

FREE GUIDE

The Magnesium Buyer's *Checklist*

Nine checks, one piece of label math, and the honest evidence grades — so you stop paying for magnesium you never absorb.

[READ THE LABEL](#)[READ THE STUDY](#)[READ THE PRICE TAG](#)

What's inside

The 60-second label test · Form comparison · The elemental math
Cost-per-absorbed-dose worksheet · Red flags · What it won't fix

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Educational content.
Not medical advice.

01. The 60-second label test

Run this on any bottle — in a shop, or on a product page — before you buy. If it fails checks 1 or 2, put it back; nothing further matters.

☐ 1. Does it name the *form*, not just "magnesium"?

You want "magnesium glycinate" or "magnesium citrate". A label that says only "magnesium 500mg" is hiding something — almost always oxide.

☐ 2. Does it state *elemental* magnesium per serving?

The number that matters. Good labels print both: compound weight and elemental. See the math on page 4.

☐ 3. How many capsules is a "serving"?

A 3-capsule serving in a 90-capsule bottle is 30 days, not 90. This is the most common way cost-per-dose gets disguised.

☐ 4. Is the dose in a sensible range?

Most trials use 200–400mg elemental daily. Far below is pointless; far above mostly buys you loose stools.

☐ 5. Is there a "proprietary blend"?

A blend means the individual doses are hidden. There is no good reason to hide a dose of magnesium.

☐ 6. Is it third-party tested?

Look for a certificate of analysis, or NSF / Informed Choice / USP marks. Supplements are not pre-approved by regulators — testing is the only real check.

☐ 7. Does the marketing make disease claims?

"Cures anxiety", "reverses insomnia" — these are illegal claims for a supplement. A brand willing to break that rule is telling you about its standards.

☐ 8. What's the cost per 100mg *elemental*?

Not per bottle, not per capsule. Worksheet on page 5.

☐ 9. Do you actually need it?

The most-skipped check. Page 7 covers what magnesium does not fix.

02. Which form, and why

The form determines how much reaches your bloodstream and how your gut reacts. Grades below are ours: **A** = consistent human trials, **B** = some human trials, mixed or small, **C** = mechanistic or thin human data.

FORM	ABSORPTION	BEST FOR	THE CATCH	GRADE
Glycinate	High, gentle on the gut	Nightly use, sensitive stomachs, stress-heavy lives	Only ~14% elemental — check the dose	B
Citrate	Good	Occasional constipation	Loose stools at higher doses	B
L-threonate	Good; brain-levels claim is rodent data	Curiosity about cognition, age 50+	3–5× the price per elemental mg	C
Malate	Good	Daytime use	Fatigue claims are largely untested	C
Taurate	Good	People already taking taurine	Little independent human data	C
Oxide	~4% in a human bioavailability study	Making a label number look big	Most of it never reaches your blood	F
Topical spray	Skin absorption not demonstrated	—	Pleasant. Unproven.	C

The short version

Glycinate for daily and evening use. **Citrate** if you're also constipated. **Oxide** only if you enjoy paying for magnesium you don't absorb.

SOURCES Firoz & Graber 2001, *Magnesium Research* (oxide bioavailability ≈4%) · Walker et al. 2003 (citrate vs oxide vs amino-acid chelate) · Mah & Pitre 2021, systematic review (magnesium & sleep) · Slutsky et al. 2010, *Neuron* (l-threonate, rodent) · Liu et al. 2016, MMFS-01 human trial, n≈44.

03. Why "500mg" can mean 12mg

The front of the bottle quotes the weight of the **compound**. Your body only gets the **elemental** magnesium inside it — and only the fraction that actually absorbs. Two multiplications stand between the label and your bloodstream.

The label says (magnesium oxide)	500 mg
× 60% elemental magnesium in oxide	300 mg
× ~4% absorbed (Firoz & Graber 2001)	~12 mg
Actually reaching your blood	~12 mg

Now the same math on a glycinate product. Glycinate is only about 14% elemental by weight — a worse-looking label number — but far more of it absorbs.

The label says (magnesium glycinate)	1000 mg
× ~14% elemental magnesium in glycinate	140 mg
× high absorption (several-fold above oxide)	—
Delivered dose	>> oxide

What to take from this

A bigger number on the front of the bottle is **not** a bigger dose. Compare products on **elemental magnesium per serving**, then on form. Any label that won't tell you the elemental figure has answered the question for you.

Absorption varies with dose, meal timing, and the individual — treat these figures as well-evidenced estimates, not constants. The direction of the effect is reliable; the exact percentage is not.

04. Cost per 100mg elemental

The only price comparison that means anything. Fill this in for any three products you're weighing up — the cheapest bottle usually loses.

STEP	PRODUCT A	PRODUCT B	PRODUCT C
Brand & form			
Price			
Servings per bottle capsules ÷ capsules per serving			
Elemental mg per serving			
Total elemental mg servings × elemental mg			
Cost per 100mg price ÷ (total ÷ 100)			

Worked example

A \$9 bottle: 120 capsules, 3 per serving = 40 servings. 100mg elemental per serving = 4,000mg total. $\$9 \div 40 = \text{\$0.23 per 100mg}$. A \$19 bottle at 200mg elemental across 60 single-capsule servings = 12,000mg → $\text{\$0.16 per 100mg}$. The dearer bottle is 30% cheaper per dose.

Then apply the form grade from page 3. A cheap price per 100mg of *oxide* is not a bargain, because most of that 100mg never arrives.

05. Seven red flags

Any one of these is a reason to look elsewhere. Two or more and you are looking at a marketing company, not a supplement company.

✗ "Proprietary blend"

Individual doses hidden. Usually because one ingredient is present in a token amount.

✗ Oxide as the only form

The cheapest form to manufacture and the worst absorbed. It makes the label number big.

✗ Disease claims

"Cures", "treats", "reverses", "prevents". Illegal for supplements in the US and UK — and a direct signal about the company's standards.

✗ "Clinically proven" with no citation

Ask which trial, in whom, at what dose. If there's no answer, there's no trial.

✗ No elemental figure anywhere

They know the number is unimpressive.

✗ Countdown timers and "only 3 left"

Manufactured urgency on a shelf-stable mineral that has been abundant since the 1930s.

✗ A blend of nine minerals at once

Sold as convenience. Usually means every dose is too small to do anything.

One honest note about us

Some links we share are affiliate links, which means we may earn a commission. That is exactly why every claim in this guide carries its source and its grade — so you can check our work rather than trust our motives. We also publish **Grade F** verdicts on products that would pay us well.

06. What magnesium won't fix

The section no supplement brand writes. Being clear about the ceiling is the difference between a supplement that helps and a supplement that disappoints.

THE CLAIM YOU'LL SEE	THE HONEST POSITION	GRADE
Helps sleep	Modest improvements in trials, clearest in people who were low or older. Not a sedative.	B
Supports muscle relaxation	Magnesium is genuinely involved in muscle function; supplementation helps most when intake was inadequate.	B
Eases night cramps	A Cochrane review found little benefit in older adults. Possibly better in pregnancy.	C
Lowers stress / cortisol	Plausible mechanism, thin human evidence. Sleep timing and exercise have far stronger data.	C
"Everyone is deficient"	Overstated. Intakes below the recommendation are common; clinical deficiency is not.	C
Cures anxiety or insomnia	No. This is a disease claim and it isn't supported.	F

The things that beat every supplement

A **consistent wake time**, **morning daylight**, **regular exercise**, and a **bedroom at 18–19°C**. All free, all better evidenced than anything in a bottle. Fix these first; a supplement can only ever be the last 10%.

When to see a doctor rather than buy a supplement: persistent insomnia beyond a few weeks, heavy snoring or witnessed pauses in breathing, palpitations, muscle weakness, or unexplained fatigue. Also speak to a doctor before supplementing if you have reduced kidney function or take medication — magnesium interacts with several common drugs.

SOURCES Mah & Pitre 2021 (sleep) · Garrison et al. 2020, Cochrane review (cramps) · Abbasi et al. 2012 (RCT, older adults) · Chaput et al. 2020 (sleep regularity) · Okamoto-Mizuno 2012 (thermal environment).

07. If you decide to buy

QUESTION	PRACTICAL ANSWER
How much?	Most trials use 200–400mg elemental per day. Start at the lower end.
When?	Evening suits glycinate. Consistency matters more than timing.
With food?	With a meal reduces stomach upset. Absorption differences are minor.
Split the dose?	Yes if you're above ~200mg — absorption falls as a single dose rises.
How long to judge?	Give it 3–4 weeks, changing one variable at a time, or you'll never know what worked.
Too much?	Loose stools are the usual first sign. Supplemental intake above ~350mg/day is generally not recommended without medical advice.

08. Your next three steps

☐ **Run the 60-second test on whatever you own now**

Most people find oxide in the cupboard.

☐ **Fill in the cost worksheet for three products**

Fifteen minutes, and it usually changes the decision.

☐ **Fix the free levers for two weeks first**

Same wake time, morning light, cooler room. Then judge whether you still need the bottle.

We audit one product category a month

Labels, evidence, and cost per absorbed dose — including the verdicts that cost us money. Follow [@elementalaudit](#) for the next one.

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