

**THEODORE C. FRIEDMAN, MD, Ph.D.**  
**OPTIMIZING THYROID HORMONE REPLACEMENT**

Dr. Friedman optimizes thyroid hormone replacement in all his patients. He bases this on 3 factors: how the patient is feeling, the patient's thyroid function tests, and side effect profile. The first issue is what thyroid medicine is the patient on? Dr. Friedman gives various combinations of thyroid hormone replacement to patients depending on their circumstances and conditions. Most of the time, he starts with T4 replacement that could be Synthroid, Levoxy, generic levothyroxine, or a new product called Tiroshint which is a liquid form of thyroid hormone in a gel that has no additives, preservatives, or dyes. If the patient is on T4 treatment, Dr. Friedman primarily looks at the TSH and aims for a TSH between 0.5 and 2.0. Within this range, Dr. Friedman may adjust the thyroid hormone dose slightly based on the patient's symptoms. If the patient is having some hypothyroid symptoms, he might increase it so the TSH is near the bottom of the range and if the patient is having some hyperthyroid symptoms, Dr. Friedman may decrease the thyroid hormone so the TSH is near the top of this range between 0.5 and 2.0. At times, Dr. Friedman fine tunes the thyroid dosage by having the patient take one dose 5 days a week and another dose on weekends. For example, he may have a patient take 100 mcg of levoxy on weekdays and 112 mcg on weekends.

Dr. Friedman puts some patients, especially those that are euthyroid on T4 replacement and still having hypothyroid symptoms, on either an Armour/T4 combination or a T4/T3 combination. Although T4 is long-lasting and most patients do fine on T4, there are many patients who do not convert T4 to T3 properly and for this reason, Dr. Friedman uses some T3 preparations. Armour has T4 and T3 in it in a fairly good mixture and also contains other thyroid factors that may be beneficial. Because the T4 and T3 in Armour is mixed in with other proteins, Armour's half-life is a little longer than if the patient is just taking T3 which would have a very short half-life. However, Armour should be given twice a day because of the T3 in it that has a short half-life. Dr. Friedman adds T4 to Armour because Armour has too much T3 in it by itself and therefore, Dr. Friedman would give a little lower dose of Armour and supplement with T4. If Dr. Friedman gives T3 plus T4, he gives the T4 once a day and the T3 dose two or three times a day, or he gives slow-release T3 compounded for daily use.

If a patient is on an Armour/T4 combination or T4/T3 combination, Dr. Friedman will often see a low TSH. Dr. Friedman does not like the TSH to be completely zero, but is comfortable with it being slightly below the normal range. Dr. Friedman would then aim for a free T4 and free T3 in the mid-to-upper normal range with the TSH slightly below the lower range. The suppressed TSH occurs because the T3 in either Armour or T3 quickly suppresses the TSH after its administered and often leads to a lower TSH even though the free T4 and free T3 are normal. It is unlikely the patient will have side effects from having this suppressed TSH, but Dr. Friedman would watch carefully for any heart problems or osteoporosis.

Page 2

Dr. Friedman then evaluates the patient's symptoms and is looking for an improvement in the patient's hypothyroid symptoms. Most of the time, the patient sees a fairly rapid improvement in his/her symptoms if he/she was truly hypothyroid. Sometimes, the patient needs a little bit longer

time or a little adjustment of either the dose or type of thyroid medicine before an improvement is seen. If there is no improvement seen, Dr. Friedman reassess the diagnosis of hypothyroidism and would look for other causes of some of the symptoms that may be overlapping with the symptoms due to hypothyroidism.

Dr. Friedman also carefully monitors patients for side effect. For example, too much thyroid hormone can give palpitations, jittery feeling, wired, trouble sleeping, and other symptoms of hyperthyroidism. If this is the case, Dr. Friedman would back down on the thyroid hormone replacement.

Dr. Friedman is aiming for optimal thyroid health and monitoring a patient on thyroid hormone replacement is crucial. For more information about Dr. Friedman's practice, please go to [www.goodhormonehealth.com](http://www.goodhormonehealth.com).