

“The Diagnosis and Management of Primary Hypothyroidism” vs. Post Thyroid Deficiencies

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The statement “The Diagnosis and Management of Primary Hypothyroidism” by the Royal College of Physicians presents very serious healthcare problems for those patients with the post thyroid deficiencies of deficient peripheral metabolism or deficient hormone reception by the peripheral cells. Nominally, there should not be a conflict because this statement claims to address primary hypothyroidism only. However, some of the statements in conclusion have a far greater breadth. They can only be interpreted to include post thyroid deficiencies with the unmistakable proscription of all triiodothyronine (T3) hormone replacements. These replacements are necessary for the lives and well-being of the post thyroid deficient patient, and now, victim.

There is a real conflict between the vision, purpose, and objectives of the Royal College of Physicians (RCP) and the diagnosis and treatment of post thyroid deficiencies. The claimed highest medical standards fail to acknowledge, diagnose, and treat post thyroid deficiencies. Rather their standard promotes chronic suffering for the victims of these deficiencies. In fact, for these victims, the Royal College of Physicians has turned the calendar back more than a century to do what medicine did then – nothing. King Henry VIII would be sorely disappointed in this portion of his legacy.

Initially, the RCP statement gives the thyroxine-resistant, post thyroid deficient patient real hope. First, the RCP declared that their statement was only on primary hypothyroidism, a deficiency of the thyroid gland. Second, the RCP stated that those with continuing symptoms of hypothyroidism in spite of “normal” levels of the thyroid stimulating hormone (TSH) and thyroxine (T4), should be investigated for non-thyroid sources of their symptoms. Since the peripheral metabolism sites are hosted by major organs, the hope was for medicine to finally be free to threat and mitigate the otherwise chronic symptoms of post thyroid deficiencies – deficient peripheral metabolism and deficient peripheral cellular hormone reception.

However, all hopes for high medical standards or any rational standard for post thyroid were dashed in the conclusion. Here, the Royal College of Physicians returned to the pre-20th Century lack of appropriate therapy with their prohibition against any thyroid hormone therapy for continuing symptoms of hypothyroidism.

This situation demands a comparison between the objectives of the Royal College of Physicians with the post thyroid deficient patients’ reality.

<u>Vision, Purpose, and Objective of the Royal College of Physicians</u>	<u>The Reality of the Post Thyroid Deficient Patient</u>
Educated to the Highest Medical Standards	The medical science (see the annex) of the post thyroid etiologies of the symptoms of hypothyroidism, circa 1970, is systematically ignored and dismissed. [2-4]
Leading Role in Delivering High Quality Patient Care	The patients are ignored in favor of laboratory assays. When the “subjective” patient presentation conflicts with the “objective” blood test, the test results take precedence – the source of the conflict is not investigated – it could be that the test is improper or improperly interpreted as thyroid function tests are for post thyroid deficiencies.
Leading Role in Delivering High Quality Patient Care – Continued	<p>The medical care of the post thyroid deficient patient is essentially no care. The prescription by the Royal College of Physician for these victims is chronic suffering and increased susceptibility to disease, especially life’s great killers, diabetes and heart disease. [5-16]</p> <p>The Royal College of Physicians is not leading the way towards high quality patient care but following the improper, unethical care of post thyroid deficient patients required by other medical associations, British [17-19] and American [20-25]</p>
Leading Role in Delivering High Quality Patient Care – Continued	<p>The Royal College of Physicians statement on the diagnosis and management of primary hypothyroidism is not logically consistent. It also does not adhere to linguistic standards of care set in the 17th Century and does not adhere to protocols for authoring medical practice guidelines set forth by the American Association of Clinical Endocrinologists [26] and others.</p> <p>If this statement on the diagnosis and maintenance of primary hypothyroidism were examined as studies on medical practice guidelines [27-29] would do, it would be judged a failure, probably an abject failure.</p>

<p>Championing the Values of the Medical Profession</p>	<p>The medical care prescribed by the Royal College of Physicians for the post thyroid deficient patient violate numerous standards of medical ethics. Briefly they are the following:</p> <p><i>Provide a Good Standard of Practice and Care. Keep Your Professional Knowledge and Skills up to Date.</i> The UK General Medical Council (2006)</p> <p><i>Make the Care of Your Patient Your First Concern</i> The UK General Medical Council (2006)</p> <p><i>Be Honest and Open and Act With Integrity.</i> The UK General Medical Council (2006)</p> <p><i>In the treatment of a patient, where proven prophylactic, diagnostic and therapeutic methods do not exist or have been ineffective, the physician, with informed consent from the patient, must be free to use unproven or new prophylactic, diagnostic and therapeutic measures, if in the physician's judgement it offers hope of saving life, re-establishing health or alleviating suffering. Where possible, these measures should be made the object of research, designed to evaluate their safety and efficacy. In all cases, new information should be recorded and, where appropriate, published. The other relevant guidelines of this Declaration should be followed.</i> (World Medical Association - Helsinki, 1964)</p>
<p>Improving Standards of Clinical Practice</p>	<p>The clinical practice prescribed by the Royal College of Physicians for the post thyroid deficient patient ignores medical science, the differential diagnostic protocol, and evidence based medicine.</p>

<p>Improving Standards of Clinical Practice – Continued</p>	<p>Medical science has acknowledged the existence of the post thyroid operations upon thyroid hormones – the conversion of the relatively inactive pro-hormone, thyroxine (T4), to the active hormone, triiodothyronine (T3) and the reception of T3 by the peripheral cells for the use in their nuclei. But these are not included in any differential diagnostic expressed or implied. The evidence proffered by this medical science must be considered as part of clinical practice. However, the routine thyroid laboratory assays do not examine post thyroid behavior. And the Royal College of Physicians has effectively banned all other potential tests. This is contrary to the wisdom of system testing, which demands testing before and after every major function.</p> <p>Even more basically, the Royal College of Physicians is effectively covering up the shortfalls of medicine for the post thyroid deficient patient in the fog of imprecise language which confuses these issues by describing physiologically different issues by the same names and terms. [30]</p>
<p>Promoting Patient-Centered Care</p>	<p>The care of post thyroid deficient patients is distinctly not centered on the patient. It is, however, centered upon one or more quite unprofessional human frailties, such as ignorance or improper dismissal of relative medical science.</p> <p>The improper diagnosis of “functional somatoform disorders” unfairly blames the patients’ imaginations for their treatable physical deficiencies. [31] The improper blaming of inadequate medicine with “nonspecific symptoms” also unfairly condemns the patient to life-long chronic suffering. [4]</p> <p>If the Royal College of Physician statement were truly patient centered it would not proscribe the therapies that have been proven necessary in so many patients and are necessary in so many more. A study discovered of those treated for hypothyroidism, 13% were dissatisfied with their medical treatment and care [32] and worse. [33] These high dissatisfaction rates are neither caring nor professional.</p>

<p>Supporting Physicians in their Practice of Medicine</p>	<p>The Royal College of Physicians, by issuing the subject statement, has joined other professional societies in forcing a professional dilemma upon physicians: Treat post thyroid deficient patients ethically and scientifically and face the wrath of the General Medical Council. Or not treating the patient properly or ethically. Either way, this is hardly being supportive of the practice of medicine in the niche of post thyroid deficiencies. [30]</p> <p>The Royal College is setting a standard of care in the post thyroid deficiency niche which is unreasonably below the potential demonstrated by medical science.</p>
<p>Provide Leadership on Health and Healthcare Issues</p>	<p>The Royal College of Physicians in support of various endocrinology associations relative to the knowledge, diagnostics, and healthcare for the post thyroid deficient patient has not lead but retreated from modern medical science, embraced the imprecise language of this niche of medical practice, and created the basis for enforcement for virtually torturing of the post thyroid deficient patient. This is distinctly not healthcare leadership.</p>

Conclusion

The Royal College of Physicians began correctly by staying within the title's limit to primary hypothyroidism. Notably, continuing symptoms of hypothyroidism (or its mimics) are subject now for further medical investigation for non-thyroid causes. But then in the conclusion, for the victims of hypothyroidism's mimics, this is taken by the proscription of any thyroid hormone replacement for continuing symptoms in spite of potential non-thyroid, post thyroid causes. This proscription is unfounded in medical science.

There are proponents for desiccated thyroid, old [7] and new. [5,6] One study stands out in its giving lives back to patients. [34] Doctors Baisier, Hertoghe, and Eeckhaut treated 40 failures of the endocrinology establishment with desiccated thyroid with good results. And there are many more, for example. [35-39]

Endnotes and References

1. The Royal College of Physicians, The Diagnosis and Management of Primary Hypothyroidism, November 2008, Endorsed by the Royal College of General Practitioners made on behalf of numerous endocrinology associations
2. Gossel, TA, Endocrinology Continuing Education accredited by the Accreditation Council for Continuing Medical Education (ACCME), 2005
3. Garber JR, *Hypothyroidism—Talking Points 2006*, AACE
4. "Wilson's Syndrome," American Thyroid Association, Nov 1999 updated May 2005
5. Starr, Mark MD, *Hypothyroidism Type 2*, Mark Starr Trust, Columbia, MO, 2005
6. Lowe JC, *The Metabolic Treatment of Fibromyalgia*, McDowell Publishing Company, 2000
7. Barnes, B MD, *Hypothyroidism: The Unsuspected Illness*, Harper & Row, 1976, pgs 142-144, 178-181
8. American Thyroid Association, Hypothyroidism, ©2005, a patient brochure available at the ATA website: www.thyroid.org

9. *Hypothyroidism*, a publication by the American Association of Clinical Endocrinologists and supported by Abbott Laboratories. 2006 & 2008. www.thyroidawareness.com
10. Nikoo MH, Cardiovascular Manifestations of Hypothyroidism, *Shiraz E-Medical J*, 2(1) <http://www.sums.ac.ir/semj/vol2/jan2001/hypothy&heart.htm>
11. Hak AE, Pols HAP, Visser, TJ, et al., Low Thyroid Function Without Symptoms as a Risk Indicator for Heart Disease in Older Women, *Ann of Intern Med*, 15 Feb 2000, 132(4):270-278
12. Camacho PM, Dwarkanathan AA, Sick Euthyroid Syndrome, *Postgraduate Medicine*, April 1999, 105(4)
13. Canaris GJ, Manowitz NR, Mayor G, Ridgway EC, The Colorado Thyroid Disease Prevalence Study, *Arch Intern Med*, Feb 28, 2000, 160(4)
14. *Thyroid Problems Increase Risk of Heart Disease and Death*, American Thyroid Association, Oct 1, 2004
15. Kvetny J, Heldgaard PE, Bladbjerg EM, and Gram J, Subclinical Hypothyroidism is Associated with a Low-Grade Inflammation, Increased Triglyceride Levels, and Predicts Cardiovascular Disease in Males Below 50 Years, *Clin Endocrinol*, August 2004, 61(2):232
16. Iervasi G, Pingitore A, Landi P., et al., Low-T₃ Syndrome – A Strong Prognostic Predictor of Death in Patients With Heart Disease, *Clin Physiol Inst*, American Heart Association ©2003
17. *Hypothyroidism – Clinical Features and Treatment*, a publication of the British Thyroid Association, www.british-thyroid-association.org/guidelines.htm
18. Vanderpump MPJ, Ahlquist JAO, Franklyn JA, et al., Consensus Statement for Good Practice and Audit Measures in the Management of Hypothyroidism and Hyperthyroidism, *BMJ*, August 1996
19. UK Guidelines for the Use of Thyroid Function Tests, The Association for Clinical Biochemistry, British Thyroid Association, British Thyroid Foundation, 2006, www.british-thyroid-association.org/guidelines.htm
20. Baskin HJ, MD, Medical Guidelines for Clinical Practice for the Evaluation and Treatment of Hyperthyroidism and Hypothyroidism, *Am Assoc Clin Endocrinol*, 2002, Rev 2006
21. Levy EG, Ridgway EC, Wartofsky L, Algorithms for Diagnosis and Management of Thyroid Disorders, www.thyroidtoday.com 2004.
22. The American Thyroid Association provides links to several hypothyroidism related guidelines: "Use of Laboratory Tests in Thyroid Disorders," "Treatment Guidelines for Patients with Hyperthyroidism and Hypothyroidism," and "Guidelines for Detection of Thyroid Dysfunction."
23. Levy EG, Hypothyroidism Treatment Failure: Differential Diagnosis, www.thyroidtoday.com 2004.
24. Garber JR, Hennessey JV, Lieberman JA, Morris CM, Talbert RI, Managing the Challenges of Hypothyroidism, *Supplement to J of Fam Pract*, 2006, www.jponline.com
25. Kaplan MM, Clinical Perspectives in the Diagnosis of Thyroid Disease, *Clin Chem*, 1999, 45:8(B) 1377-1383
26. Mechanic JI, Berman DA, Braithwaite SS, Palumbo PJ, *American Association of Clinical Endocrinologists Protocol for Standardized Production of Clinical Practice Guidelines*, *Endocr Pract*, 2004, 10(4), Particularly Table 4
27. Shaneyfelt TM, Mayo-Smith MF, Rothwangl, J, Are Guidelines Following Guidelines?, *JAMA*, May 26, 1999., 281(20)
28. Grilli R, Magrini N, Penna A, Mura G, Liberati A, Practice Guidelines Developed by Specialty Societies: The Need For a Critical Appraisal, *Lancet*, Jan 8, 2000.
29. Burgers JS, Fervers B, Haugh M, Brouwers M, Browman G, Cluzeau PFA, International Assessment of the Quality of Clinical Practice Guidelines in Oncology Using the Appraisal of Guidelines and Research and Evaluation Instrument, *J Clin Oncol*, May 15, 2004, 22(10)
30. Pritchard EK, "The Linguistic Etiologies of Thyroxine-Resistant Hypothyroidism," *Thyroid Science* www.thyroidscience.com – click on "debate."
31. Weetman AP, Whose Thyroid Hormone Replacement is it Anyway? *Clin Endocrinol*, 2006;64(3):231-233
32. Saravanan P, Chau F, Roberts N, Vedhara K, Greenwood R, Dayan CM, 2002, Psychological Well-Being in Patients on "Adequate" Doses of L-Thyroxine Results of a Large, Controlled Community-Based Questionnaire Study, *Clinical Endocrinology*, 2002, 57: 577-585
33. Turner S, Hypothyroidism Patient Survey Results, Thyroid Patient Advocacy-UK, http://www.tpa-uk.org/tpauk_survey.pdf
34. Baisier, WV, Hertoghe, J., Eeckhaut, W., Thyroid Insufficiency? Is Thyroxine the Only Valuable Drug?, *J Nutr and Environ Med*, September 2001, 11(3):159-166
35. Gaby AR, Sub-Laboratory Hypothyroidism and the Empirical use of Armour® Thyroid, *Alt Med Rev*, 2004, 9(2)
36. Danzi S and Klein I, Potential Uses of T₃ in the Treatment of Human Disease, *Clin Cornerstone*, 2005, 7(S2): S9-S15
37. Bunevicius, R MD PhD, Kacanavicius, G MD PhD, Zalinkinevicius, R MD, Prange, A MD, Effects of Thyroxine as Compared with Thyroxine plus Triiodothyronine in Patients with Hypothyroidism, *NEJM*, Feb 11, 1999, 340:424-429
38. Bente C, Appelhof EF, Ellie MW, et al., Combined Therapy with Levothyroxine and Liothyronine in Two Ratios, Compared with Levothyroxine Monotherapy in Primary Hypothyroidism: a Double-Blind, Randomized, Controlled Clinical Trial, *J Clin Endocrinol Metabol*, 90(5):2666-2674.

39. Hertoghe T, Lo Cascio A., Hertoghe J. Considerable improvement of hypothyroid symptoms with two combined T₃-T₄ medication in patients still symptomatic with thyroxine treatment alone. *Anti-Aging Medicine*, Ed. German Society of Anti-Aging Medicine-Verlag 2003- 2004; 32-43

Annex – Milestones in the History of Thyroid Related Discoveries

Circa	Event
1786	Association between hyperthyroid state and changes in heart and eyes noted
1820	Iodide therapy used in Europe to treat goiters [Marine & Kimball]
1871	Cretinism described
1874	Myxedema (Gull's disease) described [Gull]
1883	Myxedema discovered after thyroidectomy [Kocher]
1891	Thyroid extract therapy for myxedema [Murray]
1895	Effect of thyroid on controlling metabolic rate discovered
1912	Hashimoto's disease described
1914	Thyroid hormone discovered and crystallized [Kendall]
1926	Structure determination of thyroxine (T ₄) [Harrington]
1952	Identification of triiodothyronine (T ₃), the much more active thyroid-related hormone [Gross & Pitt-Rivers]
	<i>The thyroid-only hypothyroidism paradigm became entrenched.</i>
1950's	Hypothyroidism-like malady that only responds to T ₃
1958	First synthetic thyroxine, Synthroid®, marketed without patent protection. <i>Some patients using synthetic thyroxine continue to exhibit symptoms in spite of being assayed as "normal."</i>
1963	Thyrotropin (TSH) purified
1960's	Thyrotropin (thyroid stimulating hormone) assay developed [Utiger & Odell]
1967	Identifies patients with resistance to T ₄ , but respond to T ₃ [Refetoff]
1967	Resistance to thyroid hormone reception found [Refetoff, Dewind, & DeGroot]
1970	Evidence that circulating T ₃ was derived largely from peripheral monodeiodination (conversion) of T ₄ [Braverman, Ingbar, & Sterling]
	<i>Medical science now knows that there are post-thyroid causes of hypothyroidism – but they are ignored in practice – medical science is trumped by the established hypothyroidism paradigm.</i>
1971	Thyrotropin immunoassays for diagnosis of hypothyroidism
1972	Identification of T ₃ -binding receptors in tissue
1990	Demonstrations that point mutations in the thyroid-hormone receptor accounted for hormone resistance