

Leaded petrol reduces intelligence decades later

Tom Whipple Science Editor

People exposed to high levels of leaded petrol as children are still suffering from lower intelligence 30 years later.

Since the 1970s, lead in petrol has been phased out across the world because of concerns that it affects health. It was not until 1999 though that it was finally removed from petrol pumps in Britain.

While scientists in the United States have estimated that removing the additive has raised the average IQ by almost five points, establishing the link between cognitive decline and lead has been difficult, in part because those most exposed to the substance are often in lower socioeconomic groups.

Now researchers have examined a sample of more than 1,000 New Zealanders who at the age of 11 in the 1970s had levels of lead in their bloodstream measured. This sample spanned all

strata of society, meaning that it represents a unique way to chart the effects of lead across society. The average level was 11 micrograms per decilitre and it ranged from 4 to 31. This is similar to that found in Britain at the time but a lot higher than levels among children growing up today.

The study, in the *Journal of the American Medical Association*, found that for every increase of five micrograms per decilitre, IQ was lowered decades later by more than 1.5 points. Socioeconomic status was also lowered.

"Regardless of where you start in life, lead is going to exert a downward pull," Avshalom Caspi, from Duke University in North Carolina, said. He said that the fact that leaded petrol was ubiquitous around the world meant that its cumulative effects on humanity must have been significant. "If everyone takes a hit from environmental pollutants, society as a whole suffers," he said.

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