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Thyroid Synergy™

Supports Healthy Thyroid Function*

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Thyroid Synergy™ is an all-in-one synergistic formula for the nutritional support of healthy thyroid function and thyroid hormone balance.* The non-stimulating adaptogenic botanical American ginseng (*Panax quinquefolius*) helps maintain healthy cortisol, blood glucose, and insulin metabolism, along with a normal conversion of peripheral thyroid hormones.* Forskolin extract (*Coleus forskohlii*) is included to help support the normal action of the thyroid on fat metabolism.* Essential vitamins and minerals, and other nutrients work synergistically to provide a premium thyroid-supportive product in just two capsules per day.*

Formula Highlights

- Provides tyrosine and iodine, the building blocks for thyroid hormones
- Includes selenium to help support the proper conversion of T4 to T3*
- Provides chromium, zinc, and other minerals to support normal blood glucose metabolism*
- Features American ginseng, which helps support normal cortisol metabolism and supports normal peripheral T4 to T3 conversion*
- *Coleus forskohlii* may help support the normal action of the thyroid on fat metabolism*
- Gluten-free, dairy-free, soy-free; non-GMO

Benefits*

- Supports optimal thyroid gland function[7–9,11,14–16]
- Promotes the proper conversion of thyroid hormones[8,11]
- Supports normal blood glucose metabolism[25,28,30,32]
- May help support normal cortisol metabolism, promoting normal peripheral T4 to T3 conversion[31,32]
- May help support the normal action of the thyroid on fat metabolism[22–26,33,34]

Supplement Facts

Serving Size 2 capsules
Servings Per Container 60

Amount Per Serving		% Daily Value
Vitamin A (as Retinyl Palmitate)	600 mcg RAE	67%
Riboflavin (Vitamin B-2) (as Riboflavin-5-Phosphate)	5 mg	385%
Iodine (as Potassium Iodide)	100 mcg	67%
Zinc (as Zinc Bisglycinate Chelate)	25 mg	227%
Selenium (as Selenomethionine)	50 mcg	91%
Copper (as TRAACS® Copper Bisglycinate Chelate)	0.5 mg	56%
Manganese (as TRAACS® Manganese Bisglycinate Chelate)	5 mg	217%
Chromium (as TRAACS® Chromium Nicotinate Glycinate Chelate)	50 mcg	143%
N-Acetyl-L-Tyrosine	200 mg	*
American Ginseng (*Panax quinquefolius*)(root) [standardized to contain 5% ginsenosides]	200 mg	*
Forskolin Extract (*Coleus forskohlii*)(root) [standardized to contain 20% forskolin]	50 mg	*

*Daily Value not established.

Other Ingredients: Microcrystalline cellulose, cellulose (capsule), vegetable stearate.

The thyroid gland is sometimes called the "master regulator" of metabolic rate, owing to its powerful influence on energy production and metabolism in the body.[1] Like any gland, the thyroid needs supportive nutrients from food or supplements to act as raw ingredient precursors for hormone synthesis. Additionally, specific nutrients are needed to help convert certain thyroid hormones into its active forms. Thyroid Synergy™ is a unique formula that provides nutrients and botanical extracts to support healthy thyroid function and promote proper hormone balance.*

Thyroid hormone synthesis relies on the amino acid tyrosine. The primary hormone produced by the thyroid gland is thyroxine, also called T4 (the "4" indicates it contains four iodine atoms). The thyroid also produces small amounts of triiodothyronine, or T3, which contains three iodine atoms. However, most of the T3 in the body is converted from T4 in peripheral tissues.[2] The deiodinase enzyme that facilitates the conversion of T4 to active T3 is selenium-dependent,[3] which explains why tyrosine, iodine, and selenium are typically included in formulas designed to support thyroid function.*

Thyroid-stimulating hormone (TSH), secreted by the pituitary gland under the influence of thyrotropin-releasing hormone (TRH) from the hypothalamus, signals the thyroid to produce T4.[4] Elevated cortisol or insulin levels may interfere with thyroid hormone synthesis or cellular receptivity. Specifically, prolonged stress may result in the production of reverse T3, which antagonizes the effects of T3 and may be associated with signs and symptoms of hypothyroidism.[5,6]

Ingredient Highlights

Tyrosine, Potassium Iodide, and Selenium

As mentioned above, tyrosine, iodine, and selenium are required for the production of thyroid hormones and the proper conversion of T4 to T3.* Approximately 80% of the body's iodine is concentrated in the thyroid gland.[7] Apart from its role in facilitating the conversion of T4 to T3, selenium is required for glutathione peroxidase, a key enzyme that supports antioxidant status highly expressed in the thyroid gland. This enzyme catalyzes the degradation of peroxides generated during thyroid hormone synthesis.[8]

Vitamin A
Vitamin A is a crucial factor for healthy thyroid function.* It is required for the activation of thyroid hormone receptors, where insufficient vitamin A status may cause thyroid dysfunction.[9] Research indicates that TTR (transthyretin), an extracellular transport protein, is involved with binding and distributing both T4 and T3, with a preference for T4. This protein also binds vitamin A, suggesting its importance in thyroid health.[10] Hypothyroid patients may have yellow-orange colored skin due to poor conversion of beta-carotene to vitamin A — a process that also requires zinc.[11,12]

Animal models suggest that vitamin A deficiency interferes with thyroid function, starting at the pituitary gland.[9] Vitamin A insufficiency increases pituitary TSH synthesis and secretion, enlarges the thyroid gland, and reduces iodine uptake by the thyroid. Vitamin A administration has demonstrated positive impacts on thyroid function and gland size in humans, even in iodine-deficient populations, although adequate iodine remains critical for optimal thyroid health.[13]

Among 84 premenopausal women (both obese and nonobese), those who received vitamin A supplementation (25,000 IU/d retinyl palmitate) for four months experienced significantly reduced serum TSH concentration and increased serum T3 concentrations compared to the placebo group.[14] Among children with goiter living in areas where iodine deficiency disorders are prevalent, the greater the severity of vitamin A deficiency, the greater the thyroid gland volume and the higher the TSH levels.[15] Additionally, compared to the placebo group, the children who were administered vitamin A supplementation experienced a significant reduction in median TSH and goiter rate.[15] In rats with concurrent deficiencies in both iodine and vitamin A, vitamin A repletion alone, even without iodine, effectively reduced thyroid gland size and hyperstimulation.[16]

Forskolin Extract *(Coleus forskohlii)*
Coleus forskohlii, a member of the mint family, is native to the subtropical regions of India, Nepal, Sri Lanka, and Thailand. This botanical has a long tradition of use in Hindu and Ayurvedic medicine.[17] Its active constituent, forskolin, has been shown to activate the enzyme adenylate cyclase, which increases intracellular cyclic adenosine monophosphate (cAMP).[18] cAMP is crucial for cellular communication and the regulation of hormonal feedback loops. For thyroid hormones, TSH binding to thyroid epithelial cells elevates cAMP, initiating reactions that result in T4 and T3 secretion.[19,20]

Adipocytes from obese women have been shown to have lower adenylate cyclase activity than those of non-obese women.[21] Promoting adenylate cyclase activity and stimulating cAMP production may help maintain healthy body composition. Animal and in vitro studies support a potential role for *Coleus forskohlii* in promoting lipolysis and reducing body weight and fat accumulation.[22–24] A randomized, double-blind, placebo-controlled clinical study assessed the effects of *Coleus forskohlii* supplementation for 12 weeks (with a hypocaloric diet) in overweight and obese individuals (n = 30). After 12 weeks, both the experimental and placebo groups displayed significant reductions in waist and hip circumference ($p = 0.02$; $p = 0.01$, respectively), along with a significant increase ($p = 0.01$) in high-density lipoprotein-cholesterol (HDL-C). However, only the experimental group showed significant improvements in insulin concentration and insulin resistance ($p = 0.001$; 0.01, respectively) compared to the placebo group.[25] This suggests that *Coleus forskohlii* may be clinically beneficial in supporting healthy metabolism and body composition.* A separate study in mildly overweight women (n = 19) concluded that forskolin may not be powerful for fat loss, but it could be helpful for discouraging fat gain by helping to promote satiety and to attenuate occasional fatigue.[26] Although larger randomized clinical studies are warranted, considering how challenging fat loss can be for those with thyroid dysfunction, these modest results may still be clinically meaningful.*

Chromium, Zinc, and Manganese
These minerals promote healthy thyroid hormone balance by supporting optimal insulin and glucose metabolism.* Elevated insulin opposes the action of epinephrine and can hinder thyroid hormone production.[27] Chromium and manganese support healthy insulin production and glycemic control,[28,29] while zinc supports insulin-mediated glucose uptake and stabilizes the nuclear receptor for thyroid hormone.[30]

American Ginseng and Copper
American Ginseng (*Panax quinquefolius*), a non-stimulating adaptogen, supports normal cortisol metabolism and helps mitigate stress-related decreases in dopamine and serotonin.[31] It also supports healthy blood glucose and insulin metabolism,[32] which may have a favorable impact on healthy body composition.* Copper, a cofactor for dopamine β-hydroxylase, catalyzes dopamine's conversion to norepinephrine, which may help support normal lipolysis and fat metabolism.[33,34]

Recommended Use: Take 2 capsules per day with meals or as directed by your health-care practitioner.

For a list of references cited in this document, please visit:

https://www.designsforhealth.com/api/library-assets/literature-reference---thyroid-synergy-tech-sheet-references

Dosing recommendations are given for typical use based on an average 150-pound healthy adult. Health-care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**

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