



THYROID AND PREGNANCY

Subclinical hypothyroidism during pregnancy and baby IQ scores

BACKGROUND

Thyroid hormone is needed for normal brain development. The absence of thyroid hormone during development leads to irreversible mental retardation. Babies born to mothers with severe hypothyroidism that is either unrecognized or untreated during pregnancy may have lower IQ scores. Current guidelines by the American Thyroid Association recommend keeping the TSH <2.5 in hypothyroid women during pregnancy. However, it is unclear if babies born to mothers with only very mild hypothyroidism (subclinical hypothyroidism, where the TSH is increased but the other thyroid hormones are normal) during pregnancy will have the same problems. This study compared the IQ scores between children whose mothers had subclinical hypothyroidism during pregnancy and children whose mothers had normal thyroid function during pregnancy.

THE FULL ARTICLE TITLE

Behrooz HG et al. IQ scores of children evaluated between ages 4 and 14.5 years born to women with subclinical hypothyroidism were similar to the IQs of children born to euthyroid treated women. Subclinical hypothyroidism in pregnancy: intellectual development of offspring. *Thyroid* 2011;21:1143-7.

SUMMARY OF THE STUDY

This was a study of 44 pregnant Iranian hypothyroid mothers who had their babies born between 1991-2003. The researchers performed IQ testing on the mothers' children when they reached 4-15 years of age. All of the

women had been receiving thyroid hormone medication for their hypothyroidism before becoming pregnant, but some mothers remained mildly hypothyroid at the beginning of pregnancy. The authors found no difference in any of the children's IQ scores. The 25 children born to mothers with mild hypothyroidism at the beginning of pregnancy had similar IQs compared to the 19 children born to mothers who had normal thyroid function.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study suggests that children's IQ scores are not affected by mothers' mild hypothyroidism at the beginning of pregnancy. These results agree with some, but not all, of the other studies that have been done on this topic. Since the potential effects of hypothyroidism on brain development can be devastating, further research is urgently needed. Until then the recommendation to keep the TSH <2.5 in pregnant hypothyroid women remains the standard of care.

—Angela Leung, MD

ATA THYROID BROCHURE LINKS

Hypothyroidism: http://thyroid.org/patients/patient_brochures/hypothyroidism.html

Thyroid and Pregnancy: http://thyroid.org/patients/patient_brochures/pregnancy.html

Thyroid Function Tests: http://thyroid.org/patients/patient_brochures/function_tests.html

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ABBREVIATIONS & DEFINITIONS

Hypothyroidism: a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

Subclinical Hypothyroidism: a mild form of hypothyroidism where the only abnormal hormone

level is an increased TSH. There is controversy as to whether this should be treated or not.

TSH: thyroid stimulating hormone – produced by the pituitary gland that regulates thyroid function; also the best screening test to determine if the thyroid is functioning normally.