

## Weekly Practice Builder

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## Meda-Stim<sup>™</sup>

Abnormal levels of thyroid hormones are routinely detected by laboratory tests, but subjective indicators can suggest impaired thyroid function as well and may be of significant value to the clinician. Symptoms may include intolerance to cold, dry skin, brittle nails, joint pain, low blood pressure, memory loss, mood alterations, fatigue and weight gain, among others. Thyroid hormones refer to T4 (thyroxine) the prime constituent, and T3 (triiodothyronine), which is 3 to 4 times more active than T4. Thyroid hormones regulate metabolism and energy balance, growth and development, and activity of the nervous system. They stimulate carbohydrate and fat breakdown, increase protein synthesis, and increase the basal metabolic rate. Stimulus for thyroid function begins in the hypothalamus and pituitary with the production of TRH (thyrotrophin releasing hormone), a neuron/hormone that stimulates the release of TSH (thyroid-stimulating hormone) from the anterior pituitary. TSH, in turn, triggers the release of thyroid hormones from follicles in the thyroid. Thyroid hormones regulate their production via feedback mechanisms from the hypothalamus. Thyroxine completes a negative feedback loop by binding to receptors in the anterior pituitary to block the release of TRH. Synthesis of thyroid hormones begins with the uptake of iodine by the thyroid gland, where incoming iodine is oxidised by the thyroid to organic iodine via iodoperoxidase. Secretion of thyroid hormones is initiated by the lyzosomal degradation of thyroglobulin to release T3 and T4. In the bloodsteam, T3 and T4 are carried by thyroine-binding

globulin, thyroxine binding prealbumin and serum albumin. Practitioners are most concerned with the concentration of free (unbound) hormone.T4 is converted to T3 in the liver, lung, kidney and heart by the selenium-dependent enzyme lodothyronine 5'-mono-deiodinase. T3 is then taken up by appropriate target cells, where it is transported to the nucleus of the cell to activate transcription. Many factors may impact the enzyme T4-5 deiodinase, and therefore the conversion of T4 to T3. They include chronic stress and the resulting elevated cortisol levels. Depleted nutrient levels can significantly impact T4 to T3 conversion as well. Meda-Stim<sup>™</sup> was formulated by Dr. Gary Lasneski to provide nutritional support for healthy thyroid function, primarily by supplying nutrients that support the conversion of T4 to T3. They include essential micronutrients such as B vitamins, Iodine, Selenium and Zinc. Also included are supportive nutrients such as the amino acids L-Tyrosine and L-Glutathione, along with specific botanical support. Having been in the marketplace for over a decade, the clinical results for practitioners who utilise **Meda-Stim™** for their patients speak for themselves.



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## **Research Pertaining to Other Topics of Interest**

Red Yeast Rice is both Safe and Effective- Italian researchers conducted a double-blind, placebo-controlled randomised clinical trial on volunteers with mildly elevated cholesterol levels. The supplemented group received Red Yeast Rice along with 10 mg of coenzyme Q10. Compared to the placebo group, the supplemented group had reductions in total cholesterol of 12.5%, LDL cholesterol of 22% and a reduction of hs-CRP of 24% on average. Interestingly, matrix metalloproteinases (MMPs) 2 and 9, increases of which have been linked to heart attack and those having unstable angina, were decreased by 28 and 27% respectively, after four weeks of supplementation.

Cicero, AFG et al. Red yeast rice improves lipid pattern, high-sensitivity C-reactive protein, and vascular remodeling parameters in moderately hypercholesterolemic Italian subjects. Nutrition Research. Vol. 33 Aug 1, 2013