

I N N A T E

RESPONSE FORMULAS®

V i s m e d i c a t r i x n a t u r a e

Thyroid Response™ -Nutrient Factors

100% Whole Food Targeted Response Dietary Supplement

Formula Rationale

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Formula Rationale of Thyroid Response™ - Nutrient Factors

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Recent studies suggest that millions of individuals suffer from sub-clinical thyroid problems. Notably, women are far more likely than men to be afflicted. The vast majority of individuals who suffer from sub-clinical hypothyroidism (underactive thyroid) may develop any of the following symptoms: fatigue, weight gain, depression, cold intolerance, hormonal imbalance and decreased libido. A smaller fraction of individuals suffer from hyperthyroidism (overactive thyroid).

Without proper treatment, or relief of the underlying causes of sub-clinical hypothyroidism, the symptoms may generally worsen over time, eventually resulting in permanent damage.

Poor nutrition is considered one of the causes of an under active thyroid; thus, providing optimal nutrition is vital to correcting them, as well as to prevent further decline. Healthy thyroid function is dependent on a range of nutrients, especially iodine, zinc, selenium, copper and L-tyrosine. In addition to proper nutrition, fluctuations in hormone levels may also act as a trigger in thyroid dysfunction, resulting in a sub-clinical thyroid imbalance during pregnancy, perimenopause and menopause. In many cases, the thyroid disorder itself is a symptom of underlying issue. Adrenal stress, for example, impairs thyroid function; cortisol blocks the efficient conversion and peripheral cellular use of the thyroid hormones at many levels. For this reason, proper evaluation of the endocrine system may be required to determine the exact cause of low thyroid function.

Thyroid Response™ Nutrient Factors was exclusively crafted to provide nutrients vital to healthy thyroid function. Because the cause of a thyroid imbalance is affected by many different factors, this formula was designed as a targeted nutritional formula that may be used in conjunction with other Innate Response Formulas® targeted at promoting and/or modulating endocrine function.

Purpose: To provide whole food nutrients essential to support the health and metabolic function of the thyroid gland.

Indication: Sub-clinical hypothyroidism, hypothyroidism, adrenal insufficiency.

Suggested Use: 2 tablets, 1-2 times daily, or as needed. Recommended to be taken in conjunction with Thyroid Response™ Estrogen Factors, as directed; Folic Acid, B12 & B6, as directed.

Contraindications: Iodine supplements may decrease the effectiveness of methimazole and propylthiouracil.

SUPPLEMENT FACTS

Serving Size 2 Tablets

Calories <1

Total Fat	3	mg
Total Carbohydrate	85	mg
Dietary Fiber	46	mg
Sugars	39	mg
Protein	184	mg

SOURCE; FOODSTATE™ AMOUNT

Iodine	(<i>S. cerevisiae</i> *; 8 mg)	150	mcg
Zinc	(<i>S. cerevisiae</i> *; 200 mg)	10	mg
Selenium	(<i>S. cerevisiae</i> *; 50 mg)	50	mcg
Copper	(<i>S. cerevisiae</i> *; 100 mg)	2	mg

ADDITIONAL FOODS & EXTRACTS

L-Tyrosine	500	mg
Laminaria digitata	75	mg
Irish Moss	75	mg
Carrot 4:1	50	mg
Watercress 4:1	50	mg

NATURALLY OCCURRING FOOD CONSTITUENTS

Bioactive Peptides, Enzymes, Chlorophyll, SOD, Glutathione, Beta Glucans, Lipoic Acid, Essential Trace Minerals, GABA, Glutamic Acid, Polysaccharides, CoQ10 and other Compounds.

OTHER INGREDIENTS

Rice Bran, Guar Gum, Vegetable Lubricant, Silica, Food Glaze.

The following FoodState™ food concentrate was proprietarily grown and harvested at peak of ripeness to deliver optimal concentrations of the following minerals:

Food Concentrate

S. cerevisiae, yeast

Primary Nutrient Delivered

Iodine, zinc, selenium, copper

Note the total weight of each food concentrate listed in the supplement facts above is the amount of food delivered within each serving size, in order to deliver a specific amount of each vitamin or mineral respectively.

Thyroid Response™ Nutrient Factor is free of: gluten, dairy, corn, synthetic nutrients, GMO's, preservatives and/or colorants. Since no preservatives are used, store tightly sealed in cool to moderate temperatures to prevent oxidation.

Rationale for Nutrients

The thyroid gland requires specific nutrients in order to function optimally. Iodine, selenium and the amino acid tyrosine are all essential for the production and conversion of the thyroid hormones T4 (thyroxin) and T3 (triiodothyronine). Intracellular conversion of T4 to T3 is known to require zinc, selenium, copper and iron.

Selenium and iodine are two minerals which are critically important in the proper functioning of the thyroid. While the importance of iodine has been known for some time, the importance of selenium has only recently been discovered and explored. Much research is presently being conducted on the functions of these two minerals in thyroid function, and it is becoming clear that an interaction exists between the two.

In relation to thyroid health, copper is another mineral which plays an important role in the metabolism of the amino acid tyrosine. Although copper deficiency is uncommon, for individuals taking zinc supplements for more than a few weeks, supplementing copper is prudent; it is therefore included in the formula.

L-tyrosine is a non-essential amino acid that the body synthesizes from phenylalanine. While tyrosine has many functions in the body, including the formation of neurotransmitters, it is a major component of the thyroid hormones. Studies have suggested individuals with low thyroid function may well benefit from supplementation of tyrosine.

Rationale for Additional Foods and Extracts

Laminaria Seaweed *Laminaria digitata* Kelp

Laminaria, commonly referred to as kelp, is a nourishing sea weed rich in iodine, calcium, potassium, magnesium, alginates and trace elements. In traditional Chinese medicine, kelp is frequently used to support an under-active thyroid. *Laminaria* is also considered to be supportive to the kidneys, and to have a balancing action on hormones.

Actions: Antioxidant, nutritive tonic, thyroid and immune stimulating, adaptogenic

Bladderwrack *Fucus vesiculosus*

Bladderwrack is also commonly referred to as kelp or seawrack. It is another nourishing sea vegetable rich in iodine and trace minerals organically bound to polysaccharides. Bladderwrack has traditionally been used for hypothyroid conditions. Bladderwrack has proved most useful in the treatment of underactive thyroid glands and goitre (goiter). Through the regulation of thyroid function, there is an improvement in all associated symptoms.

Actions: Nutritive, hypothyroid tonic, anti-hypothyroid, anti-rheumatic

Carrot *Dacus carota sativa*

Carrot extract was included in the formula as a good food source of the amino acid tyrosine, sustaining the delivery of tyrosine in this formula with supportive food factors. Carrots are considered to have strengthening properties to the spleen, pancreas, as well as to support liver function.

Actions: Nutritive, antioxidant

REFERENCES

Bove, Mary ND. *Botanical Management of Thyroid Disease*. Proceedings of the American Herbalist Guild Symposium 2003. October, 2003.

Hoffman, David, FNIMH, AHG. *Medical Herbalism The Science and Practice of Herbal Medicine*. Healing Arts Press, 2003.

Hudson, Tori ND. *Women's Encyclopedia of Natural Medicine*. Keat's Publishing, Inc., 1999.

Modern Nutrition in Health and Disease, 9th Edition. Lipponcott Williams and Wilkins, 1999;254-264.

PDR for Nutritional Supplements. Medical Economics, Thomson Healthcare. 1st edition, 2001.

Scalzo, Richard. *Naturopathic Handbook of Herbal Formulas*, Third Edition. Kivaki Press, 1994.

Thiel, Robert J. Ph.D., *Combining Old and New: Naturopathy For the 21st Century*. Whitman Publications, 2000.