

CONCLUSIONS: In patients with hypothyroidism, partial substitution of triiodothyronine for thyroxine may improve mood and neuropsychological function; this finding suggests a specific effect of the triiodothyronine.

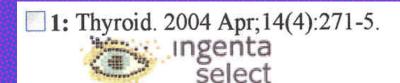
1: BMJ. 2003 Feb 8;326(7384):295-6.

T4 AND T3 TREATMENTS

Thyroid function tests and hypothyroidism.

Toft AD, Beckett GJ.

Although the potential improvement in the well-being of patients with hypothyroidism while taking a combination of T3 and T4 is of great interest, the greatest advantage will be the security of a normal TSH while taking physiological replacement.



T4 AND T3 TREATMENTS

Thyroxine plus low-dose, slow-release triiodothyronine replacement in hypothyroidism: proof of principle.

Hennemann G, Docter R, Visser TJ, Postema PT, Krenning EP.

Studies in hypothyroid rats show that, when infused with a combination of thyroxine (T4) plus triiodothyronine (T3) to normalize thyrotropin (TSH), euthyroidism in all organs is only ensured when T4 and T3 are administered in a ratio as normally secreted by the rat thyroid.

T4 AND T3 TREATMENTS

Thyroid Hormone Replacement for Central Hypothyroidism: A Randomized Controlled Trial Comparing Two Doses of Thyroxine (T_4) with a Combination of T_4 and Triiodothyronine

Marc Slawik, Björn Klawitter,* Edith Meiser,* Marcus Schories, Oliver Zwermann, Katrin Borm, Martin Peper, Beate Lubrich, Martin J. Hug, Markus Nauck, Manfred Olschewski, Felix Beuschlein, and Martin Reincke

Thus, using a fixed starting dose of T4 (e.g. 1.6 µg/kg body weight), combined with thyroid hormone determinations aiming at free T4 levels close to the upper normal limit and free T3 levels in the upper half of the normal range, seems to be a reasonable approach.

Common Variation in the DIO2 Gene Predicts Baseline Psychological Well-Being and Response to **Combination Thyroxine Plus Triiodothyronine** Therapy in Hypothyroid Patients

J Clin Endocrinol Metab, May 2009, 94(5):1623–1629 T4 AND T3 TREATMENTS

Vijay Panicker, Ponnusamy Saravanan, Bijay Vaidya, Jonathan Evans, Andrew T. Hattersley, Timothy M. Frayling, and Colin M. Dayan

Up to 3% of the population in Western countries is on thyroid hormone replacement (1), the majority on T4 alone. However, the adequacy of this to replace physiological requirements and reverse patient's symptoms remains controversial due to several observations.

Eur J Endocrinol. 2009 Dec;161(6):895-902. Epub 2009 Aug 7.

Effect of combination therapy with thyroxine (T4) and 3,5,3'triiodothyronine versus T4 monotherapy in patients with hypothyroidism, a double-blind, randomised cross-over study. **T4 AND T3 TREATMENTS**

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Conclusion: In a study design, where morning TSH levels were unaltered between groups combination therapy, (treated with T₃ 20 mcg once daily) was superior to monotherapy by evaluating several quality of life (QOL), depression and anxiety rating scales as well as patients own preference.

CLINICAL STUDY

T4 AND T3 TREATMENTS

Effect of combination therapy with thyroxine (T_4) and 3,5,3'-triiodothyronine versus T_4 monotherapy in patients with hypothyroidism, a double-blind, randomised cross-over study

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These results indicate that T_3 originating from the thyroid gland and not only from local deiodination of T4 seems needed to keep optimal balance in the tissues.

Eur J Endocrinol. 2009 Dec;161(6):895-902. Epub 2009 Aug 7.

Effect of combination therapy with thyroxine (T4) and 3,5,3'-triiodothyronine versus T4 monotherapy in patients with hypothyroidism, a double-blind, randomised cross-over study.

T4 AND T3 TREATMENTS

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No differences with regard to side effects were seen. During T₄/T₃ combination therapy five subjects experienced side effects: palpitations (n=3), excessive sweating (n=1), and psychological instability (n=1)); during T_4 monotherapy: nine subjects reported side effects: palpitations (n=5), excessive sweating (1), and psychological instability (3).

Eur J Endocrinol. 2009 Dec;161(6):955-9. Epub 2009 Oct 6.

Do we need still more trials on T4 and T3 combination therapy in hypothyroidism? Wiggings WM

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Reasons for publication might have been (...) paying attention to the unresolved issue of persisting complaints in a subset of hypothyroid patients despite what we call adequate doses of T4 replacement.