

**PREVENTION OF LEAD POISONING:
THE INTERNATIONAL WEEK OF ACTION ON LEAD POISONING,
20th – 26th 2013,
Awareness Creation Workshop at KIRDI,
Nairobi, Kenya.
23rd October 2013.**



Event Sponsors: BASCO/DURACOAT, KIRDI

Event partners: UNEP, GAELP, UoN, KEBS, NEMA

At a Glance

- Lead is a naturally occurring metal found in small amounts in the earth's crust. While it has many industrial uses, it is also toxic to biological systems causing adverse health effects.
- Lead can be found in the air, soil, water, and even inside our homes.
- Much of exposure comes from human activities including the use of fossil fuels (the use of lead in gasoline which has since been phased out).
- Lead and its compounds have been used in a wide variety of products found in and around our homes, including paint, ceramics, pipes and plumbing materials, solders, gasoline, batteries, ammunition, and cosmetics among others.

Exposure paths

- Lead can be emitted into the environment from industrial sources and contaminated sites, such as lead smelters. While natural levels of lead in soil range is relatively low, mining, smelting, and refining activities have resulted in large amounts of lead in the environment.
- When lead is released to the air from different sources, it may travel long distances before settling to the ground, where it usually sticks to soil particles. Lead may move from soil into ground water depending on the type of lead compound and the characteristics of the soil.
- Lead is particularly dangerous to children because their growing bodies absorb more lead than adults do and their brains and nervous systems are more sensitive to the damaging effects of lead.
- Babies and children can also be more highly exposed to lead because they often put their hands and other objects that can have lead from dust or soil into their mouths.
- Children may also be exposed to lead by eating and drinking food or water containing lead or from dishes or glasses that contain lead, inhaling lead dust from lead-based paint or lead-contaminated soil or from playing with toys that have lead paint

- Adults may be exposed to lead by eating and drinking food or water containing lead
- They may also breathe lead dust by spending time in areas where lead-based paint is deteriorating, and during renovation or repair work that disturbs painted surfaces in older homes and buildings.
- Working on a job or engaging in hobbies where lead is used, such as making stained glass, can increase exposure. A pregnant woman's exposure to lead from these sources is of particular concern because it can result in exposure to her developing baby.

Health impacts of Lead

- Lead can affect almost every organ and system in your body.
- Children six years old and younger are most vulnerable to the effects of lead.
- In children, the main affected part of the body target for lead toxicity is the nervous system. Even very low levels of lead in the blood of children can result in: permanent damage to the brain and nervous system, leading to behavior and learning problems, lower IQ, and hearing problems; slowed growth and anaemia.
- In rare cases, ingestion of lead can cause seizures, coma and even death.
- Lead can accumulate in our bodies over time, where it is stored in bones along with calcium.
- During pregnancy, lead is released from bones as maternal calcium is used to help form the bones of the foetus. This is particularly true if a woman does not have enough dietary calcium.
- Lead can also be circulated from the mother's blood stream through the placenta to the foetus. Lead in a pregnant woman's body can result in serious effects on the pregnancy and her developing foetus, including: miscarriage and reduced growth of the fetus and premature birth.
- Adults exposed to lead can suffer from: nervous and cardiovascular effects, increased blood pressure and incidence of hypertension, decreased kidney function and reproductive problems (in both men and women)

Steps to minimize exposure to Lead

Simple steps like keeping your home clean and well maintained will go a long way in preventing lead exposure. You can lower the chances of exposure to lead in your home, both now and in the future, by taking the following steps:

- Inspect and maintain all painted surfaces to prevent paint deterioration
- Address water damage quickly and completely
- Keep your home clean and dust-free
- Clean around painted areas where friction can generate dust from the surface, such as doors, windows, and drawers. Wipe these areas with a wet sponge or rag to remove paint chips or dust
- Wash children's hands, bottles and toys often
- Teach children to wipe and remove their shoes and wash hands after playing outdoors
- Ensure that your family members eat well-balanced meals.
- Keep the children healthy as malnourished children absorb more lead
- If you are having home renovation, repairs, or painting done, make sure your children are not at scene

How to minimize exposure to lead in paint

- Policy and decision makers to create long-term plans for providing safer environment devoid of lead
- Enforce legislation that govern industrial lead emissions in the environment and limiting or banning use of lead as additive in any product
- Educational and residential houses should be constructed away from sources of lead
- Optimize nutritional intakes with diet habits and lifestyles to reduce bio-accumulation of lead
- Conducting frequent studies and documenting prevalence levels, disseminate information on symptoms of lead; and continue monitoring trends for new exposure;
- Adopt use of lead free paint while checking for lead in paint during demolitions or renovations;
- Enforce tough legislation for compliance especially to the paint manufacturers and
- Get tested periodically for lead poisoning.

The present situation in Kenya on lead poisoning

Few studies have been done in Kenya on lead poisoning despite the long history of lead exposure. The continued increase of lead levels in the environment requires that the countries modify and develop relevant legislations to help minimize lead levels.

In Kenya for example, there is limited policies, guidelines and institutional management aimed at regulating lead poisoning. Lack of data on human environmental exposure to lead in Kenya has an illusion that adverse effects due to exposure are non-existent. This has contributed to significant public health problem considering that majority of the population in this country are likely to live in an environment where there is lead exposure. The good news is that lead poisoning is entirely preventable.

The International Week of action on Prevention of Lead Poisoning (20th – 26th October, 2013)

The International Week of Action on Prevention of Lead Poisoning (October 20th - 26th 2013) is intended to address the lack of awareness about lead poisoning emanating from lead based paints. The event is a joint voluntary collaborative plan, of the Global Alliance to Eliminate Lead Paint (GAELP) undertaken by United Nations Environment Programme (UNEP) and the World Health Organization (WHO).

It focuses and catalyzes the efforts of a diverse range of stakeholders such as Governments, Clinical and Public Health Professionals, Researchers among others to achieve international goals to prevent children's exposure to lead and minimize occupational exposures to lead paint. The GAELP aims at raising awareness about lead poisoning by highlighting countries' and partners' efforts in preventing childhood lead poisoning, and urge further action to eliminate lead based paints.

The Global data for lead in new enamel decorative paints makes reference on Kenya's report on house hold paints carried out by (ilima), an NGO in Nairobi, September 2012.

During this week of action UNEP in collaboration with IPEN will launch a report based on "Lead in Enamel Decorative Paints - National Paint Testing Results". There was a parallel launches of the report in UNEP, Nairobi and Geneva on Tuesday 22 Oct, during the week.

Kenya Industrial Research and Development Institute (KIRDI) participation in Lead Poisoning Awareness

KIRDI is mandated to carry out research and development, consultancy work for industries, community organizations, and government among others. The institute disseminates research findings to the stakeholders and the general public aimed at offering solution in line with the country's Vision 2030.

It is in this context that KIRDI is participating in the Lead poisoning Awareness week by organizing a one-day workshop to disseminate relevant information to the general public on the same. Several event partners and sponsors have also been invited to participate either through various presentations or attendance to share their experiences and views on lead poisoning in Kenya.

Dr. Faridah Hussein Were, a Senior Research Scientist at KIRDI is leading the awareness campaign having been involved in lead poisoning research.

The event will be held on the 23rd October 2013 at KIRDI Head Quarters, South C Popo Rd. off Mombasa Road. This event will have wide coverage through local media, KIRDI and UNEP websites where it will be posted for wider audience.

The institute is committed to carry out relevant collaborative research on lead poisoning including the involving the stakeholders. Research findings will be disseminated to the general public including lobbying for regulatory framework on lead poisoning.