The Australian

Lead toxic for kids at low levels

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Daphne Hare at home in Mt isa with Stella, who has high levels of lead in her blood.

Source: The Australian

IN 2008 Daphne Hare got mad. The Mount Isa mother knew her daughter Stella, then aged six, had learning and behavioural problems.

But when she got the results of Stella's blood test, Hare decided to take Swiss mining giant Xstrata to court.

Why? The test, conducted for Queensland Health, revealed Stella had dangerously high blood lead levels: nearly twice the 10 micrograms per decilitres set as safe by the National Health and Medical Research Council in its 1993 guidelines.

Where did the lead come from? Hare and her lawyers Slater & Gordon point to historical and ongoing emissions of lead and other heavy metals from the mine's operations.

At the time scientific evidence suggested strongly that blood lead levels as low as 5ug/dL put children at risk of intellectual deficits, school failure and behavioural problems such as delinquency and attention deficit hyperactivity disorder.

Since then the scientific evidence driving the cases has accumulated. "It's as close to definitive as you can get without conducting randomised trials dosing children with lead," says public health physician Bruce Lanphear, with Simon Fraser University and the Child & Family Research Institute in Vancouver, Canada.

"The scientific basis for recommendations to lower the allowable levels of lead in blood include five or more observational studies showing there is no apparent threshold for lead toxicity, bolstered by experimental studies
involving animal models," he says.

Little wonder there are now six claims against Xstrata, Mount Isa City Council and the state government from parents, including Hare, seeking compensation for injuries their children allegedly suffered from lead poisoning.

As the claims advance, so too do moves to update public health advice and regulations. Weekend Health understands the World Health Organisation is revising its blood lead level "of concern" down from 10ug/dL to 5ug/dL, as are European nations including Germany. The level of concern, or action, is the point at which a health practitioner should intervene for an individual child and attempt to identify and remove the source of the lead exposure, say home renovation, mining or smelting.

The US National Toxicology Program convened a nine-member independent panel, including Lanphear, to review its official health advice regarding the impact of low-level lead exposure. In their draft report released last month, panellists recommended unanimously that the NTP update its document to warn that "adverse health effects in children and adults" are triggered at levels below 5uc/dL, not 10uc/dL, as at present.

Panel member Eliseo Guallar goes further. The epidemiologist with the Johns Hopkins Bloomberg School of Public Health says: "We're still finding that the lower we go, we still find effects of lead, and I think we still haven't seen the end of it. This is not an area where we're done yet".

And last week the Advisory Committee on Childhood Lead Poisoning Prevention, part of the US Centers for Disease Control and Prevention, recommended the CDC also change its blood lead level of concern from 10ug/dL to 5ug/dL.

In Australia the NHMRC stands by 10ug/dL as the level of concern, as the US has not yet adopted the the advisory committee's advice. A NHMRC spokesperson says the council's Lead Working Committee maintains a "watching brief" on published literature but has no set reporting timetable.

That's despite a push to drop to 5ug/dL triggered by the November 2009 Perth Declaration for the Global Reduction of Childhood Lead Exposure, signed by Lanphear and six other Australian and international experts.

Signatory Mark Taylor, an environmental scientist with Sydney's Macquarie University, measures emissions in mining communities. He argues an NHMRC guideline of 5ug/dL would "precipitate additional responses by other agencies".

It would also force "drastically reduced" emissions from Australia's main smelters, Port Pirie and Mount Isa. And that costs money.

But, as Lanphear notes, such changes will reduce the social and healthcare burden posed by youngsters such as Stella Hare.

"Parents need to recognise that we're sacrificing our children's health for short-term profits," he points out.

"They also need to recognise that it's unlikely our federal agencies will protect children until parents demand it."