

Preliminary Thyroid Screening May Not Benefit Unborn Children Of Hypothyroid Mothers

When pregnant women experience an underactive thyroid gland (hypothyroidism), many of their bodily functions slow down and there can be problems with the baby's development. In the first trimester the fetus is entirely dependent on maternal thyroid hormones that cross the placenta. **Subclinical hypothyroidism** is diagnosed in 2-3% of pregnant women who are without symptoms of thyroid disease, but show mild elevations in serum TSH levels with normal thyroid hormone (free T4) levels. The American College of OB/GYN (ACOG) does not routinely recommend routine screening and treatment of subclinical thyroid disease in otherwise normal women. Despite this, it is common for doctors to order such tests early in pregnancy. Some experts believe that an underactive thyroid gland in a pregnant woman may adversely affect the brain development of her fetus, possibly even lowering IQ scores. With the goal of clarifying these concerns, the **Controlled Antenatal Thyroid Screening (CATS) Study** was carried out to test if there is a benefit of screening for hypothyroidism in pregnancy on the intellectual development of children.

The CATS study is the first large well-designed study to tackle the question of whether it's useful to identify and treat thyroid disease in otherwise normal pregnant women. The CATS study sought to find out whether testing for thyroid problems in early gestation, and if prescribing thyroid hormone medicine (levothyroxine), would improve the intelligence of the pregnant women's children. Women were randomized to screening or no screening. Women with abnormal screens (high TSH levels) were treated with thyroid medicine early in pregnancy. The study was headed by Dr. John Lazarus from Cardiff University who recently presented preliminary data on the CATS study population. The women studied included nearly 22,000 women with singleton pregnancies whose blood was tested for free thyroxine (T4) and thyroid stimulating hormone before 16 weeks' gestation. Dr. Lazarus and his colleagues found no differences in the intellectual development of 3-year-olds whose hypothyroid mothers took levothyroxine during pregnancy and those who did not take the hormone.

These preliminary study results indicate that testing pregnant women for hypothyroidism, and treating them early in pregnancy, doesn't seem to improve the intellectual development of their children. According to Dr. Lazarus, more data and analyses will be forthcoming over the next year. But if the results are similar, "The trial won't show a benefit to the intellect of the child of generalized maternal screening for hypothyroidism in pregnancy."

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