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Science Article of the Week: Lead

Directions:

Step 1: Read the article.

Step 2: Read the article again. List KEY WORDS for each section and write a one sentence summary using at least 4 of those key words.

Lead poisoning, years later, can lead to higher crime rates

By Chicago Tribune, adapted by Newsela staff

06.25.15

Word Count **578**

CHICAGO, Ill. — A machine scanned the brains of a group of young people.

When they were small children, they were around a dangerous type of metal called lead. It was very bad for their brains.

The part of the brain that was damaged is called gray matter. It is the part of the brain that helps you to pay attention. It also helps you to control your feelings.

They grew up in a poor neighborhood in Cincinnati.

Lead hurt the young people and their communities.

School was harder for them than for children who had not been around lead. When they were teens, they got in trouble more often.

Key Words:

Summary Sentence:

Lead Is A Kind Of Poison

A scientist said lead keeps people from developing normally. It makes it harder for people to do the right thing.

People have known for hundreds of years that lead is a kind of poison. It is very bad for our bodies. It used to be in gas and paint.

Today it is against the law for lead to be in gas or paint. Still, there is lead in some places, especially in older cities. When children are around lead, the bad effects don't show up until years later.

In Chicago, lead is a big problem in poor neighborhoods.

In 1995, the children in these neighborhoods were tested. Most of the children had dangerous amounts of lead in their bodies.

Today those children are in their 20s. A lot of people get in trouble at this age.

Possible effects of lead exposure

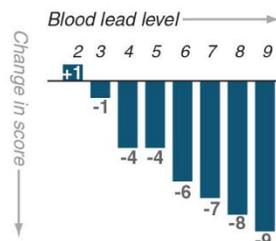
Recent studies have underscored the wide-ranging impact of lead pollution on cities like Chicago. In April, researchers reported in the journal *Environmental Health* that Chicago students who were exposed to lead in early childhood had lower test scores in third grade than other students. As exposure increased, the gap widened. Another study, from 2012, found that aggravated assault rates rose and fell in Chicago on a curve strikingly similar to the pattern seen as leaded gas emissions increased and then declined, about 20 years earlier.

Blood lead levels and test scores

Changes in third-grade ISAT performance as blood lead levels increase, relative to average score for children with the lowest lead levels at age 0-6. Blood lead level measured in micrograms per deciliter.

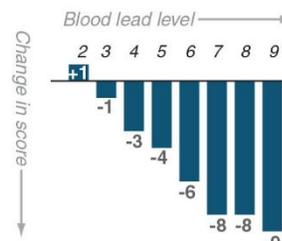
Math scores

Average score of students with a blood lead level of less than or equal to 1 mcg/dL: 161

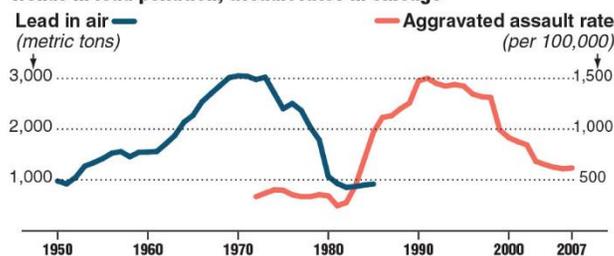


Reading scores

Average score of students with a blood lead level of less than or equal to 1 mcg/dL: 159



Trends in lead pollution, assault rates in Chicago



Source: Anne Evens, University of Illinois at Chicago; Howard Mielke, Tulane University School of Medicine; Sammy Zahran, Colorado State University
Graphic: Chicago Tribune, Tribune News Service

Key Words:

Summary Sentence:

Scientist: Lead Poisoning, Crime Are Connected

Scientists think that being around lead leads to students doing badly in school. They think it could also lead to crime, which is when people break the law.

A scientist in Chicago has a map of where lead poisoning is. It shows where children younger than 6 with lead poisoning lived in 1995. Another map shows crimes that happened in 2012. By then, those children were 17 to 22 years old. The children with lead poisoning were in the big crime areas.

The scientist thinks lead poisoning and crime are connected.

Key Words:

Summary Sentence:

Problem Wasn't Solved Long Ago

People who make laws seem to think lead pollution was solved long ago. They are not spending much money to see if children have lead poisoning. They are not inspecting buildings for lead as much. They are not trying hard to get rid of lead.

Another study looked at how lead poisoning is connected to how children do in school.

Scientists learned that the children who were around lead when they were small are more likely to fail reading and math tests.

Key Words:

Summary Sentence:

Students Who Don't Read Well Struggle In School

Children who are around lead as toddlers are more likely to act out. They also have trouble paying attention and they struggle to work well with classmates.

The scientists were looking at third graders. Third grade is important. That is when children begin to use reading to learn other subjects in school.

Students who do not learn to read well are more likely to fall behind in later grades. They also are more likely to drop out of high school. Dropouts are more likely to end up in jail than to finish high school.

It looks like lead can cause children to behave badly toward other people. This is because lead hurts the brain.

Lead keeps parts of the brain from working, especially the areas that help keep us from hurting others.

Key Words:

Summary Sentence: