



Nodule Control



Benefits

The ingredients in Nodule Control have been clinically proven to:

- Slow the rate of nodule growth
- Reduce the size of existing thyroid nodules
- Lower the risk of nodules progressing to thyroid cancer

How to Use

Take two (2) capsules once daily in the morning with food. Use Nodule Control along with recommended monitoring and treatment of thyroid nodules.

Formulation

- Spirulina - 400 mg
- Boswellia - 50 mg
- Turmeric - 50 mg
- Inositol - 100 mg
- Selenium 25 mcg
- Prunella - 25 mg

Thyroid Nodules

Thyroid nodules are abnormal growths of thyroid tissue. They may be solid or fluid-filled. Nodules are common and become commoner with age. Roughly half of all people will have thyroid nodules by age 60.¹



Thyroid nodules rarely cause symptoms but, if large enough, can cause discomfort or difficulty in swallowing or breathing.

Nodules present a risk for thyroid cancer. Roughly 4% of women's nodules contain thyroid cancer as in their thyroid nodules' size.²

There is no known single cause for thyroid nodules, but they are more common with age, excessive iodine intake, and higher body weight.

The mechanisms of action of supplements that may help reduce thyroid nodules include those that slow rates of cell division, those that act as anti-inflammatories, and those that regulate iodine metabolism.

TSF Ingredient Selection

In constructing Thyroid Specific Formulations, all ingredients considered must share the following properties.

Thyroid Safety

All considered ingredients must be natural compounds that have been safely consumed by humans for centuries. They must be generally recognized as safe (GRAS) by toxicologists. Finally, they must not contain unsafe levels of iodine.

Evidence and Efficacy

All considered ingredients must have high-quality evidence proving their efficacy. The best quality evidence demonstrates significant positive outcomes on human subjects in multiple double-blinded controlled studies. These human subjects and the outcomes should be clinically relevant to the product's end-users.

Ingredients

Following is a complete discussion of the active ingredients. It includes their relevance to thyroid disease, mechanisms of action, and a review of supportive research.

Spirulina

Spirulina is a rich source of the antioxidant superoxide dismutase (SOD) which is one of the endogenous antioxidants that allows for normal thyroid cell replication.³

The thyroid cells are exposed to high amounts of free radical damage from the formation of iodine and its attachment to thyroglobulin. Unchecked free radical formation can lead to DNA damage that can result in the abnormal cell growth behind nodule formation and thyroid cancer.

Boswellia

Boswellia is a tree resin with antiinflammatory effects which block NFkB pathways and normalize the activity of regulatory and effector T cells.⁴

Turmeric

Turmeric has been shown to benefit oxidative pathways involved with nodule formation such as IL-6, hs-CRP, and MDA.⁵

In a double blinded human clinical trial, the combination of spirulina, boswellia, and turmeric was tested for its ability to reduce thyroid nodules.

In the study, adult patients with thyroid nodules were given a combination of the three nutrients or a placebo over the period of 6 weeks. Thyroid ultrasounds to evaluate nodule size were performed at the beginning of the study, after 6 weeks, and after 12 weeks.

Of those taking the nutrient combination, over 85% showed a significant decrease to the size of their thyroid nodules. The average reduction in nodule size for those on the active treatment ranged from 0.6 to 0.9 cm².

It was noted that the results are especially significant in light of the fact that the supplements were only administered for the first half of the study.

They might have been even more pronounced had they been taken for the full 12 weeks.⁶

Inositol

Inositol is a natural occurring sugar that is a conditionally essential nutrient. It has been shown to help regulate cell proliferation, morphogenesis, and glucose regulation.⁷

Selenium

Selenium is essential for nearly all facets of thyroid function including iodine regulation, cell proliferation, and regulation of free radicals within thyroid follicles.

In a recent clinical trial, the combination of inositol and selenium was tested for its ability to reduce the mass of thyroid nodules. A total of 642 patients were evaluated for nodules. The average age of the patients was 41 and roughly 90% were female. Of them, 333 were randomly assigned to treatment with inositol and selenium or usual therapy.⁸

Of those treated, none developed thyroid cancer. The average nodule size was reduced by 26% (16.7 mm to 12.4 mm). No significant change in nodule size was seen in the control group.

Those treated with inositol plus selenium also saw their TSH scores go down from an average of 4.2 to 2.1. TSH scores in the control group went up from an average of 3.95 to 4.3.

Summary Table

Characteristics	Control (16)		Treated (18)	
	T0	T1	T0	T1
Total number of mixed TNs, no. (%)	26 (72)	22 (61)	25 (64)	19 (49)
Mean no. of mixed TNs for patients	1.63±0.15	1.38±0.20 ⁶	1.39±0.16	1.05±0.15**
Diameter of TNs (mm)	19.52±1.05	17.52±1.63	16.72±1.32	12.44±1.81*†
Multiple TNs, no. of patients (%)	3(11)	3 (11)	2 (9)	2 (9)
Thyroid cancer, no. (%)	0 (0)	0 (0)	0 (0)	0 (0)
Exposure to radiation, no. (%)	0 (0)	0 (0)	0 (0)	0 (0)
Presence of calcifications, no. (%)	0 (0)	0 (0)	0 (0)	0 (0)
Nodule vascularity, no. (%)				
Mixed	6 (23)	5 (23)	5 (20)	4 (21)
Peripheral	19 (73)	17 (77)	16 (64)	13 (68)
Absent	1 (4)	0 (0)	4 (16)	2 (11)
Elasticity Score (ES)	1.69 ± 0.11	1.54 ±0.17	1.80 ±0.13	1.24 ±0.18***
TSH (mIU/L)	3.95±0.18	4.3 ±0.22 ⁶	4.2±0.21	2.1 ±0.20****†

Prunella

Prunella vulgaris is an herb used in traditional Chinese Medicine. Also called Heal-All, it is used as a common ingredient in teas and is used as a vegetable.⁹ It has a wide range of historical applications including the treatment of abnormal growths and tumors.

A recent meta-analysis reviewed 11 randomized clinical trials totaling 1215 patients. It concluded that prunella caused:

“improvement of thyroid function and thyroid autoantibodies, shrinkage of thyroid gland and nodule[s], and improvement of clinical symptoms such as fatigue and cold intolerance”¹⁰

In vivo and in vitro studies have shown that prunella promotes apoptosis in thyroid cancer cells.¹¹

Thyroid Nodules - Supportive Strategies

TSH Regulation

Thyroid nodules often grow in proportion to elevated TSH levels. Avoidance of TSH elevation and TSH suppression to a range of 0.4 to 0.6 may reduce the size of benign nodules.¹²

Iodine Reduction

Excessive intake of iodine, even to small degrees, may promote the growth of thyroid nodules. Iodine reduction to a healthy intake of 50-200 mcg daily may improve the odds of nodule reduction.¹³

Weight loss

Insulin resistance as associated with excess body weight may increase the likelihood of thyroid nodule formation and nodule growth.¹⁴ Modest weight loss of 5-10% of body weight may improve the odds of nodule reduction.

Directions

- 2 capsules once daily with food. Take at least one hour after thyroid medication.

Supplement Facts

Serving Size 2 Capsules

Servings Per Container 30

Amount Per Serving		%DV
Selenium (as L-Selenomethionine)	25mcg	45%
Spirulina Whole Plant Powder	400mg	†
Inositol	100mg	†
Boswellia Serrata (Indian Frankincense Gum Resin Extract)	50mg	†
Turmeric Root Powder	50mg	†
Prunella Vulgaris (Heal All Herb Powder)	25mg	†

† Daily Value not established.

†† Daily Values based on a 2,000 calorie diet.

Other Ingredients: Gelatin (Capsule), Rice Flour, Magnesium Stearate

Does not Contain

- Caffeine
- Stimulants
- Thyroid hormones
- Iodine
- GMO
- Gluten
- Dairy

Cautions

Timing

- TSF Supplements must be taken at least an hour after thyroid replacement medication.

Dosage Modification

- Those taking TSF supplements while on thyroid replacement medication (hypothyroidism, Hashimoto's) or thyroid suppression therapy (Graves' Disease) are advised to monitor thyroid levels closely. When thyroid antibodies reduce, some need decreases or other adjustments made to their medication.

Medication Interactions

- Interactions can occur with many nutraceutical ingredients and prescription medications. If you are on prescription medication, please check with your doctor or pharmacist for specific guidance.

Allergy Warning

- TSF products are contraindicated in individuals with a history of hypersensitivity to any of its ingredients.

Pregnancy Warning

- If pregnant, nursing, an organ transplant recipient, or have multiple sclerosis, do not use TSF Products unless on the advice of and under the direct supervision of a health professional.

Side Effects

Selenium

- Adults' combined dose of supplemental selenium should not exceed 600 mcg. Above this dose it can be less effective. Nodule Control contains 25 mcg of selenium.

Inositol

- Antibody Support contains 500 mg of Inositol per serving. At doses above 12,000 mg daily, side effects include gas and bloating. Nodule Control contains 100 mg of inositol.

Spirulina

- Spirulina is considered safe for longer term use at doses below 10,000 mg per day. Known side effects include nausea and diarrhea. Nodule Control contains 400 mg of spirulina.

Boswellia

- Boswellia is generally considered safe and well tolerated. In most clinical trials, the rate of side effects to boswellia is equal to that of placebo.

Turmeric

- Turmeric is known to be safe and free of side effects for longer term use at doses up to 3000 - 8000 mg daily. Nodule Control contains 50 mg of Turmeric.

Prunella

- There are no known side effects or organ toxicity from prunella at doses up to 6000 - 15000 mg daily. Nodule Control contains 25 mg of Prunella.



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