Maternal Thyroid Disorder Linked With Children's Learning Disabilities

Experts Call for Thyroid Testing for Expectant Mothers; Toxic Chemicals Said to Exacerbate Problem

Washington -- Citing a scientific study linking abnormal thyroid-related hormone levels in expectant mothers with developmental problems in their babies, a panel of experts today recommended thyroid screening as part of routine health care for all pregnant women and women who are planning to have children.

The experts referred to a study published in the ***New England Journal of Medicine*** finding that children 7-8 years old had I.Q. scores 7 points lower if their mothers had slightly low thyroid hormone levels or even normal thyroid hormone with slightly elevated levels of thyroid stimulating hormone– a condition known as subclinical hypothyroidism – during pregnancy.

"Thyroid hormone is essential for fetal brain development," said Ted Schettler, a physician at the Boston Medical Center and science director for the Science and Environmental Health Network. “We’ve known for a long time that obvious thyroid deficiency can impair normal brain development but it’s the children of mothers without symptoms that we need to worry about as well. We ought to be more aggressively looking for subclinical hypothyroidism in mothers because it's affecting the neurological development of babies."

In subclinical hypothyroidism, the mother does not exhibit symptoms of hypothyroidism but the fetus may still be affected. Two and one-half percent of pregnant women are subclinically hypothyroid and 100,000 babies are born each year to these women, Schettler said.

James Haddow, professor of pediatrics at the University of Vermont School of Medicine and lead author of the study in the ***New England Journal of Medicine***, said that, once detected, the problem can be easily corrected with a daily pill.

"Hypothyroidism is a perfect example of something that's easy and inexpensive to detect and to treat once it's detected," said Haddow. "It makes good sense to incorporate [thyroid screening] into prenatal care."

Jane Browning, executive director of the Learning Disabilities Association of America, called on doctors to make thyroid screening a routine part of a well-woman exam, and said it should be part of every pre-pregnancy and pregnancy exam.

Browning discussed her experience raising a developmentally disabled child. Her son recently graduated with a high school certificate at age 21. Because of his disability, he requires a professional companion and assistance with basic tasks such as showering and shaving.

"You think it's hard to find a job without a college degree. Try finding work without a high school diploma," said Browning. "The cost to families is high. The cost to society is high. It's twice as expensive, for society, to school someone who has a learning disability."

"Moms and moms-to-be, please make sure you get your thyroid level tested," Browning urged. She said home testing kits are available for expectant mothers who cannot find a doctor to provide a test.

The panelists said synthetic chemicals in the environment may be contributing to reduced levels of maternal thyroid hormones or abnormal thyroid hormone function. "There are classes of compounds in the environment that effect thyroid function in ways we could not have imagined 10 years ago. In the lab we're seeing what appear to be links between some of these compounds

and brain development which could result in learning and developmental disabilities in humans," said Thomas Zoeller, professor of biology at the University of Massachusetts.

PCBs, perchlorate from rocket fuel, and a class of flame retardants called PBDEs are all known to interfere with the thyroid gland or thyroid hormone function. PBDEs in particular have received a great deal of attention in the press, as studies have found high levels of the chemicals in household dust and in the human body.

"We have had an extraordinary rise in PBDEs throughout the population," said Schettler, referring to the presence of these synthetic chemicals in the human body.

Schettler said that PBDEs are very similar to PCBs, which have been banned in the United States since 1976, and should be treated as an equal threat and replaced with safer alternatives . "There’s no need to repeat the same mistake we made with PCBs," he said.