

# Hypothyroidism and T3: References

Purpose of this compilation

To show that treating hypothyroidism with T3 (triiodothyronine) in addition to T4 has a scientific as well as a clinical basis, and that for many hypothyroid patients, supplementing with T4 (thyroxine) alone does not constitute adequate treatment. These findings come from Europe and North America.

## I. Medical Journals

### A. The Journal of Clinical Investigation

"Replacement therapy for hypothyroidism with thyroxine alone does not ensure euthyroidism in all tissues, as studied in thyroidectomized rats" by Escobar-Morreale HF; Obregon MJ; Escobar del Rey F; Morreale de Escobar G (Spain) 1995 Dec;96(6):2828-38

Not online at J Clin Invest; the abstract can be found via a Medscape Medline search at <http://www.medscape.com/server-java/MedlineSearchForm> (registration required for access) ...euthyroidism is not restored in plasma and all tissues of thyroidectomized rats on T4 alone. These results may well be pertinent to patients on T4 replacement therapy.

### A. The Journal of Clinical Psychiatry

"T3 is at least as important as T4 in All Hypothyroid Patients" by John V Domnisse (US), MD, FRCPC

A summary was published in July 1993

<http://www.johndomnissemd.com/report1a.html>

I would...suggest that all hypothyroid patients require both their T4 and T3 bloodlevels to be in their mid- to high-normal ranges. If T4-only treatment provides these levels, fine; if not, T3 needs to be added to the treatment.

### A. The New England Journal of Medicine

"Effects of Thyroxine as Compared with Thyroxine plus Triiodothyronine in Patients with Hypothyroidism" by Robertas Bunevicius, Gintautas Kazanavicius, Rimantas Zalinkevicius, Arthur J. Prange, Jr.

February 11, 1999 -- Vol. 340, No. 6 (abstract):

<http://www.nejm.org/content/1999/0340/0006/0424.asp>

In patients with hypothyroidism, partial substitution of triiodothyronine [T3] for thyroxine [T4] may improve mood and neuropsychological

function; this finding suggests a specific effect of the triiodothyronine normally secreted by the thyroid gland.

## II. Doctors' Websites

"Suggestions for an Approach to the Management of Thyroid Deficiency" by Dr Barry J. Durrant-Peatfield (UK)

[http://www.foxleylaneclinic.co.uk/Suggestions\\_1.htm](http://www.foxleylaneclinic.co.uk/Suggestions_1.htm)

...if natural thyroid is not to be used, then at least T4 should be combined with T3 for a more satisfactory and more logical replacement.

1. "Hypothyroidism (low thyroid)" by Richard I. Gracer (US), M.D.  
<http://gracermd.com/1999.htm#Hypothyroidism>

T4 is converted to T3 at cellular level by a specific enzyme. T4 is not actually used by the cells. T3 is the active hormone. It seems clear that the enzyme that changes T4 to T3 may be deficient, causing symptoms of hypothyroidism even in people who have normal T4 levels. These patients need to take T3.

1. Dr. John C. Lowe (US): [drloewe.com Most Recent Q&As](http://www.drloewe.com/q&a/askdrloewe/mostrecent.htm)  
<http://www.drloewe.com/q&a/askdrloewe/mostrecent.htm>

...this [T4 only] mandate is not scientifically based. Instead, it's based on a powerful marketing campaign of a major pharmaceutical company....As a result, they [conventional endocrinologists and thyroid specialists] 've deprived themselves of clinical experience with any thyroid preparation other than T4.

4. "Optimum Diagnosis and Treatment of Hypothyroidism With Free T3 and Free T4 Levels" by Dr. Joseph Mercola (US), DO  
[http://www.mercola.com/article/hypothyroid/diagnosis\\_comp.htm](http://www.mercola.com/article/hypothyroid/diagnosis_comp.htm)

If the Free T3 level is significantly lower than the Free T4 level, it is next to useless to treat with Synthroid/ Levoxyl/Levothroid (T4) only replacements. If the patient could not muster sufficient T3 from their gland (which produces some T3 directly), then they are certainly not going to convert enough T3 from T4 only. Traditional medicine assumes that preparations like Synthroid which are T4 only converts peripherally in the body to T3 in fairly standard amounts and at fairly standard rates. Unfortunately, clinical experience shows this is not true for the majority of patients. Consistent measuring of both free T3 and free T4 blood levels in hypothyroid patients who are on T4 only therapy will very rapidly dispel this myth. A certain percentage of hypothyroid patients do convert enough T4 to T3 at a sufficient rate for T4 treatment to be adequate as a source of T3; but a substantial proportion of patients require some combination of both exogenous T3 and T4.

5. "Use of **T3** Thyroid Hormone to Treat Depression" by Gabe Mirkin (US), M.D.  
<http://www.drmirkin.com/morehealth/G171.htm>

...some people become depressed when they take just T4 and their depression can be cured when they take both thyroid hormones, **T3** and T4.

### III. Interviews With Doctors by Mary Shomon

1. An interview with John Dommissie (US), MD, FRCP, November 2000, in which he discusses his self-published paper titled "Hypothyroidism: Sensitive diagnosis and optimal treatment (of all types and grades) - A review and comprehensive hypothesis."  
<http://thyroid.about.com/health/thyroid/library/weekly/aa110300a.htm>

The endocrinology establishment has also argued against treatment with any **T3**, even in combination preparations...namely that each morning/ daily treatment dose would cause peaks in the afternoon that are too high, and valleys at night and in the morning that are too low. It never seems to occur to them that this objection is very easily overcome by prescribing all **T3**-containing preparations either after breakfast and supper daily OR on an empty stomach every 8 hours....

1. "Rethinking the TSH Test: An Interview with David Derry [Canada], M.D., Ph.D." July 2000  
<http://thyroid.about.com/health/thyroid/library/weekly/aa072500a.htm>

Mary Shomon: What type of thyroid hormone replacement therapy do you favor? Levothyroxine, levothyroxine plus **T3**, or natural thyroid hormone replacement, and why?

David Derry: I use any of the above. In Canada we have only Eltroxine (levothyroxine) or desiccated thyroid (Parke-Davis). **T3** is available through specialty pharmacies but is not as readily available as in the US. If I don't get the response that I am looking for, I will often switch either way in order to try and make the patient better.

1. An Interview with David Brownstein (US), MD, July 2000: "Natural Hormones for Hypothyroidism"  
<http://thyroid.about.com/health/thyroid/library/weekly/aa071700a.htm>

In my experience, Armour Thyroid provides the best results for the majority of patients. Armour thyroid not only contains **T3** and T4, but it contains many other factors that facilitate the conversion of T4 to **T3** including calcitonin, T1, T2 and many other chemicals that we have not even identified.

3. An Interview with Carol Roberts (US), MD, June 2000: "A Look at Hypothyroidism and Armour Thyroid, Vitamin and Mineral Supplements, Type A Personalities, and More..."  
<http://thyroid.about.com/health/thyroid/library/weekly/aa062000a.htm>

The ideal thyroid replacement would be natural human thyroid in exactly the right proportions. However, since this is not currently available I use the desiccated animal product because it seems to work well for most patients, much better certainly than synthetic T4 alone (Synthroid).

3. An interview with John Dommissie (US), MD, FRCP, September 1999, in which he discusses treating people with a TSH over 1, as well as the use of T3  
<http://thyroid.about.com/health/thyroid/library/weekly/aa092299.htm>

There is not much danger of over-treatment if all you are trying to do is 'put the TSH and, perhaps the T4 level, in its normal range' because you are sailing 'far from the edge' in that case. But your patient is going to suffer the overall disadvantages of continuing to run a low-normal, sub-optimal level of both hormones. In my view, these disadvantages... are far, far greater than the potential dangers of over-treatment, if one knows how to prescribe T3 and monitors the FT4 and FT3 levels regularly.

3. "Fibromyalgia Aches and Pains as a "Symptom" of Hypothyroidism: A Look at the Theories of Dr. John Lowe" (US)  
<http://thyroid.about.com/health/thyroid/library/weekly/bldrlowe.htm>

I have found that many hypothyroid patients also have cellular resistance to thyroid hormone. Most of these patients don't benefit much from T4 alone, but some of them do from desiccated thyroid, presumably because of the relatively high T3 content. Some we have to switch to synthetic T3 because they don't benefit from desiccated thyroid. We've stopped altogether giving patients T4 alone.

#### IV. Other Websites

1. Thyroid Health Information Site: "Thyroid Therapy: Mimicking Mother Nature" by Alan R. Gaby, MD (US doctor; UK site)  
<http://freespace.virgin.net/smokey.quartz/this.html>

...some hypothyroid patients whose symptoms fail to respond to T4 alone have a rapid and marked improvement when their treatment is changed to an equivalent dose of thyroid extract (such as Armour thyroid).

2. "Is Your Hypothyroidism UNDERtreated?" 08/14/99 by Mary Shomon (US), author of About.com Guide to Thyroid Disease and Living Well With Hypothyroidism <http://thyroid.about.com/health/thyroid/library/weekly/aa081499.htm>

Many people have a normal or even LOW-normal TSH level, yet still suffer continuing hypothyroidism symptoms. In these cases, the addition of **T3** helped relieve depression, brain fog, fatigue and other symptoms.

3. A collection of patients' experiences with the use of **T3** (various countries) <http://thyroid.bravepages.com/t3/t3exp.rtf>

Cheryl: It makes me very angry that docs don't do their homework after med school. I have been taking **T3** with my T4 now for a year and have never felt better. Even with just the T4 I was still depressed, anxiety attacks, weight gain, foggy head, tired, etc. The **T3** immediately cleared the foggy head and the other symptoms went away soon after.

Stuart H: ...I go from feeling kind of 'fuzzy' to clear thinking about 10 or 15 minutes after taking my morning dose. I've tried not taking the **T3** a couple of times just to see if it's really making a difference but after an hour or two I start feeling my old self (kind of zombie like) so I go ahead and take it and BAM! a few minutes later I feel 'normal.'

John Riggs: ...I started adding **T3** to the mix. The sinuses cleared, the vision improved, headaches went away, libido returned, cognitive abilities improved, and sleep returned to normal. Those are just a few of the things that improved by adding a relatively cheap pill.

JW: I have grave's and had the RAI 4 years ago. I tried Synthroid for 2 and a half years and even with the proper levels in my test still felt horrible. I have been on Armour/ 105 once a day for a year and a half and feel great!!

David: After being on just Thyroxine for 8+ years I also switched to the T4/**T3** combination (Cytomel). My depression, brain fog, and tiredness are gone. I'm back in the land of the living.

## V. Books

1. Living Well With Hypothyroidism: What Your Doctors Don't Tell You...That You Need to Know by Mary J. Shomon (US), author of About.com Guide to Thyroid Disease, 2000

Meanwhile, if doctors like Toft, Greenspan, Yeo and their colleagues have their way, patients may wait forever for the big enough, long-enough, peer-reviewed-enough study that proves what the research has already shown, and patients already know. Thyroid patients have wasted enough valuable time not feeling well, living lives at half-speed, waiting to feel better, while doctors tell us that more research is needed. They could literally research our lives away. We already have the research findings that can help many people. And we have the anecdotal knowledge of thousands upon thousands of thyroid patients and their doctors who are able to live well with the use of **T3** drugs. Thyroid patients have waited long enough. Responsible doctors owe it to their patients to carefully consider whether or not **T3** will benefit their patients. (p. 154)

2. The Thyroid Solution by Dr. Ridha Arem (US), 1999

Many people continue to suffer from symptoms of low metabolism. They have difficulty losing weight, and they complain of hair loss, dry skin, brittle nails, muscle cramps, and a host of physical symptoms. These symptoms indicate that the body is not receiving exactly the right amount of **T3** from the conversion of T4. Many people suffer from some degree of depression, also probably due to some extent to low **T3** in the brain. (p. 285)