Levothyroxine to increase live births in euthyroid women with thyroid antibodies trying to conceive: the TABLET RCT

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Plain English summary

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Miscarriage, the loss of a pregnancy before 24 weeks, affects one in five women. In addition, up to 1 in 10 babies are born too early, between 24 and 37 weeks of pregnancy. Antibodies protect us from viruses and bacteria, but can also be produced against the body’s own cells. Thyroid gland antibodies are found in the blood in approximately 1 in 10 women who have no other thyroid problems, and have been linked to a higher risk of miscarriage and early birth. Previous small studies have suggested that giving levothyroxine (a hormone produced by the thyroid gland) to women with thyroid antibodies may reduce the risk of miscarriage. We studied whether or not taking levothyroxine, compared with placebo (dummy drug), increases the chance of delivering a live baby after 34 weeks of pregnancy.

Women who had had a previous miscarriage and wanted to get pregnant, or who were having infertility treatment, were invited to take a blood test for thyroid antibodies. Those who had thyroid antibodies and a normal thyroid function were divided into two groups at random by a computer: 476 received levothyroxine and 476 received an identical placebo. Neither the woman nor her doctor knew which group she was in. Both groups took a daily tablet for up to 1 year while trying to get pregnant, and then until the end of the pregnancy.

Of the 952 women in the study, 540 became pregnant and 354 had a baby after 34 weeks of pregnancy: 37% (176/470) in the levothyroxine group and 38% (178/470) in the placebo group. As the trial was large and of high quality, the research team are confident that levothyroxine does not improve pregnancy success for women with thyroid antibodies and normal thyroid function.
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