Common insecticide tied to kids' lower test scores

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By Leigh Krietsch Boerner

NEW YORK (Reuters Health) - Toddlers whose mothers breathed more of a chemical often present in insecticides during pregnancy had slower brain development, according to a study from New York City.

On average, women breathing the highest amounts of piperonyl butoxide, or PBO, had babies who scored 3.9 points lower on a mental development test at age three (85 points and above is considered normal).

These changes are about the same as those seen in kids with low-level lead exposure, according to Megan Horton, a researcher at Columbia University who worked on the study.

"It means that these kids might not do as well in school" later on, said Horton, whose findings appear in the journal Pediatrics.

Baby brains are extra vulnerable to toxic chemicals, because they are not fully formed.

"If you alter the blueprint, there may be lasting long-term consequences," Horton explained.

She and her colleagues analyzed air samples from a few hundred pregnant women's environments to track the levels of PBO and another chemical called permethrin. The two compounds are commonly found in bug sprays for indoor use.

Permethrin wasn't tied to the toddlers' mental skills. But among the 42 women who breathed the highest levels of PBO -- around 4 parts per trillion -- nearly half had a baby with a lower-than-normal mental development score.

That compared to only about one in five of women exposed to lower or undetectable levels of PBO. Still, the results don't prove that PBO in itself causes developmental delays.

Horton said the average amount of PBO in the air is unknown, and that it's unclear if low levels of PBO are safe.

"For these toxic chemicals, there's probably no such thing as a safe level during pregnancy," said Dr. Philip Landrigan, who heads the Children's Environmental Health Center at the Mount Sinai School of Medicine in New York, and was not involved in the new study.

He suggested that pregnant women who have an insect problem should make sure more bugs can't get in through measures such as caulking cracks in walls, and that all food is cleaned up.

"Instead of spraying," he said, "use little baits like roach motels because it's contained."

SC Johnson, which makes the PBO-containing Raid bug spray, told Reuters Health they would review the new study.

"All of our products go through an extensive risk assessment," including possible effects on children and pets, the company added in an e-mail.