



# **An Unnecessary Poison**

**Babies, Bibs, and Lead**  
**(August 2007 update)**



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# Introduction

Lead is a stunningly toxic metal. A long list of problems has been linked to lead exposure: lowered intelligence, behavior problems, cancer, strokes, high blood pressure, kidney problems, anemia, cavities, and delayed puberty,

While lead is a mineral that occurs naturally in our soils, people's activities have caused our exposure to lead to dramatically increase. Levels in our environment are about 1000 times what they were a few hundred years ago.

Children are particularly sensitive to lead poisoning. According to the U.S. Department of Health and Human Services, "no safe blood level in children has been determined." Yet in recent decades children have been exposed to lead through products that we all use regularly. Lead has been removed from some of these products (gasoline and household paint), but children continue to be exposed to lead in candy, jewelry, vinyl lunchboxes, and other everyday items.

This report documents hazardous levels of lead in yet another common product. In this case it is one that is used regularly by babies, bibs that are made with vinyl.

# Lead in Bibs

During the winter of 2006, the Center for Environmental Health found lead problems in bibs sold by a major retailer (Wal-Mart). These problems prompted us to continue screening bibs from other retailers. In June 2007, we purchased bibs from Toys R Us, Babies R Us, and Lisa Kline and tested them for lead. The bibs had a vinyl front and a cotton-polyester back.

We sent samples of each of the bibs that screened positive for lead to an independent laboratory. The laboratory digested a vinyl portion of the bib with concentrated nitric acid, and analyzed it for lead using National Institute for Occupational Safety and Health method 7082. We found that the vinyl portions of five of the bibs we tested contained significant amounts of lead, above 600 parts per million. We used this number because the Consumer Product Safety Commission classifies paints with more than 600 parts per million of lead as “banned hazardous products.”



Especially for Baby  
(Toys R Us)



Especially for Baby  
(Toys R Us)



Koala  
(Babies R Us)



Disney  
(Babies R Us)



Kidcosmic  
(Lisa Kline)

We believe that a large number of these bibs are in use since most are sold at major national retailers.

# Not Good for Kids

Lead has a profound ability to damage children's intellectual and behavioral development. Children who have been exposed to higher levels of lead score lower on IQ tests than children with less exposure. Children with higher exposures are also more impulsive and have shorter attention spans.

Recent research shows how pervasive these problems are. For example, research from Duke University published this month showed that low levels of lead exposure in early childhood were linked to lower test scores when children reach fourth grade. Another recent study looked at children who participated in a national monitoring program at the Center for Disease Control and Prevention. The study showed that lead exposure may be responsible for Attention Deficit Hyperactivity Disorder (ADHD) in almost 300,000 children.

Childhood lead exposure has effects on our mental function that persist into adulthood. Doctors in the Cincinnati Lead Study, using magnetic resonance imaging (MRI) technology, have looked directly at the brain activity of young adults. This research, published last September, showed that young adults who were more exposed to lead as children had visually different brain activity than young adults without as much lead exposure.

Because of these kinds of problems, the state of California has identified lead as a chemical that causes developmental toxicity.

# Not Good for Adults Either

Lead also causes a wide spectrum of health problems in adults.

One significant disease caused by lead exposure is cancer. The International Agency for Research on Cancer, the U.S. Environmental Protection Agency, and the National Toxicology Program, have all identified lead as a cancer causing chemical.

Lead also reduces our ability to have healthy children. Two recent studies, one from the Taiwan Institute of Occupational Safety and Health and the other from Brown Medical School, showed that women with higher lead exposures were more likely to have infertility problems. A third study, led by a researcher from the Harvard School of Public Health, found that mothers with higher lead exposure during the first part of their pregnancies were more likely to have babies with slower mental development.

Other important diseases are also linked to lead exposure. Researchers from Tulane University and Johns Hopkins University recently showed that low level lead exposures are linked to a greater risk of heart attacks and strokes. Other recent studies showed that low or normal lead exposures accelerate kidney failure in patients with chronic kidney disease and are linked to an increased risk of Lou Gehrig's disease.

# What You Can Do

If you have a baby in your family, buy bibs that are not made of vinyl. All-cotton bibs are a good choice. We recommend that you purchase bibs made from organically grown cotton whenever possible. Tell your friends to do the same!

If you need a bib with a waterproof layer, look for bibs that are advertised as PVC-free or vinyl-free.

Nobody should have to worry about lead poisoning when a baby stuffs a bib into her or his mouth. During the past several years, the Center for Environmental Health has successfully negotiated agreements with manufacturers of other lead-containing children's products that reduce the amount of lead in children's medicines, diaper powders and creams, lunchboxes, jewelry, and candy. We used California's Safe Drinking Water and Toxic Enforcement Act of 1986, commonly known as Proposition 65, to initiate these actions. We are taking the same action with bibs.

In the meantime, if you, your family, or your friends own bibs that you're concerned about you can use a lead test kit to check your bibs for lead. These test kits are designed to test paint for lead, but work well for vinyl objects. They are widely available at hardware and paint stores.

# References

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