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Thyroid medication (under and over active) and breastfeeding

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Under- active thyroid

A mother with an under active thyroid needs to take medication to return her levels of levothyroxine to "normal". The dose of the drug is regulated by therapeutic drug monitoring. It is worth repeating blood levels after delivery as anecdotally, fluctuations seem common at this time. If the supplementation is too low, prolactin levels will be affected resulting in a poor milk supply. The correct dose gives a mother the level of levothyroxine of a normal breastfeeding mother. Symptoms of an under active thyroid include gain in body weight, dry skin and hair and tiredness.

Levothyroxine is secreted in extremely low levels into breastmilk, if at all ⁽¹⁾. It is highly bound to proteins in the maternal plasma. The estimated level to which the baby will be exposed is theoretically 0.6 nanogrammes per kilogramme per day - virtually undetectable. Levels secreted into milk are too low to influence tests for neonatal hypothyroidism ⁽²⁾.

Over - active thyroid

A mother with an over active thyroid gland produces raised levels of levothyroxine and will experience symptoms which may include tachycardia (increased heart rate), sweating, heat intolerance and loss of body weight. Symptoms are initially controlled by anti-thyroid drugs (carbimazole or propylthiouracil) and beta blockers. In some cases the gland is removed surgically or by the use of radioactive iodine and levels replaced by synthetic levothyroxine.

Carbimazole (Neomercazole®) reaches sub-clinical levels in infants exposed to less than 30mg a day through their mother's breastmilk ⁽³⁾. The theoretical infant dose is 6.45 microgrammes per kg per day. If this drug is used monitoring of the infant's thyroid function is recommended.

Propylthiouracil (PTU) is the drug of choice in a breastfeeding mother. Only small amounts are secreted into breastmilk and reports suggest that levels are too low to produce side effects. At doses of 400mg, a study of 9 women and their babies showed no change in infant thyroid function ⁽⁴⁾. A further study has shown that up to 750mg produces no changes

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⁽⁵⁾. However monitoring is recommended. Theoretical infant dose is quoted as 0.105mg/kg/day

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