

Endocrine Society's *The Journal of Clinical Endocrinology & Metabolism*.

Thyroid hormones are crucial for normal development of a baby's brain and nervous system. During the first trimester—the first three months of pregnancy—a baby depends on its mother's supply of [thyroid hormone](#), which comes through the placenta. Levels of maternal thyroid hormones, including thyroid stimulating hormone (TSH) and free thyroxine (FT4), change dynamically during pregnancy, and both high and low maternal thyroid hormone levels can affect children's behavioral development.

"Our findings highlight the significance of close monitoring and management of maternal thyroid function during pregnancy," said Kun Huang, Ph.D., of the Anhui Medical University in Anhui, China. "This research presents a new perspective in early intervention of children's emotional and behavioral problems."

The researchers studied 1860 pairs of mothers and their children from the Ma'anshan Birth Cohort in China. The researchers repeatedly measured thyroid hormone levels in the first, second and third trimesters of pregnancy. The researchers followed up with the families when the children were 4 years old and had them fill out a checklist to evaluate their behavioral problems.

The researchers found boys born to mothers with high thyroid hormone levels during [pregnancy](#) were more likely to be withdrawn, have [behavioral problems](#) and be anxious or depressed. Moderate and low [thyroid hormone](#) levels were associated with aggressive behavior in preschool boys.

More information: Peixuan Li et al, Sex-specific effect of maternal thyroid hormone trajectories on preschoolers' behavioral development: a birth cohort study, *The Journal of Clinical Endocrinology & Metabolism*

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