

## Preventing Hearing Loss with Magnesium Glycinate

### What is magnesium?

- Magnesium is an **essential mineral** used in many chemical reactions in the body. It has many protective effects, and can help protect your hearing when exposed to loud noises.<sup>1</sup> Our ears are injured over time by loud noises from amplified sound and music, gunpowder explosions and from the loud noise of engines. Magnesium helps by preventing excitotoxicity that injures nerve endings that send sound signals from hair cells in the inner ear to the brain. Taking magnesium prior to noise exposure will help preserve your hearing over time but will not take the place of ear plugs or muffs which are always recommended for individuals who use loud machinery or guns.

### What is the recommended daily dose of magnesium glycinate?<sup>2</sup>

- **200-400 mg**  
This is a very general number. If you are taking it daily I recommend 200mg. If taking it for occasional loud noise exposures(e.g. concerts, shooting, lawn mowing, chainsaws, motorcycle use etc.) take 300-400mg. The half-life of magnesium in the body is 30 hours.

### How do I take magnesium?

- If you have hobbies or an occupation that expose you to loud noises you should take magnesium daily in addition to using standard ear protection such as ear plugs or muffs. Because some of yesterday's dose is still in your system, 200 mg will be protective.
- If you are only exposed to loud noise on occasion you may take magnesium an hour prior to exposure. In this situation a higher dose of 300-400mg is recommended. Once again, plugs or muffs are also recommended.
- If you have are taking antibiotics do not take magnesium within 2 hours of your dose.

### What foods are high in magnesium?

- Green leafy vegetables (spinach, kale, roasted soybeans), legumes, and nuts (cashews, almonds, walnuts) are good sources of magnesium.<sup>2</sup> If your diet is rich in these foods you may take a lower daily dose. Most multivitamins do not contain enough magnesium to protect your hearing.

### Kinds of Magnesium:

- Magnesium comes in many forms: oxide, gluconate, threonate, citrate, aspartate and glycinate. All have beneficial properties but they vary greatly in absorption and some can be hard to find. Magnesium citrate for example is poorly absorbed from the gut and is very laxative. **Magnesium glycinate** is well absorbed by the gut, has minimal laxative effect and is easy to find.

### Additional Tips for Protecting Your Hearing:

- Wear earplugs or earmuffs when exposed to loud sounds for long periods.
- Keep the volume down on your headphones and avoid listening at high levels. (Avoid listening to music *over* the noise of a lawn mower.)
- Take breaks in quiet places if you're around loud noises.
- While magnesium glycinate may help, it's not a guarantee that you won't experience hearing loss. It's just one way to reduce the risk.

<sup>1</sup> Attias J, Weisz G, Almog S, Shahar A, Wiener M, Joachims Z, Netzer A, Ising H, Rebentisch E, Guenther T. Oral magnesium intake reduces permanent hearing loss induced by noise exposure. Am J Otolaryngol. 1994 Jan-Feb;15(1):26-32

<sup>2</sup> Institute of Medicine (IOM). Food and Nutrition Board. Dietary Reference Intakes: Calcium, Phosphorus, Magnesium, Vitamin D and Fluoride. Washington, DC: National Academy Press, 1997