

# Thyroaide

Supports healthy thyroid function | VA-095



## Key Features:

- Provides essential nutrients - iodine, L-tyrosine, vitamin A, B6, Zn and Se - for thyroid hormone synthesis.
- Contains Ashwagandha to support T4 to T3 (active form) conversion.
- Contains Coleus forskohlii, a traditional Ayurvedic medicine to treat thyroid disorder - scientifically proven to balance TSH levels.
- Synergistic formulation that supports thyroid activity and maintains body's basal metabolic rate and mental alertness.

## Indications:

- Normalizes thyroid function, especially in people negatively affected by stress.
- People who have slow metabolisms and often suffer from fatigue, weakness, depression, irritability, abnormal weight gain, and memory loss.

## Description:

The thyroid gland secretes thyroid hormones thyroxine (T4) and triiodothyronine (T3), which maintains the body's metabolism rate. People who do not produce sufficient thyroid hormone have slow metabolisms and often suffer from fatigue, weakness, depression, irritability, and memory loss.

**Thyroaide** contains ingredients that assist in regulating thyroid function by supplementing iodine, the major component of the thyroid hormones, as well as replenishing essential minerals to support T4 to T3 conversion.

Thyroaide also provides functional herbs that lead to healthy thyroid function and balanced thyroid hormone production.

### L-Tyrosine & Iodine

L-Tyrosine and iodine are precursors of thyroxine (T4), which is the storage form of thyroid hormone. Thyroxine can be converted to triiodothyronine (T3) - the more active form - when needed. Without T4 and T3, the body's metabolic rate decreases and results in an inability of the body to obtain energy from food.

Tyrosine also helps in the management of some forms of stress since stress, depression, and cognitive decline are often associated with insufficient thyroid hormone.<sup>1</sup>

Iodine is crucial in the maintenance of the thyroid gland. The healthy human body contains 15 to 20 mg of iodine, approximately 70 to 80% of which is in the thyroid gland.<sup>10</sup> The thyroid has to obtain 60 mcg of iodine per day to maintain an adequate supply of thyroxine (T4).

**Quantity: 84 Vegetarian Capsules**

### Ingredients (per capsule):

Ashwagandha Extract ( <i>Withania somnifera</i> ) (6:1).....	200 mg (root) (7% withanolides) (equivalent to 1200 mg dried herb)
L-Tyrosine.....	125 mg
Forskohlii Extract ( <i>Plectranthus barbatus</i> ) (62.5:1).....	50 mg (root) (20% forskolin) (equivalent to 3125 mg dried herb)
Vitamin B6 (from pyridoxine HCL).....	7.5 mg
Vitamin A (750 mcg RAE) (from vitamin A palmitate).....	2500 IU
Folate (folacin).....	300 mcg
Zinc (from AAC* (glycine)).....	6 mg
Iodine (from <i>Laminaria digitata</i> ).....	150 mcg
Selenium (from AAC* (glycine)).....	100 mcg

\*AAC: amino acid chelate (from vegetable source)

**Non-medicinal Ingredients:** Silicon dioxide, L-leucine, pullulan/hypromellose (capsule)

**Suggested Use:** Adults – Take 1-2 capsules a day, or as directed by a health care practitioner.

### Forskohlii Extract

Forskolin, the active ingredient in forskohlii extract, has the ability to stimulate adenylate cyclase and cyclic AMP levels. Typically, an increase in cyclic AMP leads to subsequent activation of protein kinase, which is involved in numerous hormone-signaling pathways in the body.

Forskolin's potentiation of cAMP can in turn stimulate thyroid hormone release and increase thyroid hormone production,<sup>2,3</sup> contributing to the increase of metabolic rate and thermogenesis.

### Folic acid

Preliminary studies have found that homocysteine levels are higher in patients with untreated hypothyroidism.<sup>4</sup> Folic acid and vitamin B6 have been recognized as potent suppressing agents for homocysteine. It is well known that high levels of homocysteine leads to elevated LDL cholesterol that increases the risks of cardiovascular diseases,<sup>5</sup> and it has also been shown that elevated total homocysteine level is correlated with overt hypothyroidism.<sup>6,7</sup>

### Vitamin A

Deficiency of vitamin A can reduce the effectiveness of iodine



supplementation, as well as thyroid metabolism.<sup>8</sup> Vitamin A deficiency decreases thyroidal iodine uptake, impairs thyroglobulin (Tg) synthesis, and causes enlargement of thyroid size.<sup>9</sup> Vitamin A is also essential for proper incorporation of iodine into the thyroid gland.

### Vitamin B6

Vitamin B6, along with folic acid, is recognized as a potent suppressing agent for homocysteine. High levels of homocysteine leads to elevated LDL cholesterol, increasing the risks of cardiovascular diseases,<sup>5</sup> as well as hypothyroidism.<sup>6</sup> Vitamin B6 is involved in more than 100 enzymatic reactions including the synthesis of thyroxine.

### Selenium

Selenium is the essential cofactor in iodothyronine deiodinases I-III - the enzymes that convert T4 into T3. These enzymes catalyze the deiodination of the precursor T4 into active hormone T3, thereby regulating T3 concentration.<sup>11</sup>

A clinical study was conducted to determine the relationship between plasma selenium (Se) levels and the conversion of T4 to T3 in 109 healthy, elderly men.<sup>12</sup> The subjects were carefully screened for to make sure that they did not have thyroid dysfunction, acute or chronic diseases or calorie restriction. Serum Se and RBC GSH-Px (as indices of Se status), T3/T4, and TSH were measured. A highly significant linear correlation between the T3 /T4 ratio and indices of Se status was observed in the older group of subjects.<sup>12</sup>

### Zinc

Deficiency of zinc can result in lowered thyroid function. Research has shown a direct correlation between zinc levels and TSH (elevated in zinc deficiency).<sup>8,13</sup>

A study demonstrated the role of zinc deficiency in subclinical hypothyroidism and thyroid function changes in Down Syndrome children cyclically supplemented with zinc sulfate. Six months supplementation of zinc improved thyroid function as TSH levels dropped to normal in hypo-zincemic patients. In the second cycle of supplementation, a similar trend of TSH was observed. At the end of the study, TSH significantly decreased in treated hypo-zincemic subjects ( $4.48 \pm 1.93$  vs.  $2.96 \pm 1.20$  mUI/mL) and it was no longer different in comparison to TSH levels of normo-zincemic patients.<sup>13</sup>

### Ashwagandha Extract

There is evidence that ashwagandha (*Withania somnifera*) might boost thyroid hormone synthesis and/or secretion. Ashwagandha suppresses thyroid stimulating hormone (TSH) or increase triiodothyronine (T3) or thyroxine (T4) values.<sup>14</sup>

**For Education Purpose Only:** The entire contents are not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition. Never disregard professional medical advice or delay in seeking it because of something you have read in this presentation. All statements in this article have not been evaluated by the Food and Drug Administration and are not intended to be used to diagnose, treat, or prevent any diseases.

A preliminary animal study was conducted to investigate the effects of daily administration of ashwagandha root extract (1.4 g/kg body wt.) on thyroid function in 28 female mice.<sup>15</sup> After an acclimatization of 7 days, mice were divided into four groups of seven each. One group received 1.4 g/kg body weight of ashwagandha root extract daily for 20 days. Blood was collected for the estimation of T3 and T4. Serum T4 concentration increased significantly following ashwagandha treatment ( $P<0.001$ , as compared to the control value).<sup>14</sup>

### Reference:

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### Caution

Do not use if you are pregnant or breastfeeding. Consult a health care practitioner prior to use if you have a history of non-melanoma skin cancer; or if you are taking anticoagulant and antihypertensive agents. Consumption with alcohol, other drugs or natural health products with sedative properties is not recommended.