

NIH Annual Intramural Research Report**ZIA ES043011-14****Report Title**

Toxicity Of Lead In Children--Clinical Trial

2008 Fiscal Year

October 01, 2007 - September 30, 2008

Principal Investigator

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Research Organization

Epidemiology Branch

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Keywords**Goals and Objectives**

This study was originally designed to test whether succimer, an oral chelating agent, could prevent lead-associated cognitive defects in toddlers. It does not. Using these data, we have explored other aspects of lead poisoning. We have now arranged to have blood samples from the trial analyzed for mercury and cadmium. We have reported at meetings that succimer is not a good chelator of mercury. We plan to test whether succimer chelates cadmium, and whether mercury or succimer at the low levels seen in these children is associated with any of the cognitive or behavioral test scores.

Summary

In a randomized clinical trial of succimer, an oral chelating agent that lowers blood lead concentration, children with blood leads of 20 to 44 micrograms per deciliter were given succimer or placebo when they were about 2 years old and followed with cognitive and behavioral testing. We reported previously that, despite lower blood lead levels during treatment, children given succimer had test scores that were no different from those of children given placebo at ages five or seven years. We have arranged with CDC to analyze blood samples collected in this project for methyl mercury, inorganic mercury, and cadmium, which will allow a randomized trial of succimer for chelation of these compounds without enrolling any new subjects or collecting any specimens. In data presented at meetings, succimer does not appear to be an efficacious chelating agent for mercury.

Publications Generated during the 2008 Reporting Period

There were no publications during this reporting period