



Hypothyroidism and Reproduction- Patient Handout

What is hypothyroidism?

The thyroid is a gland that regulates the body's metabolism. When the gland is underactive, this can lead to hypothyroidism. Some people may experience fatigue, cold intolerance, weight gain, dry skin, constipation, or menstrual irregularities. In severe cases, it may even lead to increased risk of miscarriage or pregnancy complications.

How do we test for hypothyroidism?

Every patient who is undergoing an infertility evaluation will have their thyroid stimulating hormone (TSH) tested.

A high TSH (>4 mIU/L) indicates you may have hypothyroidism. This must be confirmed by testing your free T4 level (one of the substances secreted by your thyroid). If this is low, then you have **overt hypothyroidism**. If your TSH is > 4 but your free T4 level is normal, then you have **subclinical hypothyroidism**.

You may also receive testing for anti-thyroid antibodies. The presence of antibodies is a risk factor for developing thyroid disease later in life, even if your other testing is normal now.

How do we treat hypothyroidism?

If you are attempting to conceive and your TSH is above 4, you should be treated with a medication called **levothyroxine** (brand names: Synthroid or Levoxyl). This is based on recommendations by both the American Society of Reproductive Medicine (ASRM) and American Thyroid Association (ATA).

In the past, patients undergoing fertility treatment often received treatment with TSH > 2.5 . However, newer studies show that treatment of patients with TSH 2.5-4 had no impact on improving pregnancy outcomes. Therefore, we now only recommend treatment for TSH > 4 .

How do I take levothyroxine?

Levothyroxine should be taken on an empty stomach, with water, ideally 30-60 minutes before breakfast. If taken at night, it needs to be at least 2 hours after your last meal.

It should not be taken with other medications that will affect its absorption, including but not limited to:

- Calcium supplements (calcium carbonate)
- Iron supplements (ferrous sulfate)
- Bile acid resins (cholestyramine, colestipol, colesevelam)
- Gastric reflux meds (omeprazole, lansoprazole, etc)
- Ciprofloxacin
- Rifampin
- Phenobarbital
- Carbamazepine
- Phenytoin
- Raloxifene