

ThyroMend™ *Hormone Specific Formulation™*

DESCRIPTION

ThyroMend™, provided by Douglas Laboratories®, is a formula of iodine containing seaweeds, and herbs which contain phytothyroidogenic properties, as well as phyto-thyroid-receptor agonists. This formulation is designed to promote optimal function of thyroid hormones by maintaining the health of thyroid hormone producing tissues and by supporting the healthy function of tissues that respond to thyroid hormones.†

ThyroMend™ is a *Hormone Specific Formulation™* formulated by Dr Joseph J Collins, created to support the optimal function of specific hormones through the use of hormone specific adaptogens, hormone specific agonists and hormone specific functional mimetics. This formulation may be used to as part of a hormone health program with dietary and nutrient support. In addition, this formulation may be used by clinicians as an adjuvant to support optimal hormone health in patients who have been prescribed bioidentical hormone replacement therapies, including thyroid replacement therapy.

FUNCTIONS

The primary functions of ThyroMend™ are to support the natural production of thyroid hormones by the thyroid gland, and to support how tissues throughout the body respond to thyroid hormones. This is accomplished by providing support for each of the seven steps involved in thyroid function.

The synergistic combination of specific seaweeds and herbs in ThyroMend™ support these **Seven Important Actions** associated with optimal thyroid health through specific action of the seaweeds and herbs which:

- 1) Provide bio-available iodine for thyrocytes;
- 2) Promote iodine uptake by thyrocytes through interactions with sodium-iodide-symporter (NIS) proteins;
- 3) Promote T3 & T4 production and secretion from thyrocytes;
- 4) Promote conversion of thyroxine (T4) to the more bioactive triiodothyronine (T3) by liver cell and other peripheral cells;
- 5) Promote RXR/TR heterodimerization of thyroid receptors on target cells;
- 6) Promote binding of thyroid hormone receptors to DNA by RXR/TR heterodimers;
- 7) Promote action T3 on target gene expression.*

By supporting thyroid functions, this synergistic formulation supports the health of tissues which respond to optimal thyroid health. This support can also help maintain ideal metabolic rate. This support can also help maintain normal blood lipids and sugar levels and support memory and mood.*

Bladderwrack (*Fucus vesiculosus*) is a dietary source of natural iodine that has been used by many societies throughout history. An additional benefit of Bladderwrack is that it is protective to estrogen sensitive tissues. Thyroid tissue is sensitive to the effects of estrogen, which increases the risk of thyroid disease in women. Bladderwrack such that may be responsible for the reduced risk of estrogen-related disorder in in both human and animal studies based on published research.

Guggulipid (*Commiphora mukul*) has shown an ability to support thyroid function, especially through increased conversion of T4 to T3 in the liver, the principle site of T3 generation.* The effects of guggulsterone may be due to its ability to activate multiple receptors on the nuclear membrane, including thyroid receptors (alpha & beta), retinoic acid receptors, (which pairs with thyroid receptors), and the vitamin D receptor, which also plays a role in thyroid function. *Commiphora mukul* and its cholesterol-supportive components, guggulsterones, support proper LDL metabolism, an important concern for those looking to maintain healthy thyroid function.

Bacopa (*Bacopa monniera*) can promote thyroid hormone production exhibited through an increase of T4 serum concentrations, as demonstrated in animal studies. Bacopa may have more direct thyroid supportive properties versus an effect on hepatic conversion to T3. Bacopa may also address concerns about neurocognitive function associated with sub-optimal thyroid function. In human studies, Bacopa has been shown to improve many of the higher order cognitive processes, including the ability to significantly improve

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speed of visual information processing, learning rate, memory consolidation, improve memory retention, enhance retention of new information, and decrease the rate of forgetting of newly acquired information.

Ashwagandha (*Withania somnifera*) can promote thyroid hormone production due to an ability to directly act on the thyroid to raise serum levels of thyroid hormones, as noted in animal studies during the late 1990s.

Though inconclusive, a case review in late 2005 also indicated that Ashwagandha may have the ability to raise serum levels of thyroid hormones in humans. Ashwagandha has also been attributed as having a number of adaptogenic properties including neuroprotective properties.

Hops (*Humulus lupulus*) can increase the uptake of iodide into the thyroid gland, a fundamental step in thyroid hormone synthesis, through interactions with sodium-iodide-symporter (NIS) proteins. This observation is quite the opposite of many other plant-derived phenolic secondary metabolites such as isoflavonoids, which can potentially inhibit iodide uptake. Xanthohumol, a chalcone found in *Humulus lupulus*, plays a critical role in supporting normal blood lipid and glucose metabolism.*

Coleus (*Coleus forskohlii*) can promote thyroid hormone production due to forskolin, a potent activator of the cyclic AMP-generating system in many tissues including the thyroid, which increases T3 & T4 secretion from thyrocytes in a fashion similar to TSH, though independent from TSH. Forskolin is specifically able to mimic the effect of TSH in regard to iodide uptake, organification of iodine, thyroglobulin (TG) production, and promote secretion of T3 & T4, through an increase in the expression of sodium/iodide symporter (NIS) proteins.

Sage (*Salvia officinalis*) has long been recognized as a very rich source of the antioxidant carnosic acid which, as noted above, can increase T3 activity through improved RXR/TR heterodimerization. Important features of *Salvia officinalis* are also its memory supportive properties, including memory retention, more efficient memory retrieval and improved mood and cognitive task performance.

Rosemary (*Rosmarinus officinalis*) provides carnosic acid, a polyphenolic diterpene that at low concentrations increases the expression of vitamin D and retinoid receptors. Retinoid-X-receptors (RXR) undergo heterodimerization with thyroid hormone receptors (TR). The RXR/TR heterodimers have been proposed to be the principle mediators of target gene regulation by T3 hormone. The ability of carnosic acid to also affect retinoic acid receptors may increase its importance as a TR agonist. Rosemary also contributes rosmarinic acid, which has significant antioxidant and anxiolytic properties. An additional constituent, carnosol, may support healthy metalloproteinase-9 activity and healthy NF-kappaB activity, which may be responsible for its support of normal immune system function.

Sea Kelp (*Ascophyllum nodosum*) provides bioavailable iodine. An additional benefit of *Ascophyllum nodosum* is its ability to protect thyrocytes from oxidative stress by increasing glutathione peroxidase activity, an important antioxidant. Human thyrocytes synthesize and secrete extracellular glutathione peroxidase, which translocates into the intracellular space and helps to maintain normal redox status within thyrocytes.

INDICATIONS

ThyroMend™ may be a useful dietary supplement for individuals wishing to support healthy thyroid production and function.

FORMULA (#201381)

Serving size.....2 v.caps.....4 v.caps

Iodine.....200 mcg..... 400 mcg

(from seaweed blend)

Proprietary Blend.....1,300 mg.....2,600 mg

Seaweed Blend (*Ascophyllum nodosum* & *Fucus vesiculosus*, entire plant), Standardized Guggulipid (*Commiphora mukul*, gum resin, 2.5% guggulsterones), Standardized Bacopa (*Bacopa monnieri*, aerial parts, 20% bacosides), Standardized Ashwagandha (*Withania somnifera*, root, 1.5% withanolides & 1% alkaloids), Standardized Hops(*Humulus lupulus* aerial parts, 5% alpha bitter acid), *Coleus forskohlii* (root, standardized to 10% forskolin), Sage (*Salvia officinalis*, leaf), & Standardized Rosemary extract (*Rosmarinus officinalis*, aerial parts, 6% carnosic acid)

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Other Ingredients: Hydroxypropyl methylcellulose (capsule), dicalcium phosphate, vegetable stearate, silica

SUGGESTED USE

As a dietary supplement, adults may take **2 capsules** each day with food for **1 to 2 weeks** or as directed by your healthcare professional. The dose may then be increased to **4 capsules** each day with food for **2 to 4 months** or as directed by your healthcare professional. After **2 to 4 months** dosage may be lowered back down to **2 capsules** each day with food and may continue on that dosage as needed or as directed by your healthcare professional.

SIDE EFFECTS

WARNING: Keep out of reach of children. Not to be used by pregnant or nursing women without consent of their healthcare professional.

STORAGE

For optimal storage conditions, store in a cool, dry place.
(59° – 77° F / 15° – 25° C)

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For more information on ThyroMend™ visit **DouglasLabs.com** or **ThyroMend.com**

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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.

Manufactured by
Douglas Laboratories
600 Boyce Road
Pittsburgh, PA 15205
800-245-4440
douglaslabs.com



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Your patients trust you.**

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