



## Clinical Applications

- Supports a Healthy Synthesis of Thyroid Hormones\*
- Helps Maintain Healthy Breast Tissue\*
- Supports Antioxidant Activity\*

*PureDine provides a high-potency dose of iodine in the form of potassium iodide along with supportive doses of molybdenum and selenium. Iodine is required for thyroid hormone synthesis and is found in virtually every cell in the body. Selenium supports the production of the active thyroid hormone T3 and participates in antioxidant systems. Molybdenum is incorporated into several metabolic enzymes and is instrumental in the breakdown of sulfites, nucleotides, drugs, and toxins.\**

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## Discussion

The health and function of the thyroid gland depend on a number of micronutrients as well as sufficient antioxidant protection and activity. PureDine combines iodine, selenium, and molybdenum in a distinctive formula designed to support thyroid, breast, and endocrine system health.\*

Iodine is an essential trace element, recognized for its traditional role in thyroid hormone synthesis. Iodine is directly incorporated into thyroxine (T4), which contains four atoms of iodine, and the biologically active form of the thyroid hormone triiodothyronine (T3), which contains three atoms of iodine. Thyroid hormones regulate metabolism and energy production throughout the body and, in turn, affect core body temperature, growth, reproduction, protein synthesis (including hair and skin), and neuromuscular function.\*<sup>[1]</sup>

Iodine plays a role in overall endocrine health,<sup>[2]</sup> intellectual development,<sup>[3]</sup> breast and reproductive system health,<sup>[4-7]</sup> and the maintenance of a healthy balance of microorganisms in the body.<sup>[3]</sup> Oral and gastric mucosa, salivary and thymus glands, skin, and the choroid plexus of the brain are also believed to rely on iodine for their optimal functions.\*<sup>[3]</sup>

Iodine must be obtained in diet or supplement form, and dietary intake can vary widely. In some cases, high doses of iodine may be consumed directly through the diet; populations consuming large amounts of seaweed may consume 50-80 mg of iodine daily.<sup>[6]</sup> In other cases, the iodine content of food is dependent upon the presence and availability of iodine in the soil in which the food is grown. Furthermore, table salt and cattle feed are fortified with iodine to meet minimum intake requirements.\*

Supplemental iodine has been found to be safe and well tolerated in the inorganic, non-radioactive iodine/iodide form.<sup>[9]</sup> Lugol's 5% solution has been safely and effectively employed since 1829; it contains 50 mg of iodine and 100 mg of potassium iodide (77% iodine) per ml, providing a total of 125 mg of iodine/ml. The suggested intake of 0.1 ml per day provides 12.5 mg of iodine.<sup>[10]</sup> It's a little-known fact that under certain circumstances, high doses of potassium iodide (up to 130 mg) are used to saturate the thyroid, a protective practice employed in the event of a nuclear accident.\*<sup>[11]</sup>

Moderately high doses of supplemental iodine have been used to promote breast comfort after both animal and human studies suggested that such a protocol would have positive effects. A randomized, double-blind, placebo-controlled, multicenter clinical trial (N = 111) investigated the effect of supraphysiologic doses of iodine on breast health in women with normal thyroid function. The 3 and 6 mg/day doses resulted in significant improvement in breast comfort.<sup>[12]</sup> Iodine and selenium are believed to work synergistically in supporting breast health as well.\*<sup>[5]</sup>

PureDine provides 12.5 mg of iodine per tablet in the form of potassium iodide. The trace element selenium is present to support the conversion of the inactive thyroid hormone T4 to the active T3 form as well as the overall regulation of thyroid hormone metabolism.<sup>[13,14]</sup> Selenium also plays a significant role in antioxidant activity because it is an integral component of several glutathione peroxidases as well as the enzyme thioredoxin reductase.<sup>[13]</sup> Molybdenum, another essential trace element, is a cofactor for the metabolic enzymes sulfite oxidase, xanthine oxidase, and aldehyde oxidase. Sulfite oxidase is instrumental in converting sulfite to sulfate. Xanthine oxidase converts nucleotides to uric acid. Both xanthine oxidase and aldehyde oxidase facilitate the metabolism of drugs and toxins.\*<sup>[15,16]</sup>

Due to the high-potency dose of iodine in PureDine, individuals should consult their healthcare practitioner about possible interactions with medications such as warfarin, lithium, and ACE inhibitors.



## Supplement Facts

Serving Size: 1 Tablet  
Servings Per Container: 90

	Amount Per Serving	%Daily Value
Iodine (as potassium iodide)	12.5 mg	8333%
Molybdenum (as molybdenum citrate)	25 mcg	33%
Selenium (as selenium chelate)	25 mcg	36%

**Other Ingredients:** Dicalcium phosphate, cellulose, vegetable stearic acid, silica, vegetable magnesium stearate, and pharmaceutical glaze.

## Directions

Take one tablet daily, or as directed by your healthcare practitioner.

## Does Not Contain

Wheat, gluten, corn protein, yeast, soy, dairy products, fish, shellfish, peanuts, tree nuts, egg, artificial colors, artificial sweeteners, or preservatives.

## References

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15. Linus Pauling Institute. Molybdenum. <http://lpi.oregonstate.edu/infocenter/minerals/molybdenum/>. Updated April 2007. Accessed January 22, 2013.
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## Cautions

Consult your healthcare practitioner before use. Keep out of reach of children. Avoid if allergic to any ingredient. Due to the high-potency dose of iodine in PureDine, individuals should consult their healthcare practitioner about possible interactions with medications such as warfarin, lithium, and ACE inhibitors.

**\*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.**

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