



# Leaded consumer products purchasable in the UK

By a LEAD Action News Contributor, February 2019

## BBC article on lead in consumer products purchasable in the UK

In December 2018 Lead Safe World UK were contacted by a BBC producer who was making a 10 minute piece on lead in consumer goods for 'Inside Out'. This is a regional current affairs programme for BBC South West of England and the piece was screened on Monday 4<sup>th</sup> March 2019. The broadcast was online (but only accessible to UK residents) for a week but the excellent article - which focussed on leaded drinking glasses (including photos) at <https://www.bbc.com/news/uk-england-devon-47405409> - remains online.

We provided information (see below in this edition of *LEAD Action News*) on products that have been found to contain lead and are also available in the UK. Where possible the country of origin was identified. Several were from China (Hevea Baby Bottle and Children's Musical Instruments) and one was a product (Children's Musical Instruments) that has been recalled by the Food and Drug Administration (FDA) in the USA.

Although some products have been identified online as containing lead they have not all been subject to tests to determine whether lead migrates out of them at toxic levels in normal use. Depending on the item this could include leach tests such as those described in the European Union directive [Directive 2009/48/EC](#) or the USA FDA bulletin [DFS/ORO/ORA No. 4126](#). If ceramicware or stoneware is used to store acidic foods, e.g. with vinegar, lead could come out but you would need to test it according to:

- [Ceramic Articles in Contact with Food \(England\) Regulations 2006](#)
  - The leach test limit is 4.0 mg/L
  - How much lead would come out is unknown, even if you know the lead level in parts per million (ppm) or milligrams per gram (mg/g)

However, there is no known reason why new products should contain toxic amounts of added lead.

The initial contact from the BBC was regarding lead paint on drinking glasses and asked for introductions to experts in the fields of lead paint and the impact of lead on human health. This soon broadened to other consumer goods known to contain detectable lead.

In addition to sharing the names of UK contacts, the BBC were also given the following information.

Short list of leaded consumer products available in the UK



The process was to identify current consumer products that have been found to contain lead, then check if they are available in the UK, and finally try to identify the country of origin.

Here are the products that were found. This is not at all comprehensive. There was no need to continue looking once these were found.

### Hevea Painted 5 oz Baby Bottle



Figure 1

Non-Toxic Munchkin, Los Angeles USA

- Lead?
  - [Older, 5 oz bottle manufactured in China turned colour-change kit pink](#) (Non-Toxic Munchkin)
- UK?
  - [On sale in the UK on Amazon - be sure to only buy newer 4 oz \(non-painted therefore non-leaded\) bottle manufactured in Germany](#) (Hevea)
- Origin?
  - [Older, leaded, bottle was manufactured in China. Hevea USA is offering to replace any Chinese-manufactured 5 oz Hevea bottle with a German-manufactured 4 oz Hevea bottle](#) (Non-Toxic Munchkin)

## Fidget Spinners



*Figure 2*

Live Science

- Lead?
  - [Some parts of some toys can contain lead](#) (Live Science)
- UK?
  - [Found to be not 'CE' marked as required in the EU](#) (Daily Record) ["CE" originated in 1985 as an abbreviation of **Conformité Européenne**, meaning **European Conformity**. **CE marking** is a [certification mark](#) that indicates conformity with health, safety, and environmental protection standards for products sold within the [European Economic Area](#) (EEA).]
- Origin?
  - Often unbranded with no country of origin

## Magnetic Putty



Figure 3

Northampton Chronicle and Echo

- Lead?
  - [Found in Northamptonshire](#) (Northampton Chronicle and Echo)
  - 2 times permitted level for lead
- UK?
  - [Same brand available for shipping to the UK](#) (DH Gate)
  - Described as 'non-toxic'
- Origin?
  - No country of origin mentioned, but the writing on the instruction leaflet may give it away.

## Children's Musical Instruments



***“Paint on the maracas, xylophone and carrying case contains levels of lead that exceed the federal lead paint ban” (US Consumer Product Safety Commission (CPSC))***

*Figure 4  
CPSC*

- Lead?
  - [Listed as a recall \(October 26, 2018\) for lead by the USA Consumer Product Safety Commission \(CPSC\)](#)
- UK?
  - [Listed on Amazon UK](#) (ToyMyToy)
  - “safe and non-toxic, no harm to your kids.”
- Origin?
  - CPSC list this as being made in China.



Contextual information about lead health policy in the UK

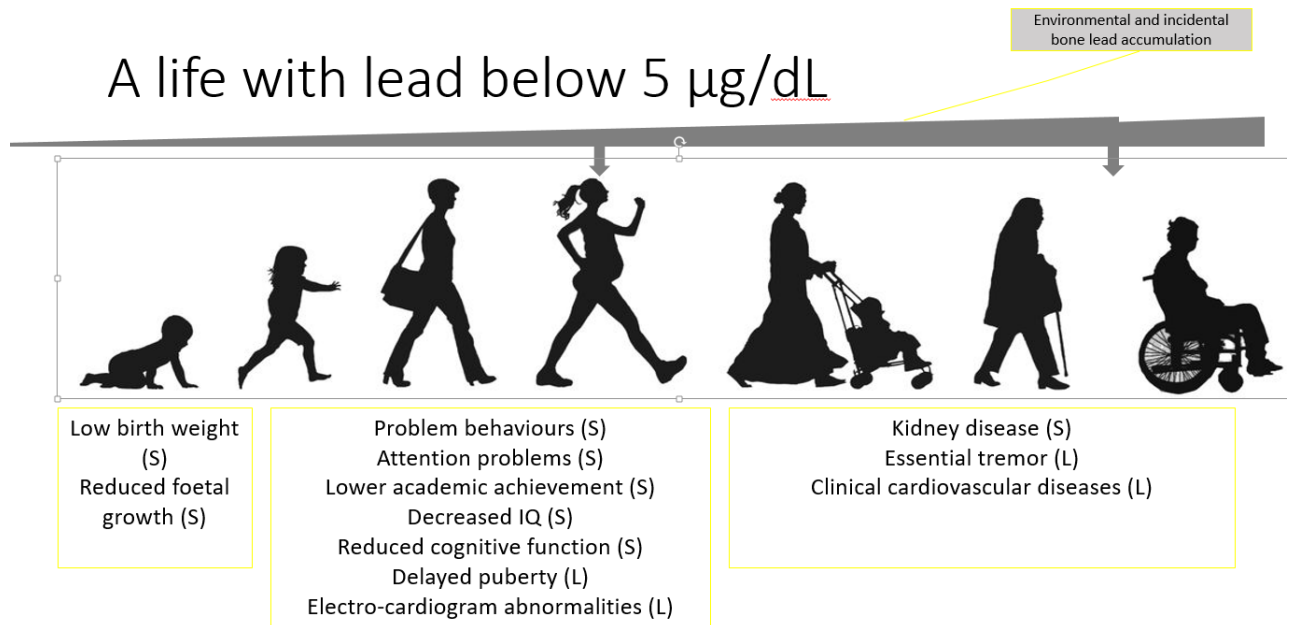
To put the information above in context the following information was also forwarded to the BBC.

**What is the risk?**

- [535,000](#) children over six have elevated blood lead levels in the USA
  - Would equate to > 100,000 in the UK
  
- In the mid 1990's [27% of toddlers in Avon](#) had elevated lead levels
  - Enough to impact educational achievement, cause antisocial behaviour and hyperactivity
  - No UK epidemiological studies since then
  
- [Impacts](#) on children
  - Diminished reading and learning abilities
  - School drop out rate 7 times peers
  - Hearing loss
  - Speech delay
  - Aggressive, even violent, behaviour
  
- Long term impacts on kidneys, heart and brain:
  - [The Lancet](#)
    - 18% of deaths,
    - 29% of cardiovascular disease,
    - 37% of ischaemic heart disease



## Lifetime Impacts of Lead Toxicity



US National Toxicology Program. Health Effects of Low-level Lead. 2012 - Sufficient (S) and limited (L) evidence

### Figure 5

We acknowledge Andrew Allen for preparation of the figure. [Katharina Simon, A & Holländer, Georg & McMichael, Andrew. \(2015\). Evolution of the immune system in humans from infancy to old age. Proceedings. Biological sciences / The Royal Society. 282. 10.1098/rspb.2014.3085.](#)

1. U.S. Department of Health and Human Services, National Toxicology Program. NTP Monograph

Health Effects of Low-Level Lead, June 2012

[https://ntp.niehs.nih.gov/ntp/ohat/lead/final/monographhealtheffects/lowlevellead\\_newissn\\_508.pdf](https://ntp.niehs.nih.gov/ntp/ohat/lead/final/monographhealtheffects/lowlevellead_newissn_508.pdf)

#### Sufficient Evidence of an Association:

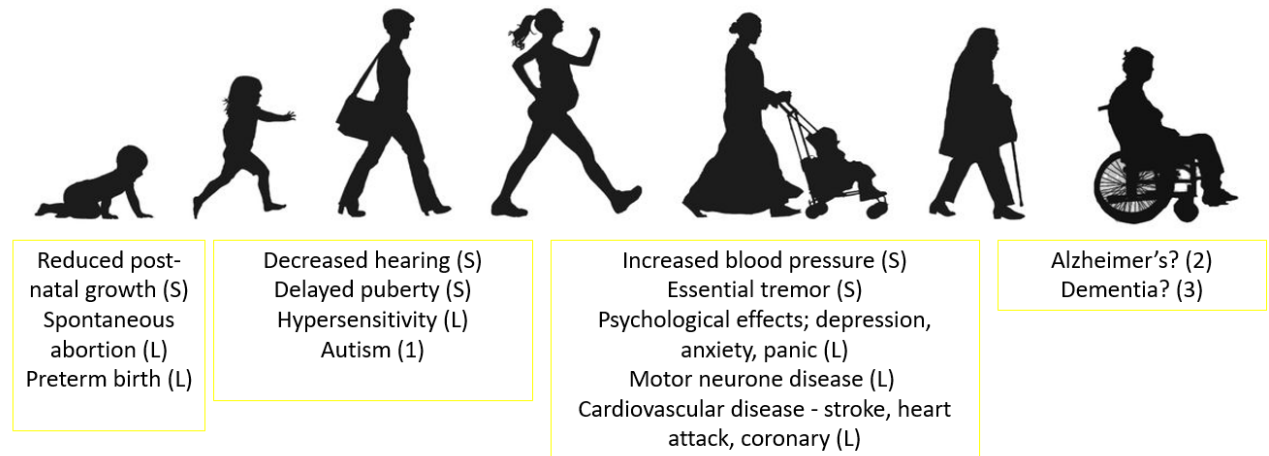
An association is observed between the exposure and health outcome in studies in which chance, bias, and confounding could be ruled out with reasonable confidence.

#### Limited Evidence of an Association:

An association is observed between the exposure and health outcome in studies in which chance, bias, and confounding could not be ruled out with reasonable confidence.



## A life with lead between 5 and 10 $\mu\text{g}/\text{dL}$



US National Toxicology Program, Health Effects of Low-level Lead, 2012  
(1) Kim K.N. et al, 2016  
(2) Hegazi I, 2014  
(3) Rosin A, 2009

### Figure 6

- 1) Kim KN, Kwon HJ, Hong YC. Low-level lead exposure and autistic behaviors in school-age children. *Neurotoxicology*. 2016 Mar;53:193-200 <https://www.ncbi.nlm.nih.gov/pubmed/26877220>
- 2) Hegazi I. Lead Exposure & Alzheimer's Disease: Is There A Link?. *Forensic Medicine & Toxicology, Global Lead Advice & Support Service (GLASS)* 2014. <http://www.lead.org.au/fs/fst48.html>
- 3) Rosin A. The long-term consequences of exposure to lead. *Isr Med Assoc J*. 2009 Nov;11(11):689-94. <https://www.ncbi.nlm.nih.gov/pubmed/20108558>





### Top lead exposure pathways

- Dust
  - From old paint
  - Walked in from outside
- Drinking water
  - Lead pipes (laid years ago)
  - Leaded brass tapware and other brass inline fittings (installed in the past 1-3 years)
- Soil
  - Around buildings that have or had lead paint
  - Near roads from when lead was used in petrol
  - Near industrial facilities, e.g. smelters, mines, lead flashing manufacturers, coal-burning power stations, crematoria, etc.

### Where are leaded consumer products being produced?

- China and elsewhere
  - [China Has a History of Selling Dangerous Products to U.S. Consumers](#)
  - [Lead in Toys: Could It Be Lurking in Your Home?](#)
  - [Last year, 440 products notified to the EU as potentially dangerous - 48 per cent of the total - originated in China](#)

### Why are they being sold here (UK)?

- Lack of compliance to regulations
- Presumably not detected by Trading Standards
- Article in [The Scotsman](#)
  - “There is no system for testing any toy before it is sold in Britain”
  - “The number tested from the shelves is a tiny fraction”
- ‘CE’ mark is a self-declaration and testing is required from only a sample of products.



### What legislation is there to protect consumers?

- [EU directive 2009/48/EC](#) “on the safety of toys, as regards lead”
  - Migration limits
    - Dry, powder-like or brittle - 2 mg/kg (2ppm by weight)
    - Liquid, sticky - 0.5 mg/kg
    - Scraped off - 23 mg/kg
  - Brought in UK law 19th August 2011 - [S.I. 2011 no.1881](#)
    - Includes second-hand toys
    - Should have ‘CE’ marking
  - Toy manufacturers, importers and distributors: [your responsibilities](#)

### Why this matters

- Lead poisoning prevention is a [top priority](#) in the USA
- NHS is to focus on [prevention](#), but lead is not mentioned
- [Health Profile for England](#), no mention of lead poisoning prevention
- Annual health care costs for paediatric lead poisoning (not including the costs of pain and suffering or the costs of late complications for which etiologic associations are poorly quantified) are estimated to be [\\$43Bn in the USA](#). “The costs of pediatric environmental disease are high, in contrast with the limited resources directed to research, tracking, and prevention”)
- The annual avoided costs (ie benefits) of implementing paediatric lead poisoning control measures are estimated to be [€23Bn in France compared to lead abatement costs of up to less than €3Bn/year](#). “Costs of pollutant exposure control [to bring all blood lead levels of 1-6 year olds below 1.5 micrograms per decilitre ( $\mu\text{g}/\text{dL}$ )] were partially estimated in regard to homes lead-based paint decontamination, investments aiming at reducing industrial lead emissions and removal of all lead drinking water pipes.” That’s a cost benefit ratio of €3Bn to €23Bn!
- [Blood lead screening is currently not recommended by the UK National Screening Committee \(NSC\)](#), mainly because of lack of data, ie not enough doctors ordering blood lead tests
- The November 2018 publication of the 2017 Annual Report from [Lead Exposure in Children Surveillance System \(LEICSS\)](#) states that “in 2017 there were 50 cases of lead exposure [ $\geq 10\mu\text{g}/\text{dL}$ ] in children notified to Public Health England (PHE)” and that “the number of cases detected was lower than the expected incidence of lead exposure”, yet does not recommend any



plan for increasing the number of children referred for blood lead testing. The LEICSS report does recommend that: “clinicians should be aware of important sources of lead exposure, children most at risk...” but Lead Safe World UK have found no plan online for implementing their recommendations

- The October 2018 publication of the [SLiC](#) studies on lead in children, states that: “SLiC has collected data on 46 confirmed cases of children with raised blood lead concentrations [ $\geq 10\mu\text{g}/\text{dL}$ ] across the UK and the Republic of Ireland over 24 months (2010 -12).” The recommendations of the SLiC report are to be carried out by some body or other, not stated (although it does say in the introduction to the recommendations in the SLiC report that they will require a collaborative approach). And although SLiC acknowledges that “Many children with raised blood lead concentrations have no symptoms, or non-specific symptoms, and may not present to clinicians” SLiC only recommends: “**Review the need** for targeted screening to identify children at high-risk of lead toxicity” instead of simply recommending targeted screening and a government-funded education campaign to educate doctors on how to implement targeted screening. In similarity with the LEICSS report, there is no plan found online for implementing the SLiC recommendations - which took nearly 6 years to write!
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