



**Metis Research, Inc.**  
**A West Virginia Non-Profit Corporation**

Members of Scottish Parliament:

[petitions@scottish.parliament.uk](mailto:petitions@scottish.parliament.uk)

Re: **PE01463 Effective thyroid and adrenal testing, diagnosis and treatment**

Dear Members:

Effective "thyroid" testing depends on the view taken by patients since they are the customers of the medical system. Typically patients associate "thyroid" with the symptoms of hypothyroidism whether those symptoms were caused by dysfunction of the thyroid gland or not. Indeed, "or not" is the problem before us. The reality that medical practice ignores is simple: There is more physiology to be considered than only the thyroid gland and there are more tests to be considered than the thyroid function tests. The physiology that should be considered is shown in Figure 1, the Greater Thyroid System. [1-4] Obviously, from the sides of this figure, there are many potentials for tests, function inputs on the left and outputs on the right. Obviously there are far more potentials than TSH, fT4, and antibodies, within the endocrine system and after it in the post-thyroid physiology. [2-4]

The general medical practice is to screen with TSH. However, notice in Figure 2 that secondary hypothyroidism or pituitary deficiency has a TSH range that includes parts of the hypothyroidism and hyperthyroidism ranges as well as all of the normal range. [5] Obviously, with the TSH test alone, secondary hypothyroidism may be missed.

Further, TSH cannot find hypothalamic deficiency, since proper functioning pituitary and thyroid glands will generally produce a normal TSH.

The confirmation of hypothyroidism is routinely done with both a TSH and fT4 tests. However, there is euthyroid (the thyroid is OK) hypometabolism (the body has little energy). This requires the additional test for fT3. [6] But there are more functions and they haven't been tested.

The T3 modulates or controls the respiratory cycle that uses the cell nutrients, blood sugar and oxygen and produces water, carbon dioxide and converts the produced energy into ATP (adenosine triphosphate) from ADP (adenosine diphosphate). The ATP then carries its phosphate bond energy to power the body's functions. This action can be monitored by the ATP/ADP ratio in the blood, or by oxygen consumption via basal, or resting metabolism rate. Since the ATP production is proportional to sugar and oxygen consumption and ATP production is controlled by T3, then oxygen consumption is an indirect measurement of T3 in the mitochondria. [4,7,8] Energy extraction from ATP to ADP conversion is required by a host of metabolisms in the body. [8] In other words:

"T3 is the active ingredient, and it's the thing that accounts for the thyroid hormone action. As I've been reminded many times, there are no intracellular events that we know that can be described by T4 at the level of the nucleus. Only T3." [9]

"Free T3 is by definition a direct expression of the metabolic support given by the hormone to the tissues generally, and therefore should more accurately reflect the general wellbeing of the patient." [10]

Thus, the well being of a patient is related to the results of resting metabolism rates, i.e., her use of oxygen while resting. Indeed, this analysis gives some, not all, credence back to the basal temperature diagnostic since the use of energy becomes heat in a resting body, since inadequate heat produces lower body temperatures.

Contrary to Evidence-Based Medicine, [1,11,12] heed must be given to medical science. Thyroxine (T4) replacement does not work for all those suffering from the symptoms of hypothyroidism. [13,14] Triiodothyronine (T3) is the most active thyroid hormone [15] and has been used successfully where endocrinology fails. [6,16] Counterexamples are valuable [17] and endocrinology's treatment of the symptoms of hypothyroidism has many. [6,16,18,19] Some of these patient counterexamples have had to regain their health more than once. Consequently, they fit the causality CDR test, [20] which suggests T3 is a benefit for some. Even endocrinology's various red herrings, such as T3 danger, are debunked. [1]

If medicine, and more importantly the control of medical practice, is to properly care for those patients getting no relief from the continuing symptoms of hypothyroidism, [21] then physicians and physician disciplinarians must limit [1] misguided science [22-27] and comply with the standards of medical ethics:

***Make the Care of Your Patient Your First Concern*** The UK General Medical Council (2006)

***A Physician Shall Owe His/Her Patients Complete Loyalty and all the Scientific Resources Available to Him/Her.*** World Medical Association (1949, 1968, 1983)

***Be Honest and Open and Act With Integrity.*** The UK General Medical Council (2006)

***Provide a Good Standard of Practice and Care. Keep Your Professional Knowledge and Skills up to Date.*** The UK General Medical Council (2006)

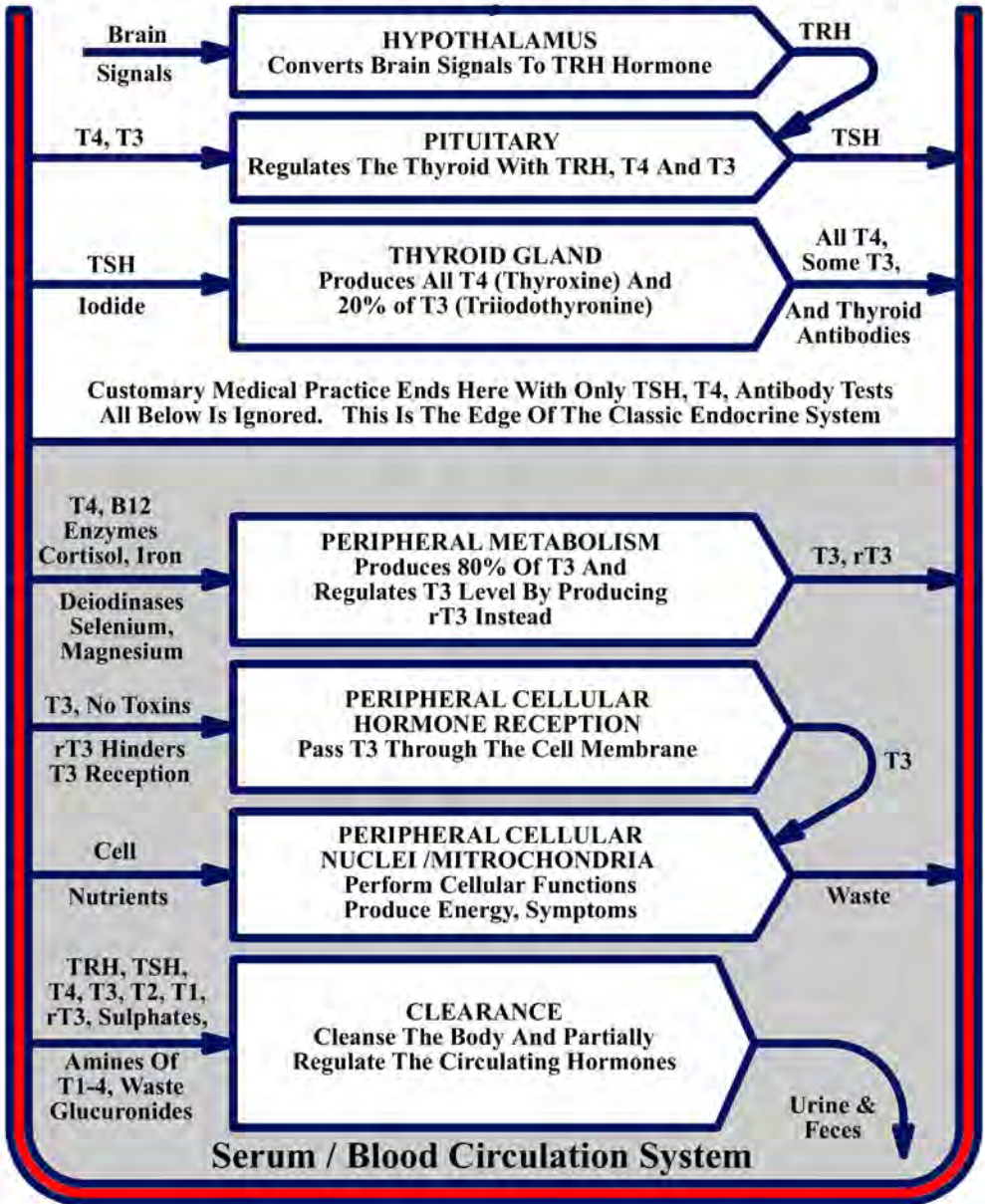
Sincerely, Eric K. Pritchard, M.Sc.

## **Endnotes:**

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# Figure 1 - The Greater Thyroid System Customary Practice Ignores The Gray Area



## Figure 2 - TSH Ranges

