes of them.

As long ago as 1994 it was recommended to the Australian Federal Government that lead sinkers be banned in “**Recommendations for a National Strategy**” in **Reducing Lead Exposure in Australia - July 1993, Final Report Vol 1 - Pages ES 7 To ES 20**. Funded by National Health and Medical Research Council. Published by Commonwealth Department of Human Services and Health, Commonwealth of Australia, Canberra, 1994. Among the recommendations was:



Prohibit sale and use of lead shot, lead in children's toys, paints and crayons, lead fishing weights, lead curtain weights and other products in which lead can be readily replaced.

Comment on the above recommendation – Victoria has begun phasing out use of lead shot in wetlands, though of course lead shot is still on sale. The Australian toy standard (AS 1647.3) limits lead content in children's paints and crayons, surface coatings and other components of toys to 90 parts per million and there was a federal survey to ensure compliance in 1999, but it was not published. Lead fishing weights and curtain weights have not even been considered for banning yet.

Again in 1994 the following recommendation was made to the NSW Government in **“Recommendations for Strategies, Priorities and Guidelines”** in **Report of the Select Committee upon Lead Pollution” December 1994**. Published by the \*Select Committee upon Lead Pollution, NSW Parliament, Sydney, December 1994.

that the dangers of lead shot, lead fishing weights, lead crystal ware and ceramic ware, hobbies involving lead and other products in which lead can be readily replaced be subjected to public awareness campaigns and **alternatives promoted**.

Comment on the above recommendation – this was not done convincingly in the three year (1997-1999) education campaign run by the NSW government, as evidenced by callers to the Lead Advisory Service being surprised to hear that there are lead hazards in these products or that there are alternatives.

In 1996 Australia agreed to the **Resolution of the Organisation for Economic Cooperation and Development (OECD) Council Concerning the Declaration on Risk Reduction for Lead**. OECD Document number: C(96)42/FINAL (adopted by the Council at its 869th Session on 20 February 1996 [C/M(96)4/PROV]). The resolution included among other things:

...(3) Continue to review lead levels in the environment and exposure to lead of sensitive populations (such as children and pregnant women) and of high risk populations (such as certain groups of workers) using the results to evaluate the effectiveness of national programs in reducing risks from exposure to lead and to identify priorities and opportunities for future actions.

Comment – not done. It's easier to avoid reviewing lead levels if you fail to monitor them in the first place – this seems to be the policy in Australia.

(4) Promote and maximise the use of environmentally sound and economically viable collection and recycling programmes for lead and lead containing products in order to reduce the release of lead to the environment from waste streams ...

Comment – recycling of lead and lead containing products (like light bulbs) and lead contaminated wastes (like paint chips, ceiling dust and sump oil) does not seem to be a priority of any Australian government.

... (9) Review progress by Member countries in pursuance of this Declaration three years after adoption and assess the need for further action; ...



Comment – not done. The review done by Environment Australia was appalling in not answering most questions and including at least a page (out of the six pages) of vehicle emissions information irrelevant to lead. It in no way assessed the need for further action.

...b. Eliminate exposure of children to lead resulting from products intended for use by children (e.g., toys, cribs, crayons);

Comment – in the period when the US Consumer Product Safety Commission has recalled well over 100 different consumer items due to lead content, the Australian government has recalled 5. Lack of testing would seem to be the key.

c. Eliminate exposure to lead from food packaging (e.g., for cans, by phasing down use of lead solder in existing canning lines, not using lead solder in new canning lines, or where these are not practical, using functional barriers to prevent lead migration; for wine-bottle capsules, substituting other materials);

Comment – lead soldered food cans were still being produced in Australia for ham etc and some leaded cans were still being imported in 2001. Lead capsules were still manufactured and allowed to be imported into Australia in 2001 but have since been phased out so that Australian wine could be sold into the California market without having to be labelled as hazardous due to the lead capsule, under California's Proposition 65 Legislation.

...e. Restrict exposure to lead from the leaching of lead from ceramic ware and crystal ware used for food and beverages (e.g., by effective production and process controls);

Comment – labelling of these products would also be essential as there is no process control that will help you if you leave alcoholic beverages stored in leaded containers. A severely lead poisoned couple were hospitalised in Sydney recently due to drinking a health drink (kombucha) grown in a ceramic pot. An education campaign is required as long as people still have these items in their homes.

f. Restrict the use of lead shot in wetlands and promote the use of alternatives to lead sinkers in shallow waters; ...

Comment – not done by the federal government despite a recommendation from ANZECC (Australian New Zealand Environment and Conservation Council) in 1996 that lead shot in wetlands should be banned within 4 years. The Victorian government planned to ban lead shot in certain areas by 2003. In the past Australian manufacturers of alternatives to lead sinkers have had to go to the US to market their product without any hope of success due to the Australian government's lack of support on this issue.



Candles having metal wick cores of lead (Pb), lead:tin (Pb:Sn) alloy & zinc (Zn)



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The only instance of a leaded consumer product being banned in Australia first-in-the-world was the banning of leaded candle wicks in October 1999 (see <http://www.lead.org.au/lanv7n4/L74-3.html>) but the ban was limited to an 18 month period. Nevertheless the Australian ban did inspire New Zealand to follow suit in February 2000 and eventually the United States announced its intention to ban lead in candle wicks in February 2001. And in the rest of the world, who knows whether candles with lead wicks are still sold??