Lead dust a burden for life

Lead exposure in the 1990s still haunts Jeff Farmer and his sons

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NSW Police sergeant Jeff Farmer has first-hand experience with lead poisoning. He has deposits of the heavy metal in his arms after exposure to lead paint in the historic police residence in Tea Gardens, on the NSW central coast, where he and his family lived from 1992 to 1999.

But worse, much worse, two of Farmer’s three sons suffered the nausea, chronic illness, anaemia, breathing problems, and life-threatening complications of acute lead poisoning. “It was terrible,” he recalls.

“At one point both boys were tested for leukaemia. My wife Robyn and I were very fearful,” says Farmer, who struggled to get authorities to acknowledge the problem even after tests on the youngsters showed dangerous blood lead levels and the property was found to be contaminated with lead and even asbestos.

“I was told the dangers of lead poisoning were exaggerated,” says Farmer. “Then I was advised to repaint the house myself and keep the boys out of the back yard.”

There was nowhere else to live in the town, yet it wasn’t until 1998 that workmen in full protective gear arrived to strip paint and replace contaminated soil.

James, now 18, and Timothy, 16, still carry lead’s heavy burden. Both suffer from behavioural and learning difficulties as well as intellectual deficits. In contrast, their brother Christopher, now 20, is in the top 5 per cent of the IQ scale, is winning top honours in his third year at university and intends to study medicine.

The difference is lead. Christopher wasn’t exposed to it in the womb, wasn’t born into a contaminated house, didn’t play in a lead-laden sandpit or ingest flaking paint and dirt while crawling.

In 2010 Jeff and Robyn Farmer took the state authorities to court for the damage James and Timothy suffered from lead poisoning. As a result, the NSW Police Force reviewed all properties for lead and asbestos, and the state Police Association took the matter to the NSW Ombudsman, saying the force knew all about the risk. A report is expected within weeks.

Farmer continued to harbour doubts following the clean-up at the Tea Gardens property. “We were not confident that the lead had been completely removed,” he tells Weekend Health.

His concern is well placed, judging by the results of a review presented at a recent forum on childhood lead toxicity, convened at Sydney’s Macquarie University by environmental scientist Mark Taylor and attended by Farmer and national and international experts in lead research.

Among them was Sue Woolfenden, a pediatrician with the Sydney Children’s Hospitals Network. On behalf of her Australian, Canadian and British colleagues, she discussed their recent Cochrane review of the effectiveness of so-called household interventions in reducing the amount of lead children experience in homes exposed to environmental lead.

The worrisome news is that this year’s review for the Cochrane Library, an international non-profit organisation that investigates the effectiveness of different medical interventions, was no different from their 2008 review. In a nutshell, cleaning, home repairs and parental awareness campaigns do not protect children from exposure to lead dust.

“Obviously, if you had an individual child in a house with high levels of lead you’ve got to do something for that family,” says Woolfenden. “But at the moment purely educating families around
lead hazards or just dust controls doesn't seem to be a useful intervention at the population level."

Thus, community programs such as Mount Isa's Living Safely with Lead campaign cannot be expected to minimise exposure to lead in towns where the metal is mined or smelted.

Yet "getting the lead out" is essential to prevent irreversible damage of the kind suffered by James and Timothy Farmer, says Cochrane co-author and forum speaker Bruce Lanphear, a public health physician with Simon Fraser University in Vancouver.

"There's no safe level of lead," says Lanphear, referring to measurements of lead in a child's blood and the mounting body of evidence that levels as low as 5 micrograms per decilitre put children at risk of intellectual deficits, school failure and behaviour problems. As childhood exposure to lead dust causes permanent damage to regions of the brain governing mood regulation, executive control and judgment, epidemiological findings link such exposure to adult violence.

As Weekend Health reported last month, the US Centres for Disease Control's "level of concern" has fallen from 10 to 5ug/dL, and Australia's National Health and Medical Research Council is reviewing its level of 10ug/dL.

In 1998, Timothy's reading was 27ug/dL and James's was 17ug/dL.

Along with Woolfenden and their team headed by Berlinda Yeoh at the child services NGO Royal Far West in NSW Lanphear reviewed 14 international trials involving 2656 children. Since not enough intervention assessments have been conducted with only one in Australia the team couldn't draw conclusions about the soil "abatement" at Tea Gardens, or recommend what interventions might work. "The jury is out," concludes Woolfenden. But the jury is in on one thing, "Primary prevention is obviously the key," she says.

"I couldn't agree more," adds Farmer.