

DUAL-FUNCTION LIQUID ZINC SUPPLEMENT & ASSESSMENT TOOL

Supplement Facts

Serving Size: 10 ml
(approx. 2 teaspoons)
Servings Per Container: 24

	Amount Per Serving	% Daily Value
Zinc	8 mg	53%
(as zinc sulfate monohydrate)		

Other Ingredients: Distilled water.
Does not contain gluten.

SUGGESTED USE: AS A DIETARY SUPPLEMENT TAKE 2 TEASPOONS PER DAY OR AS DIRECTED BY YOUR HEALTHCARE PROFESSIONAL.

WARNING: IF TAKING MEDICATION, PREGNANT OR NURSING, CONSULT A PHYSICIAN BEFORE USING.

- Used in zinc taste test to help evaluate zinc status.*
- Doubles as a well-absorbed liquid zinc supplement.*
- Zinc helps supports healthy immunity, reproductive and sensory function, connective tissue & glycemic control.*

ZincEval Select® is a professional liquid supplement combining zinc sulfate with pure distilled water. The solution is designed for use in conducting the zinc taste test, a researched method for helping determine body zinc status. **ZincEval Select®** also serves as a high quality, bioavailable zinc supplement, suitable for use by children, adults and seniors.

THE ZINC SULFATE TASTE TEST

Zinc deficiency is associated with diminished taste acuity in both humans and animals because zinc is a primary component of *gustin* (carbonic anhydrase VI), a salivary protein involved in taste perception. The zinc taste test was devised to help determine zinc status in people. At least four versions of the test have been proposed, all of which involve the use of a 1% zinc sulfate solution held in the mouth for a brief period of time until a distinct taste does or does not develop. A subjective scale or set of descriptive words is then used to describe the taste experience, for example “no taste,” “slight taste” or “a very strong, unpleasant taste, provoking the desire to spit it out.” A taste intensity visual analog scale (TI-VAS) is also used by some practitioners as an adjunct to the classical zinc taste test. To complete the TI-VAS, patients mark their taste response along a 100 millimeter long horizontal line, where the far left end of the line stands for “No taste”, and the far right represents “Extremely intense taste.” Generally speaking, *those with replete zinc levels tend to experience a strong unpleasant taste from zinc sulfate solution; those who are deficient tend to find it tasteless.* We suggest using the following guidelines for conducting the zinc taste test:

Hold 1 tsp **ZincEval Select®** in mouth for 10-30 seconds before swallowing; note flavor that develops on tongue. Evaluate zinc status as follows:

- **Immediate, very noticeable bitter, unpleasant or metallic taste.** Indicates optimal levels of zinc are present; suggests no need for zinc supplementation.
- **Slight bitter or metallic taste.** Indicates suboptimal zinc levels; suggests need for zinc supplementation.
- **No taste, sweet or “water-like” taste.** Indicates low zinc levels; suggests definite need for zinc supplementation.

If need for zinc supplementation is indicated, consider using either **ZincEval Select®** liquid or higher potency **Zinc Select®** capsules (30 mg) to avoid experiencing increasingly bitter, unpleasant taste sensations as zinc status improves. Perform follow-up taste tests with **ZincEval Select®** after 2 to 4 weeks of zinc supplementation to re-evaluate zinc status.

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* 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.

The zinc taste test provides a subjective evaluation of physiological zinc status. Beyond helping to assess serum zinc levels, research suggests there is a relationship between zinc sulfate taste acuity and other findings such as weight, blood pressure, postpartum depression and frequency of illness. In men but not women, zinc sulfate taste acuity also has been significantly correlated with dietary zinc intake.

ZINC is a nutritionally essential mineral for which marginal deficiencies are common. According to a 2016 review paper, *Assessing Zinc in Humans*, 17% of the world's population is affected by inadequate dietary zinc intake. The best dietary sources of zinc are animal foods: oysters, shellfish, beef, poultry and eggs. Nuts and legumes are good plant sources but the high levels of phytic acid in these foods, as well as in whole grains, may interfere with zinc absorption, potentially putting people on high fiber diets or whole food/plant-based vegetarian diets at increased risk for zinc deficiency. Other populations with a higher risk for zinc deficiency include pregnant and lactating women, patients with anorexia nervosa or protein-energy malnutrition, elderly people taking one or more prescription drugs and individuals with intestinal inflammation or any digestive disorder marked by persistent diarrhea.

Owing to its multiple roles in human physiology, the symptoms associated with zinc deficiency are wide and varied. Some familiar signs of inadequate zinc status include: frequent and/or severe infections, delayed wound healing, dermatological disorders of both body and scalp skin, hair loss, joint and connective tissue disorders, reproductive disorders (most notably infertility, prostate problems and menstrual irregularities), inflammatory GI problems, decreased insulin sensitivity, impaired sleep and various psycho-behavioral disturbances. Loss of smell and loss of taste, along with night blindness, are also common signs of zinc deficiency.

At least 300 different enzymes in the body rely on zinc to function. Zinc forms a key structural component of the antioxidant enzyme *copper-zinc superoxide dismutase* and, as part of the immune system, is involved in maintaining healthy T-cell, cytokine and neutrophil function. Clinically, zinc has been associated with improved immune health in people of all ages, including children and the elderly. In a 2008 study, zinc supplementation in seniors was shown to optimize inflammatory biomarkers and improve immunity in response to pathogen invasion.

Numerous factors influence and may impair zinc absorption, whether the zinc is supplied by dietary sources or by supplements. Optimizing zinc status begins with assessment of zinc status, making ZincEval Select® a valuable tool for use by practitioners and their patients.

REFERENCES

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