

global alliance to eliminate lead paint

Why is lead paint still an issue?

Since the first part of the 20th century, restrictions on the use of lead in paints have been enacted in a number of countries. Despite these efforts, it has become clear in recent years that paints containing high levels of lead are still widely available and used in many countries for decorating the interiors and exteriors of homes. It can also be found in paint in public buildings such as schools and hospitals, as well as on toys, toy jewellery, glazes, furniture, and playground equipment.

Lead is a chemical of major public health concern. It can have profound and permanent adverse health effects on children, including through exposures to pregnant women. While the greatest impacts are on children, lead also causes harm in adults, particularly workers.

The cost of lead exposure to society can be significant. Lead exposure is estimated to account for 0.6% of the global burden of disease, with the highest burden in developing countries. Childhood lead exposure is estimated to contribute to about 600,000 new cases of children with intellectual disabilities every year. Public health interventions which focus on elimination of exposure are the most effective measures against childhood lead poisoning.

Reducing childhood lead exposure is a key public health goal and will make an important contribution to achieving sustainable development objectives including the United Nations' Millennium Development Goals and implementation of the Strategic Approach to International Chemicals Management.

Exposure to lead from paint can occur during manufacture and application. One of the most common and most concentrated sources of lead exposure for children is lead paint and paint dust. Exposures can continue for many years as the paint deteriorates or is removed during painting and demolition.

Good substitutes for lead in paint have been known for many years. Paints without lead are available which are similar in cost and performance to lead paints.

We can prevent the adverse effects of lead.



Suat Eman

Health effects of lead

Typically, lead is a chronic or cumulative toxin that affects multiple body systems including the neurological, haematological, gastrointestinal, cardiovascular and renal systems. Chronic lead exposure commonly causes haematological effects, such as anaemia, or neurological disturbances including headache, irritability, lethargy, convulsions, muscle weakness, ataxia, tremors and paralysis. There is evidence that chronic occupational exposure to lead may also contribute to the development of cancer.

Acute adverse effects are commonly seen only after exposures to lead at high concentrations. Acute exposures to lead may cause gastrointestinal disturbances (anorexia, nausea, vomiting, abdominal pain), hepatic and renal damage, hypertension and neurological effects (malaise, drowsiness, encephalopathy) that may lead to convulsions and death.

Infants, young children and pregnant women are most susceptible to the adverse effects of lead. Young children are particularly vulnerable to the neurotoxic effects of lead with the developing nervous system the critical target. Subtle effects on intelligence quotient (IQ) are expected from blood lead levels as low as 5ug/dl and lead exposure has also been linked epidemiologically to attention deficit disorder and aggression. Exposure of pregnant women to high levels of lead can cause miscarriage, stillbirth, premature birth and low birth weight as well as minor malformations.

Many children who ingest smaller amounts of lead may not have immediate acute symptoms but may be still at risk of behavioural problems, poor school performance and lower IQ later in life. No "safe" blood lead level has been identified.

There are many ways young children can be exposed to lead. Children can be severely affected by eating lead-based paint chips, chewing on objects, including toys painted with lead-based paint, or from exposure to dust or soil that contains lead from paint.

Pregnant and breast feeding mothers with high lead burden due to environmental or occupational exposures can pass lead to unborn or nursing babies, placing them at risk of developmental delay, reduced IQ and behavioural problems even if the mother displays no symptoms herself.

High level exposure to lead in men can damage the reproductive organs responsible for sperm production, with decreased sperm count and increased number of abnormal sperm.

What is lead paint?

'Lead paint' refers to a product which is produced using specific lead compounds to give paint its colour, to allow the paint to reduce corrosion on metal surfaces, or to help the paint dry more quickly. Lead compounds may also be present in a range of coatings such as varnishes, lacquers, stains, enamels, glazes or primers.

Lead can also be found as a contaminant in other raw materials that are used to make paint and other products, and as a result manufacturers must closely monitor overall lead content. Efforts should be made to keep the total lead content in paints as low as possible.

Simple analytical tests are used to determine the amount of lead (by weight) and a number of approaches exist depending on the painted surface or the sample.

Recent multi-country surveys have found many new enamel paints with average lead concentrations ranging from 163 to 7341 ppm and with some paints having very high concentrations of lead, such as 200,000 ppm dry weight or 20%

Good substitutes for lead in paint have been known for many years. Paints without lead are available so that reducing the lead content of decorative paints is something that is practically achievable. Levels of lead less than 90 ppm and often below 45 ppm can be found in a number of countries.

It is a priority to make paint manufacturers aware of the public and occupational health risks arising from continued use of lead paint and the consequent need to reformulate products to eliminate the practice of adding lead or lead compounds to paint.



RIA Novosti

Few people realize that common playground equipment may be colored with lead paint.

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Use of lead paint in countries

Despite what is known about the health risks arising from lead paint and the restrictions on lead in paints that were enacted in a number of countries in the first part of the 20th century, paints containing high levels of lead are widely available in many countries

The impression that the use of lead in paints in both developing and developed countries is limited to paints intended for industrial uses is incorrect.

Once applied, it is often very expensive to remove lead paint or otherwise reduce the risks of exposure to lead. Dust from lead paint can be created as painted surfaces deteriorate through use and weathering and when they are prepared for repainting. Lead-contaminated dust is a major exposure pathway for children. Women may also be at increased risk because of their greater role in daily household cleaning and maintenance. Significant occupational hazards are observed when workers, often without knowing, damage painted surfaces containing lead.

Unless we prevent the use of lead paint, we can assume that there will be a large increase in the number of houses and other buildings that are contaminated by lead.

Primary prevention, including through controls on the manufacture, sale, import and export of lead paints, is far more cost-effective and viable than remediation programmes.

Regulatory issues for controlling lead paint

Effective legislation and regulatory mechanisms are needed to stop current practices and protect public health and the environment. The key objectives of any legislative and regulatory approach are to:

- Define lead paint and establish analytical methods for determining the lead content of paints.
- Assign regulatory authorities and responsibilities.
- Eliminate the manufacture and use of lead paint.
- Require paint container labelling on lead content and lead dust hazards.

The legislation/regulations should also seek to:

- Establish means to prevent paints, toys and other consumer products that do not comply with lead restrictions from entering the country.
- Specify the role of third party organizations in certifying lead content in paint.

Global Alliance to Eliminate Lead Paint

The Global Alliance to Eliminate Lead Paint is a new initiative to focus and catalyse the efforts of diverse stakeholders to achieve international goals to eliminate lead paint.

The overall goal of the Global Alliance is to prevent children's exposure to paints containing lead and to minimize occupational exposures to lead paint. The broad objective is to phase out the manufacture and sale of paints containing lead and eventually to eliminate the risks that such paints pose.

The Global Alliance to Eliminate Lead Paint is an important means of contributing to the Plan of Implementation of the World Summit on Sustainable Development and to the resolutions of the International Conference on Chemicals Management (ICCM).

The participation of representatives and interested experts from Governments, intergovernmental organizations, non-governmental organizations, including civil societies, regional bodies, philanthropic organizations, academia, the media and the private sector, is encouraged.

The work of the Global Alliance is organized in five focal areas:

- Environmental aspects
- Health aspects
- Worker's health
- Legislation and regulation
- Outreach to industry

If you would like to receive more information on the work of the Global Alliance to Eliminate Lead Paint, please visit the Global Alliance to Eliminate Lead Paint website. www.unep.org/hazardoussubstances/

Alternatively, you may contact:

Chemicals Branch
Division of Technology, Industry and Economics
United Nations Environment Programme
Email: lead-cadmium.chemicals@unep.org

and

Public Health and Environment
World Health Organization
Email: noleadpaint@who.int

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