

Lead Poisoning

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Lead poisoning is a problem that many people are unaware of. The risk of lead poisoning is greater to children than to adults. In the United States in 2014, more than 2,500,000 children under the age of six years old were confirmed to have lead poisoning. Lead can be found in water, paint, dyes, ceramics, cosmetics, ammunition, and many more products (“Lead Poisoning,” 2010). Lead water pipes were used in many older homes in America. As they aged, the pipes became corroded and caused the lead to poison our drinking water (“Water,” 2016). This has become a major problem in Flint, Michigan. In the early 1900’s, it was discovered that high volumes of lead could lead to poisoning. Many cribs made in this time period used lead-based paint. The paint tasted sweet, so babies would chew on the rails and become sick. It was not until the 1990’s that it was announced that even low doses of lead could be extremely toxic (Montagne, 2016). There are a number of side effects that affect the body and brain. It is more dangerous to children than to adults because they are still growing. Lead in water is not detectable without testing. It is tasteless, colorless, and odorless (“Lead in Flint Water,” n.d.). Lead poisoning is extremely toxic but can be controlled.

Lead poisoning causes many ailments to a young child. Many feel abdominal pain, muscle weakness and fatigue. They begin having diarrhea and vomiting. They may have a metal taste in their mouth. Many children will have headaches and may begin having convulsions. Some may even go into a coma. If the lead poison is inhaled, they may experience respiratory infections. If not treated early enough, they will begin to have skin discoloration, anemia, constipation, motor weakness, and even paralysis. Lasting effects can be learning disorders and behavioral issues linked to lower IQ’s (“Lead Poisoning,” 2010).

In Nigeria, there have been cases of lead poisoning caused by gold ore that was being mined in family living areas. In 2010, there was an outbreak, and a team of health professionals began research there. The number of children tested for poisoning was extremely high. The blood levels of over 95% of the children tested were within the levels that the Centers for Disease Control and Prevention (CDC) recommends chelation therapy. The children in this area have had an abnormally high death rate. More than twenty-five percent of the children from this area passed away during this time (Burton, 2012).

The problem of lead poisoning is not simply a problem for the third world countries. The situation in Flint, Michigan, shows us that the problem is very close to home, right here in the United States. The problem in Flint began in April of 2014. Public officials had recently diverted the water supply for the city to come from the Flint River. People started becoming very sick, losing hair, becoming nauseous, and developing rashes (Pitts, 2016). The area that was affected is a lower-income area. Many times, lead poisoning is a problem in areas of relatively low income. Older houses that were built before World War II often used lead-based paint. Many of those homes still exist in urban areas today. Land lords simply paint over the old paint and rent these homes out. It is believed to cost between \$30 to \$40 million to tear down and rebuild all these houses (Montagne, 2016). In Flint, the per capita income is below \$15,000, placing the poverty rate just above 40%. It has been over two years now that the problem began, and a solution has yet to be found (Pitts, 2016). The solution would be the complete elimination of lead.

Whenever there are high levels of contamination, chelation therapy is recommended by the CDC. They say anything above 45 mg/dl on a blood level test is within the range for this

type of therapy (Burton, 2012). Chelation therapy is given orally or intravenously. One form of chelation therapy is Dimercaptosuccinic acid (DMSA) (Momen, 2010). DMSA was discovered to be a safe treatment for lead poisoning in the early 1950's. In the 1990's, the FDA approved it for use in children (Blaurock-Busch, 2016). Another form of therapy is ethylene diamine tetraacetic acid (EDTA). It is given intravenously. It is not used in the United States, though, because it has a serious side effect, death (Fountain & Reith, 2014). A third form of treatment is garlic tablets. It is used for patients with mild to moderate cases of poisoning (Kianoush, Sadeghi, & Balali-Mood, 2015). According to Dr. Howard Markel, the best form of treatment is prevention (Montagne, 2016). The Pennsylvania Department of Public Health reminds people to do their own forms of prevention. Checking the paint in older homes for lead-based paint and keeping children away from paint that is peeling or flaking are important. The department also explains that many of the symptoms of lead poisoning mimic the symptoms of other illnesses, so have children showing any abnormal symptoms checked by a healthcare professional immediately (Gilger, 2011).

Lead poisoning is a major problem in the United States. It causes terrible side effects that are similar to other illnesses, such as diarrhea, vomiting, headache, seizure, and coma. It can cause lasting effects if not treated early; behavioral problems and learning disorders are the most common. It is found in many places: paint, soil, water, and cosmetics. Parents must be vigorous in testing children so that lead poisoning can be eliminated. It is essential that lead-based products be eradicated from the United States. The contaminated water supply in Flint could have been avoided. The pipes should have been inspected before being used. Lead poisoning is extremely toxic, but with the proper prevention, it can be controlled.

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