

3rd September 2019

Address redacted

Dear Dame Cheryl,

You may remember me coming into your office in 2017 to discuss lead poisoning prevention in the UK. Since that time I have been diagnosed as being on the autism spectrum and also learned that you are the chair of the All Party Parliamentary Group on Autism. This ties together because many research studies have shown that there is a link between lead exposure and autism (see appendix A).

I was involved in a submission to the National Screening Committee regarding screening children for elevated blood lead levels - as they commonly do in the USA. [This was not recommended](#). The main reason being that there is no up to date data on blood lead levels in children in the UK.

I wonder if you would be interested in helping get more action from the Department of Health and Social Care and Public Health England to reduce the incidence of autism, and many other conditions, through exposure to lead.

Would you be willing to write to Matt Hancock (DHSC) and Duncan Selbie (PHE) and ask them:

- a) Whether they will support a study into the current prevalence of elevated blood lead levels (in the 1990s this was 27% of toddlers, [Chandramouli et al, 2008](#)).
- b) If, how and when they intend to implement the recommendations of the Lead Exposure in Children Surveillance System (LEICSS) and Surveillance of Elevated Blood Lead in Children (SLiC) [reports](#).

This would also be useful input to the '[Advancing our health: prevention in the 2020s](#)' consultation which does not mention lead toxicity at all - despite this being

A letter we sent to Duncan Selbie (CEO of Public Health England) is attached for your information.

If you would be willing to help, I would be very pleased to come into your office to discuss this further.

Yours sincerely,

Tim Pye

Appendix A – Example studies exploring links between lead exposure and autism, with quotes

[Arora et al, 2017](#)

Baby teeth from children with autism contain more toxic lead and less of the essential nutrients zinc and manganese, compared to teeth from children without autism.

[Adams et al, 2009](#)

This study demonstrates a significant positive association between the severity of autism and the relative body burden of toxic metals. The metals of greatest influence were lead (Pb), antimony (Sb), mercury (Hg), tin (Sn), and aluminium (Al).

[Elsheshtawy, 2011](#)

There were highly significant differences between the level of these substances (mercury, copper, lead and zinc) in the hair of children with autism compared with controls.

Our data suggested increased autistic disorder risks related to lead, particularly for boys.

Lead, with aircraft as the dominant source in Los Angeles, was associated with autistic disorder.

[Mohamed et al, 2015](#)

Levels of mercury, lead, and aluminium in the hair of autistic children are higher than controls. Environmental exposure to these toxic heavy metals, at key times in development, may play a causal role in autism.

[Rose et al, 2007](#)

Individual risk of developmental neurotoxicity with exposure to environmentally relevant levels of lead and mercury is likely to be determined by genetic susceptibility factors as well as additive interactions with other environmental pollutants, cumulative dose, and the developmental stage of exposure.

[Fido, 2005](#)

The children with autism had significantly ($p < 0.001$) higher in-hair concentration levels of lead, mercury and uranium.

[Dickerson et al, 2015](#)

Autism spectrum disorder prevalence and proximity to industrial facilities releasing arsenic, lead or mercury. We found that tracts in the closest 10th percentile had higher autism prevalence.

[Curtis and Patel, 2007](#)

Many, but not all, studies link exposure to toxins such as mercury, lead, pesticides, and in utero smoking exposure to higher levels of autism and/or ADHD.

[Lidsky and Schneider, 2005](#)

Lead (Pb) toxicity remains a significant health problem in the USA and worldwide. The present paper presents two case histories of children who, during periods of severe lead poisoning, developed autism or autistic symptoms.

[Alabdali, Al-Ayadhi and El-Ansary, 2014](#)

This study confirms earlier studies that implicate toxic metal accumulation as a consequence of impaired detoxification in autism and provides insight into the etiological mechanism of autism.

[Senut et al, 2012](#)

Mounting evidence suggests that environmental factors can impact the developing brain through these epigenetic mechanisms. It has been observed that altered expression and subsequent deregulation of methyl-CpG-binding proteins is associated with a variety of autism spectrum diseases.

[Yassa, 2014](#)

Pb is a ubiquitous pollutant of our environment. Chronic exposure during prenatal life or early childhood can have dramatic effects on cognitive ability and neuropsychiatric function.