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# Toxic Waste Exposure Widespread in Developing World

by Jessica Berman

Millions of people in developing countries living near toxic waste dumps are facing potentially severe mental and physical health dangers, according to a new study. The report finds the hazards posed by exposure to these chemical waste sites are comparable to those from malaria and air pollution.

The study by a New York-based environmental organization analyzed water and soil samples at 373 waste sites in three countries - India, Indonesia and Pakistan - with a combined population of more than 1.5 billion people, roughly a fifth of the global population.

The researchers found that the more than 8.6 million people living near the sites in 2010 were being exposed to a veritable soup of toxic chemicals.

"Lead, chromium, phosphates, different kinds of organic chemicals, pesticides and the like. They're all over the world, unfortunately," said Richard Fuller.

Co-author Richard Fuller is head of the Blacksmith Institute, which funded the study and works to solve pollution problems in low- and moderate-income countries.

Fuller and colleagues calculated the affected population lost more than 828-thousand years of healthy life due to toxic waste exposure, as a result of illness, disability and early death. In comparison, researchers say malaria in the same countries caused less illness and early death, and air pollution slightly more.

The three-nation survey found pollution levels were highest for lead, a toxic metal which, if absorbed into the bloodstream, can impair the neurological development of unborn babies and lower children's IQ, a measure of their cognitive skills.

Two-thirds of those exposed to lead near waste dumps in Pakistan, India and Indonesia were children and women of child-bearing age, according to researchers.

But lead author Kevin Chatham-Stephens, a pediatric environmental health expert at the Mount Sinai school of medicine in New York, says those living near toxic waste sites can take simple steps to reduce their risk.

"Even though it may not sound like a lot, washing your hands is one of the most effective ways that we can decrease our exposure to chemical pollutants - just because we know that oftentimes chemicals such as lead can end up in the dust and if we have that dust on our hands, and then we eat our foods and we wipe our mouths or something like that, then that chemical can enter into our body," said Chatham-Stephens.

The Blacksmith Institute is evaluating toxic waste sites in 70 other developing countries, hoping to help organize clean-up efforts. Fuller says it's a slow process to remediate the chemical dumps, but the countries he's working with have been eager to cooperate.

"Everyone here has the right heart and [is] keen to do the best that they can. So, we think it's possible. It's just going to take a lot of work," he said.

The study on the burden of disease from toxic waste dumps in India, Pakistan and Indonesia is published online in the journal *Environmental Health Perspectives*.

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<http://www.voanews.com/content/toxic-waste-exposure-widespread-in-developing-world/1661121.html>