

BodyBio Liquid Manganese

Fuel Energy, Brain Health, and Antioxidant Defense

BodyBio Liquid Manganese is a highly bioavailable trace mineral essential for brain health, energy metabolism, antioxidant protection, and connective tissue integrity. It supports mitochondrial ATP production, blood sugar regulation, and collagen synthesis while defending against oxidative stress and promoting overall metabolic and neurological function.*

AVAILABLE FORMAT:

2oz Glass Bottle
with Dropper



BENEFITS

Cellular Energy and Metabolism

Manganese supports mitochondrial enzyme activity, aiding ATP production and sustaining energy levels.*

Antioxidant Defense and Neuroprotection

As a cofactor for manganese superoxide dismutase (MnSOD), manganese helps neutralize free radicals, protecting neurons and supporting cognitive health.*

Glucose Metabolism and Blood Sugar Balance

Manganese influences enzymatic pathways involved in insulin secretion and glucose tolerance, supporting metabolic health.*

Connective Tissue and Structural Health

Essential for collagen formation and cartilage maintenance, manganese promotes strong joints and tissue repair.*

TRUST POINTS

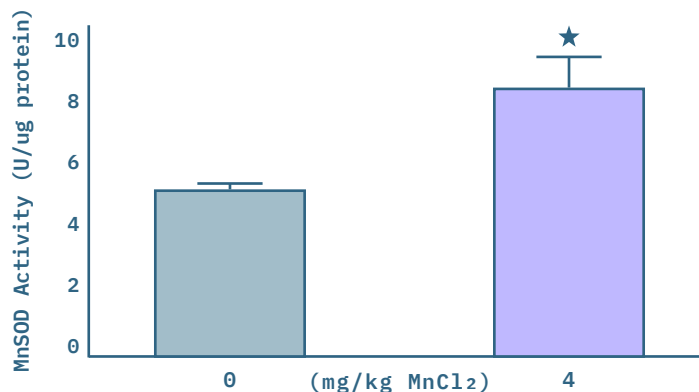
BodyBio Liquid Manganese is formulated for maximum bioavailability, purity, and clinical efficacy, making it an ideal choice for healthcare practitioners. Unlike capsules or tablets, this highly absorbable liquid form ensures rapid uptake, especially for individuals with digestive concerns. Formulated based on rigorous research, this supplement provides an effective, precise dose without unnecessary fillers.

Manufactured in a cGMP-certified facility, it is free from unnecessary fillers and flavors, ensuring a clean, high-quality formulation. As part of BodyBio's individualized mineral collection, Liquid Manganese allows practitioners to fine-tune supplementation based on patient needs, supporting metabolic function, antioxidant defense, and overall wellness.*

EVIDENCE

Manganese Supplementation Increases MnSOD Activity in Liver

To find out if MnSOD (manganese-superoxide dismutase) was fully activated and whether manganese supplementation could boost its activity, researchers gave normal mice daily injections of either saline or manganese chloride for 7 days. In a normal mouse strain, manganese injection increased MnSOD activity in liver mitochondria by 73% compared to the saline group (P<0.05).



Lee, S.-H., Jouihan, H. A., Cooksey, R. C., Jones, D., Kim, H. J., Winge, D. R., & McClain, D. A. (2013). Manganese supplementation protects against diet-induced diabetes in wild type mice by enhancing insulin secretion. *Endocrinology*, 154(3), 1029–1038. <https://doi.org/10.1210/en.2012-1445>

APPLICATIONS

Energy and Fatigue Support

Beneficial for individuals with chronic fatigue, mitochondrial dysfunction, or low energy due to suboptimal mineral status.*

Neurological and Cognitive Health

Supports brain resilience and cognitive function in individuals experiencing brain fog, memory challenges, or oxidative stress.*

Metabolic and Blood Sugar Regulation

Recommended for those with insulin resistance, metabolic syndrome, or impaired glucose metabolism.*

Joint and Tissue Repair

Ideal for patients recovering from injury, surgery, or joint discomfort related to collagen breakdown or connective tissue stress.*

Correcting Deficiency

For individuals with confirmed manganese deficiency due to poor diet, chronic illness, or medication-induced depletion.*

SCIENTIFIC RATIONALE

Cellular Energy and Metabolism

Manganese is an essential cofactor for key mitochondrial enzymes, including pyruvate carboxylase and MnSOD. Pyruvate carboxylase converts pyruvate into oxaloacetate, a critical intermediate that replenishes the Krebs cycle. This process helps maintain ATP production during periods of increased demand. In addition, MnSOD protects mitochondria from oxidative damage, allowing energy pathways to function efficiently.*

Antioxidant Defense and Neuroprotection

Manganese is required for MnSOD, the primary mitochondrial antioxidant enzyme that neutralizes superoxide radicals. Adequate Mn is essential for neuronal protection, as reduced MnSOD activity has been linked to neurodegeneration.*

Glucose Metabolism and Blood Sugar Balance

Manganese regulates enzymes such as arginase and phosphoenolpyruvate carboxykinase (PEPCK), impacting insulin signaling and glucose tolerance. Mn deficiency correlates with impaired glucose homeostasis and metabolic syndrome.*

Connective Tissue and Structural Health

Manganese activates prolydase (for collagen turnover) and glycosyltransferases (for proteoglycan synthesis), critical for joint repair, cartilage health, and wound healing.*

SCAN QR CODE
FOR REFERENCES



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	
Manganese (as manganese gluconate)	10 mg
Ionic Sea Minerals Concentrate	400mg

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