# **Thyroid Gland Support**



### Discussion

**Thyroid Hormone Production** The thyroid is a small gland with a sizeable role in the body. Its primary function is the concentration of iodine and the production of crucial thyroid hormones thyroxine (T4) and triiodothyronine (T3). T4 is converted to T3 by the body. Between them, T3 is the more potent, biologically active hormone. It regulates the metabolic rate within cells and affects fundamental functions throughout the body. Thyroid hormone production depends on the presence of iodine and the amino acid L-tyrosine in adequate amounts. T4 contains tyrosine and four iodine molecules, while T3 contains tyrosine and three iodine molecules. Production of thyroid hormones can be disrupted by several factors in the environment, including heavy metals (lead, cadmium, mercury, flouride), pesticides, dysbiosis, hormonal fluctuations, antibiotic residues, chemicals, other xenobiotics, or lack of nutrients required for thyroid hormone synthesis.<sup>\*[1]</sup>

**The Thyroid Gland's Manifold Effects** The thyroid gland does not work alone; it interacts intimately with the liver, the kidneys, and the hypothalamus, pituitary, and adrenal glands. Communicating via the intricate matrices of the hypothalamic-pituitary-adrenal (HPA) axis and the hypothalamic-pituitary-thyroid (HPT) axis, these key players coordinate the body's response to stress and its quest for homeostasis.<sup>\*[1,2]</sup>

Thyroid hormone activates over 100 enzymes in the body, exerting a significant effect on growth and metabolic rate. The metabolic rate reflects the body's transformation of nutrients into energy. Thyroid hormone, and its influence on metabolic rate, plays a fundamental role in appetite, weight maintenance, energy levels and mood, gastrointestinal regularity, tolerance to temperature changes, and healthy hair and nails.\*<sup>[3,4]</sup>

**Glandular Support** Glandular extracts have a century-old history of supporting healthy thyroid levels. A linear relationship between thyroid extract and serum levels of thyroxine and triiodothyronine in children has been observed.\*<sup>[3,5]</sup>

**Micronutrient, Amino Acid, and Herbal Support** Production of thyroid hormone is fundamentally dependent on the presence of L-tyrosine and iodine, while conversion of T4 to T3 is facilitated by selenium. Bladderwrack (*Fucus vesiculosus*), dulse, kelp, and Irish moss are natural sources of iodine for support of endogenous thyroid hormone production.\*<sup>[6]</sup>

The combination of foundational elements with supportive nutrients in Koshland Pharmacy, Inc.'s Thyroid Gland Support represents a comprehensive approach to thyroid support.\*

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\*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.



## Supplement Facts

Serving Size: 1 Capsule Servings Per Container: 60

Amount Per Serving %Daily Value		
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lodine (from organic Icelandic kelp)(Laminaria digitata)(stel	m and leaf) 40 mcg	27%
Selenium (as L-selenomethionine)	50 mcg	91%
Dulse (Rhodymenia palmata)(whole plant)	400 mg	**
Thyroid Gland (from New Zealand bovine)	150 mg	**
Adrenal Gland (from Argentina bovine)	50 mg	**
Irish Moss (Chondrus crispus)(whole plant)	40 mg	**
L-Tyrosine	30 mg	**
Anterior Pituitary Gland (from Argentina bovine)	15 mg	**
Bladderwrack (Fucus vesiculosus)(whole leaf)	15 mg	**
Spleen (from Argentina bovine)	5 mg	**
Thymus Gland (from Argentina bovine)	5 mg	**

\*\* Daily Value not established.

Other Ingredients: HPMC (capsule), vegetable stearic acid, silica, vegetable magnesium stearate, microcrystalline cellulose, and medium-chain triglyceride oil. May contain traces of fish and crustacean shellfish.

#### Directions

Take one capsule daily with water (away from food), or as directed by your healthcare practitioner.

Consult your healthcare practitioner prior to use. Individuals taking medication should discuss potential interactions with their healthcare practitioner. Do not use if tamper seal is damaged.

#### Does Not Contain

Wheat, gluten, corn, yeast, soy, dairy products, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, or artificial preservatives.

#### References

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Bodó E, Kromminga A, Bíró T, et al. Human female hair follicles are a direct, nonclassical target for thyroid-stimulating hormone. *J Invest Dermatol.* 2009 May;129(5):1126-39. [Epub 2008 Dec 4] [PMID: 19052559]

5. Weill J, Debruxelles P, Fulla Y, et al. [Management of primary hypothyroidism in childhood treated with thyroid extract (author's transl)] [Article in French]. Arch Fr Pediatr. 1980 Jan;37(1):29-34. [PMID: 7469681]

6. Krinsky DI, LaValle JB, Hawkins EB, et al. Natural Therapeutics Pocket Guide. 2nd ed. Hudson, OH: Lexi-Comp, Inc.; 2003.

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