

Air pollution dramatically harms childhood brain development

Between 1981 and 1989, 26 outbreaks of asthma were reported in [Barcelona] with many cases centred around the harbour. Local scientists eventually discovered that [the cause was soybean dust released](#) into the air when the cargo was unloaded.

The solution was simple enough – filters to cover the soybeans silos – however, the episode left a remarkable legacy in the scientific community in Barcelona, which could help us to identify a significant risk to brain development in children.

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In 2015, Prof. [Jordi] Sunyer and his colleagues published research showing that higher pollution levels were linked to a 5% decrease on [tests of working memory in children](#) aged 7 to 10.

‘This is the same amount of change that was found several years ago between children with high levels of lead in the blood and children with lower levels in the blood,’ said Prof. Sunyer.

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When the lead pollution from petrol was found to be causing widespread harm, unleaded petrol was introduced from the 1970s. At an individual level, a 5% decrease on a test would not be enough to make an obvious impact, but on a population level it could have a significant economic cost says Prof. Sunyer.

He adds that 90% of brain development happens by the age of four, so he is now following up on his previous study to understand the effects of air pollution at the earliest stages of life.

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