



HYPOTHYROIDISM

Desiccated thyroid extract vs Levothyroxine in the treatment of hypothyroidism

BACKGROUND

Hypothyroidism, or an underactive thyroid gland, is a common endocrine problem and requires lifelong treatment with thyroid hormone pills. Untreated hypothyroidism is associated with a wide variety of symptoms, many of which are nonspecific. In particular, memory problems and depression (psychometric problems) as well as weight gain are very common symptoms in hypothyroidism but also have multiple other nonthyroidal causes as well. Levothyroxine is the main thyroid hormone produced by the thyroid gland and the synthetic form is the most common form of thyroid hormone replacement therapy. Prior to the availability of the pure levothyroxine, desiccated animal thyroid extract was the only treatment for hypothyroidism. Today, some individuals prefer desiccated thyroid extract as a more “natural” thyroid hormone. In addition, some patients who continue to have symptoms of hypothyroidism when taking levothyroxine report improvement in these symptoms when switched to desiccated thyroid extract. This study was performed to compare levothyroxine to desiccated thyroid extract in terms of thyroid blood tests, changes in weight, psychometric test results and patient preference.

THE FULL ARTICLE TITLE

Hoang TD et al Desiccated thyroid extract compared with levothyroxine in the treatment of hypothyroidism: A randomized, double-blind, crossover study. *J Clin Endocrinol Metab* 2013;98:1982-90. Epub March 28, 2013.

SUMMARY OF THE STUDY

This was a study of 70 patients with hypothyroidism who were treated with either desiccated thyroid extract or levothyroxine for 12 weeks followed by a switch to

the other option for another 16 weeks. The participants were “blinded” during both phases – they did not know the type of pill they received. After each treatment period patients were weighed, had blood tests, underwent psychometric testing and were asked which therapy they preferred. The researchers report that 49% of the patients preferred desiccated thyroid extract, 19% preferred levothyroxine and 23% had no preference. Desiccated thyroid extract use was also associated with more weight loss. There was no difference in the psychometric testing or in any symptoms. Both types of thyroid hormone were able to normalize the abnormal thyroid blood tests.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Although desiccated thyroid extract is not widely used, this study showed that many patients preferred this option as compared with levothyroxine. This result was observed despite there being no differences in thyroid function blood test and psychometric test results, although use of desiccated thyroid extract was associated with some weight loss. These results suggest that there may be a certain number of patients in who desiccated thyroid extract might be a reasonable treatment option. Further research is needed on this topic to confirm which patients this might benefit the most from desiccated thyroid extract therapy.

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ATA THYROID BROCHURE LINKS

Hypothyroidism: <http://www.thyroid.org/what-is-hypothyroidism>

Thyroid Hormone Treatment: <http://www.thyroid.org/thyroid-hormone-treatment>

ABBREVIATIONS & DEFINITIONS

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

Levothyroxine (T4): the major hormone produced by

the thyroid gland and available in pill form as LevoxyI™, Synthroid™, Levothroid™ and generic preparations.

Desiccated thyroid extract: thyroid hormone pill made from animal thyroid glands. Currently desiccated thyroid extract is made from pig thyroids and is available as Armour Thyroid™ and Nature-Throid™.