

## TAUROMAG®-SR™ Magnesium N-Acetyltaurinate

Sustained Release



Promotes brain health,  
cognitive function  
& positive mood

### What Is It?\*

Tauromag®-SR™ Magnesium N-Acetyltaurinate features Tauromag, a patented form of magnesium (Mg) that holds New Dietary Ingredient (NDI) status in the United States.\*

The sustained-release vegetable wax-matrix tablet is formulated for a slow, steady release of Mg N-Acetyltaurinate over 5 to 7 hours for optimal absorption and tissue uptake

### How Does It Work?\*

Mg N-Acetyltaurinate is a superior form of Mg for brain health and cognitive function. Acetylation with the amino acid taurine yields a lipophilic moiety that more efficiently crosses the bloodbrain barrier and penetrates brain cell membranes compared to other common Mg compounds.

Mg N-Acetyltaurinate is also a structural analogue to two key excitatory neurotransmitters (glutamic acid and kainic acid), which allows it to modulate neuronal activity.

Mg plays an essential role in nerve transmission, protects against excessive excitation that can lead to neuronal cell death (excitotoxicity), and has been reported to have a potential therapeutic role in multiple neurological disorders.<sup>1</sup>

### Who can benefit?

For adults seeking nutritional support to help maintain brain health, cognitive function, and positive mood as they age.

### Product Availability

Bottle Size(s):  
90 tablets

**Directions:** ATake one (1) tablet, twice daily, with a meal, or as directed by your healthcare professional.

### Supplement Facts

Serving Size 1 Tablet

Amount Per Tablet	%DV
Magnesium (from Magnesium N-Acetyltaurinate)	24 mg 6%
Magnesium N-Acetyltaurinate	300 mg

\*Daily Value (DV) not established

**Other Ingredients:** Vegetable wax (rice bran and/or carnauba), stearic acid (vegetable), magnesium stearate (vegetable), and silica.

1. Kirkland AE, et al. *Nutrients*. 2018;10(6):730.

### PRACTITIONER DISTRIBUTION

- Online dispensaries pending

This information is for healthcare professionals only to inform patient treatment and is not intended for consumer use.

\*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.

# TAUROMAG<sup>®</sup>-SR<sup>™</sup>

## Magnesium N-Acetyltaurinate

## RESEARCH HIGHLIGHTS

### Sustained Release

#### Exerts neuroprotective actions to support brain health & cognitive function in animal models

Pre-clinical research demonstrates the potential for Mg N-Acetyltaurinate to support brain health and cognitive function in several ways, including:

- **Improved neuronal synaptic plasticity in animal models of Mg deficiency and Alzheimer's Disease.** One animal study<sup>2</sup> investigated the effect of Mg N-Acetyltaurinate on hippocampal synaptic plasticity, as measured by long-term potentiation (LTP), in Mg-deficient rats and in a murine model of Alzheimer's Disease. In the Mg-deficient rats, Mg N-Acetyltaurinate (50 mg/kg/day for 24 days) significantly ( $P < .05$ ) improved LTP. This amount provided 3.7 mg/kg/day of elemental Mg, comparable to the recommended dosage for humans. In the murine model of Alzheimer's disease, Mg N-Acetyltaurinate (700 mg/kg/day for 24 days providing 51 mg/kg/day of elemental Mg) also significantly ( $P < .05$ ) improved LTP. These findings indicate a potential therapeutic role for Mg N-Acetyltaurinate to support memory and other cognitive processes.

- **Improved recovery in animal model of brain injury.**

One comparison study<sup>3</sup> in rats investigated the effect of Mg from various sources (Mg N-Acetyltaurinate, Mg sulphate, and Mg citrate) on recovery from mild traumatic brain injury. Trauma decreased oxytocin, vasopressin and vasopressin v1b receptor levels in the amygdala and produced significant morphological damage and apoptosis in brain tissue. Mg N-Acetyltaurinate (50 mg/kg for 12 days post trauma) effectively ameliorated histopathological deteriorations in brain tissue, improved vasopressin and v1b receptor levels in the amygdala, and attenuated the trauma-induced decline in empathy-like behavior. The limited/lack of effect of the Mg salts is attributed to their inability to adequately penetrate brain tissue.

- **Improved seizure control in animal model of epilepsy.** Mg N-Acetyltaurinate has been shown to reverse audiogenic seizures in mice induced by Mg deficiency,<sup>4</sup> suggesting a potential therapeutic role for epilepsy.

#### Exhibits superior brain uptake and anti-anxiety effects vs. common Mg sources

One comparison study<sup>5</sup> in rats assessed tissue uptake and behavioral effects of a single oral dose of Mg (400 mg/70 kg) from various sources. Results indicate the Mg level in brain tissue after 8 hours was significantly ( $P < .05$ ) higher from Mg N-Acetyltaurinate compared to common Mg salts (i.e., Mg sulfate, Mg oxide, Mg citrate, and Mg malate), indicating an efficient passage across the blood-brain barrier. The Mg N-Acetyltaurinate group also exhibited the lowest anxiety indicators of all the Mg preparations tested.

One comparison study<sup>6</sup> in mice investigated tissue uptake of Mg from a single oral dose of Mg N-Acetyltaurinate vs. other organic Mg compounds (Mg citrate, Mg malate, and Mg glycinate) at different doses (45, 135, and 405 mg/70kg of elemental Mg) over a 24-hour period. Compared to control, only Mg N-Acetyltaurinate significantly ( $P < .05$ ) increased the brain Mg level at all dosages in a dose-independent manner (both low- and high-doses were equally effective). By contrast, only high-dose Mg glycinate and Mg citrate significantly ( $P < .05$ ) increased the brain Mg level, but to a lesser extent than Mg N-Acetyltaurinate, while Mg malate had no effect. In addition, dividing the high daily doses failed to increase the brain Mg level compared to control.

#### May play a role in migraine prophylaxis & treatment

The superior brain uptake of Mg from Mg N-Acetyltaurinate suggests a therapeutic role for migraine prophylaxis and treatment. Mg is not only reported to be a key factor in the pathogenesis and treatment of migraine,<sup>7</sup> but a suboptimal intake is associated with migraine in U.S. adults<sup>8</sup>.

SmartMatrix and ENDUR-ACIN are trademarks of Innovite, Inc.

#### References

2. Fassin M. Magnes Res. 2020;33(4):106-113.

3. Hosgorler F, et al. Turk Neurosurg. 2020;30(5):723-733.

4. Bac P, et al. Magnes Res. 1993;6(1):11-19.

5. Uysal N, et al. Biol Trace Elem Res. 187:128-136.

6. Ates M, et al. Biol Trace Elem Res. 2019;192(2):244-251.

7. Domitrz I, et al. Nutrients. 2022;14(5):1089.

8. Slavin M, et al. Headache. 2021;61(2):276-286.

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