

LEAD IN AIR, WATER Spur Kidney Ailments

TIMES NEWS NETWORK

Batteries help many households tide over increasing power cuts in the cities, but the blessing has now turned into a curse. Spent batteries that are being disposed unscientifically across India, pose serious health hazards such as kidney failure, say doctors.

They say that lead from these batteries often extracted through crude methods expose workers and residents. If left unattended, lead from these batteries can contaminate groundwater. The increasing number of batteries is a result of frequent power disruptions in the cities, doctors said at an international conference on renal and transplant pathology held at the Sri Ramachandra University in Chennai.

The demand for lead is also increasing as the metal is extensively used in many industries, including by mobile and automobile companies.

Lead is recycled to make fresh batteries as well. A car battery, which weighs around 14.5kg has 8.7kg of lead, while the batteries used for invertors have nearly 16kg. Unlike many countries, India does not insist that manufacturers buy back the used products to ensure environment

safety. The batteries are usually taken back by small agents who use crude methods to retrieve lead. When batteries are broken for recycling, lead is

released as dust, which affects the respiratory system. Add to this, poor government monitoring and you have a major health hazard on hand.

Lead toxicity can cause high blood pressure, kidney failure in adults and developmental delays and behavioural problems in children, said US-based nephrologist Sharada G Sabnis from Armed Forces Institute of Pathology in Washington, DC. Lead, when eaten or inhaled frequently, can also cause various forms of cancer.

Nephrologist Dr P Sounderarajan said doctors were seeing increased number of patients with kidney failures due to lead toxicology. "We don't have any facts to prove that, but can say that from experience. It is often left undiagnosed as doctors tend to suspect other causes for kidney failure. Even pathological tests don't often directly indicate metal toxicity. Sadly, there are no standard or periodic tests that warn people about water or air pollution in their locality," he said.

Pathologists said hospitals are admitting more patients with lead poisoning. "Only a few patients instantly react to lead," said Dr Sarah Kuruvilla, the organizing chairperson of the conference.

Docs Link Rise In Organ Failures To Unscientific Disposal Of Batteries

HEALTH HAZARDS

Lead is a toxic metal that is usually found in paints, toys, contaminated groundwater, batteries, glazed pottery and cheap cosmetics and jewellery. It can cause various types of behavioural and health problems

LEAD TOXICITY SCALE

AMOUNT UG/DL	ASSOCIATED AILMENTS
10	Development disability in children, premature birth
20	Reduced nerve function
30	Vitamin D deficiency
40	Anaemia, kidney damage, reproductive disorders (men)
50	Colic problems
100	Kidney failure, coma, seizures, anaemia
150	Death

EXPOSURE TO DANGER

1 Lead is absorbed through inhalation, injection or even through skin. **Children are at greater risk than adults** and the damage is more severe. It moves through blood to tissues and organs, damaging cells.

2 In children, lead can cause **learning disability and behavioural problems and affect intelligence**

3 In lungs, lead can **block airway, cause serious respiratory disorders and distress**

4 While softer tissues hold lead for months, **bones can retain them for decades**

5 In kidneys, which filter out toxins in the body, **lead particles can absorb toxins and cause kidney failure**

