

Exposure to chemicals may harm young brains

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By Patricia Reaney

LONDON (Reuters) - Exposure to industrial chemicals in the womb or early in life can impair brain development but only a handful are controlled to protect children, researchers said on Wednesday.

There is also a lack of research and testing to identify which chemicals cause the most harm or how they should be regulated, they added.

"Only a few substances, such as lead and mercury, are controlled with the purpose of protecting children," said Philippe Grandjean of Harvard School of Public Health in Boston, Massachusetts and the University of Southern Denmark.

"The 200 other chemicals that are known to be toxic to the human brain are not regulated to prevent adverse effects on the fetus or a small child," he added.

In a review published online by The Lancet medical journal, Grandjean and Philip Landrigan of the Mount Sinai School of Medicine in New York identified 202 industrial chemicals known to be toxic to the human brain.

They suggested millions of children worldwide may have been harmed by toxic chemicals and may suffer learning disabilities and developmental disorders. But only substances such as lead, methylmercury and polychlorinated byphenyls (PCBs) have been sufficiently studied and regulated.

"Chemicals that can interfere with brain function -- that are toxic to the brain -- should be considered toxic also to the developing brain," Grandjean told Reuters.

"We should protect developing brains from exposure to these substances. We also need to examine industrial chemicals for these kinds of effects because it is not being done systematically," he added.

The researchers warned the developing brain is more susceptible to the effects of toxic chemicals than an adult brain and any interference could have permanent consequences.

They called for a precautionary approach and said strict regulations should be enforced for any substance which is shown to have a toxic effect.

Professor Mark Hanson, of Southampton University in England, described the review as a timely report which will stir up debate and generate more research.

"There is no need to panic, but we can't ignore this possible problem," he said in a statement. "And of course it's no accident that the populations in which development and education are challenged in other ways ... in poor parts of the developing world, are also the areas in which such pollutants are abundant."

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