

BodyBio Liquid Selenium

Thyroid + Immune Health With One Trace Mineral

BodyBio Liquid Selenium delivers a clean, bioavailable form of this essential trace mineral to support thyroid hormone conversion, antioxidant defense, and immune health. With flexible dosing and ionic absorption, it's ideal for patients with thyroid dysfunction, oxidative stress, or low dietary intake.*

AVAILABLE FORMAT:

2oz Glass Bottle
with Dropper



TRUST POINTS

BodyBio Liquid Selenium is formulated with just a few active ingredients: sodium selenate and ionic sea mineral concentrate in a pure, liquid base with no unnecessary fillers or flavors. This clean, minimalist formulation ensures optimal bio-availability and tolerability, especially for pediatric, geriatric, or sensitive patients.

Each batch is third-party tested for potency and purity, and manufactured in a cGMP-certified facility. The liquid format allows for flexible, drop-by-drop dosing, making it easy to individualize protocols.

BENEFITS

Thyroid Hormone Conversion

Selenium is essential for converting inactive thyroxine (T4) into its active form triiodothyronine (T3), while also protecting thyroid tissue from oxidative damage.*

Cellular Antioxidant Protection

As a cofactor for enzymes like glutathione peroxidase, selenium neutralizes harmful free radicals, helping to modulate inflammation, reduce oxidative stress, and protect cells from damage.*

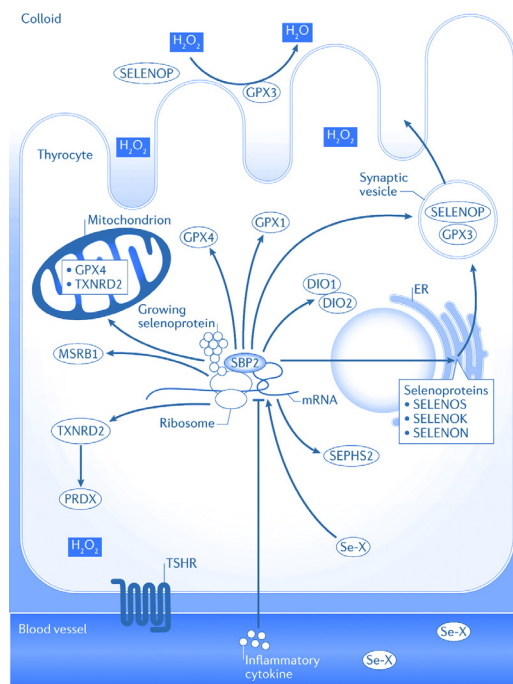
Immune and Mitochondrial Support

Selenium-containing selenoproteins support immune cell function, enhance redox signaling, and improve mitochondrial efficiency—key for energy production and immune resilience.*

EVIDENCE

Critical Roles of Selenium

This diagram illustrates the critical roles of selenium in thyroid function, antioxidant defense, and inflammation regulation. Inside the thyrocyte (thyroid cell), selenium is incorporated into various enzymes such as glutathione peroxidases (GPX1, GPX3, GPX4), thioredoxin reductase (TXNRD2), and iodothyronine deiodinases (DIO1, DIO2). These proteins help neutralize hydrogen peroxide (H_2O_2), protect mitochondria, and convert T4 to T3, the active thyroid hormone. Additionally, selenoproteins (SELENOS, SELENOK, SELENON) help regulate endoplasmic reticulum (ER) stress and suppress inflammatory cytokine production, contributing to immune modulation and cellular resilience. Together, these functions highlight selenium's essential role in maintaining thyroid integrity, reducing oxidative stress, and regulating inflammation.



ABBREVIATIONS:

- Se-X** – Selenium bound to carrier or metabolic molecules (biologically active, transportable form of selenium)
- GPX1, GPX3, GPX4** – Glutathione peroxidase 1, 3, and 4
- TXNRD2** – Thioredoxin reductase 2
- PRDX** – Peroxiredoxin
- MSRB1** – Methionine sulfoxide reductase B1
- DIO1, DIO2** – Type I and Type II iodothyronine deiodinases
- SELENOP** – Selenoprotein P
- SELENOK, SELENOS, SELENON** – Various selenoproteins
- SBP2** – SECIS-binding protein 2
- SEPH2** – Selenophosphate synthetase 2
- TSHR** – Thyroid-stimulating hormone receptor
- mRNA** – Messenger RNA
- ER** – Endoplasmic reticulum
- H₂O₂** – Hydrogen peroxide

Winther, K. H., Rayman, M. P., Bonnema, S. J., & Hegedüs, L. (2020). Selenium in thyroid disorders—Essential knowledge for clinicians. *Nature Reviews Endocrinology*, 16(3), 165–176.

APPLICATIONS

Thyroid and Endocrine Care

Recommended for individuals with thyroid dysfunction such as hypothyroidism, Hashimoto's thyroiditis, or an imbalanced T4:T3 ratio, to support hormone conversion and reduce oxidative stress within the thyroid gland.*

Antioxidant and Oxidative Stress Support

Recommended for individuals at risk for conditions associated with oxidative stress and redox imbalance, including neuro-degenerative disorders (e.g., Alzheimer's, Parkinson's), infertility, accelerated aging, and autoimmune disease.*

Immune Function and Infection Recovery

Recommended for individuals with weakened immunity, chronic viral infections, or inflammatory immune disorders. Selenium helps modulate immune signaling, enhances antioxidant defense in immune cells, and supports resolution of oxidative damage during infection or immune activation.*

SCIENTIFIC RATIONALE

Thyroid Hormone Metabolism Regulation

Selenium is required for the synthesis and function of deiodinases (DIOs), the selenium-dependent enzymes that convert T4 into T3. This activation step is essential for regulating gene expression related to energy metabolism, thermogenesis, and endocrine signaling. Selenium also supports antioxidant protection in the thyroid, reducing local inflammation and autoimmune activity.*

Antioxidant Defense and Redox Balance

Selenium is a critical component of glutathione peroxidases (GPx) and thioredoxin reductases—enzymes that reduce hydrogen peroxide and lipid hydroperoxides into non-toxic molecules. This maintains intracellular redox homeostasis, protects DNA and membranes from oxidative damage, and reduces the risk of chronic disease driven by oxidative stress, such as cognitive decline, infertility, and autoimmune disease.*

Immunomodulatory Function

Selenium influences both innate and adaptive immunity through its role in redox-sensitive signaling pathways, including nuclear factor kappa B (NF-κB) and mitogen-activated protein kinase (MAPK). These pathways regulate immune cell activation, inflammatory cytokine expression, and antioxidant capacity. Selenoproteins help preserve immune cell function during infection, limit inflammation-induced tissue damage, and may play a protective role in autoimmune conditions by minimizing oxidative stress.*

SUGGESTED USE

As a mineral supplement, add 1.25 mL in water or beverage of choice daily, or as directed by a healthcare practitioner.

SUPPLEMENT FACTS

Serving Size: 1.25 mL (25 drops)
Servings: About 47

Amount Per Serving	
Selenium	300mcg
(as sodium selenate)	
Ionic Sea Minerals Concentrate	350mg

Other ingredients: Purified water, non-GMO citric acid, potassium benzoate.

SCAN QR CODE
FOR REFERENCES

