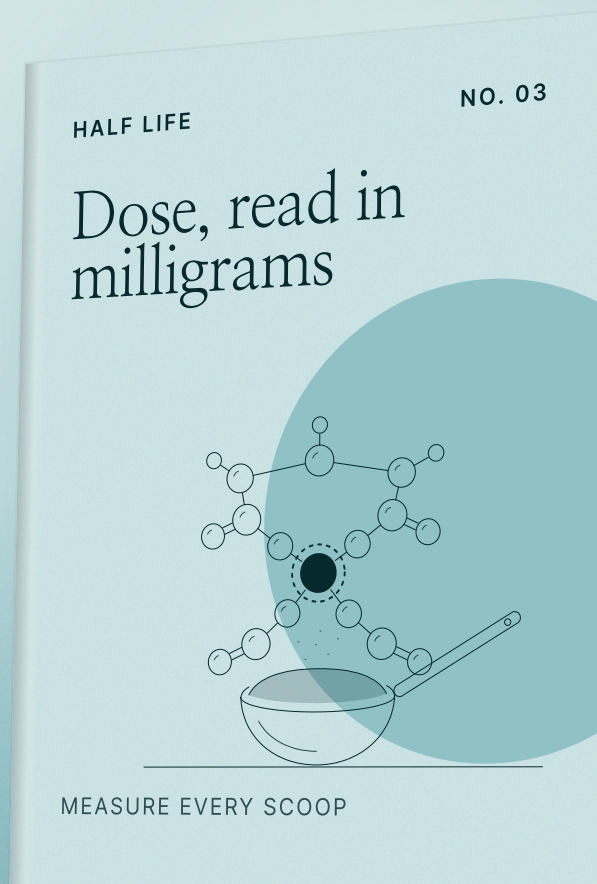




MONOGRAPH · DOSING

# What the label actually gives you per scoop

Most electrolyte labels hide the math in plain sight. This guide translates milligrams, elemental shares and lot papers into choices you can repeat on hot training days and quiet desk days.



## Count food first

Three days of meals set sodium and potassium before powder enters.



## Do elemental math

Divide compound weight by chemistry to find magnesium that counts.



## Demand lot papers

Match the tub number to its Certificate and screening list.

By Hailey Carson · Updated Jul 27, 2026 · 10 min read

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The powder that steadied last week’s long run can feel flat next time because the scoop never held what the front claimed at a glance, only what the panel lists in milligrams by form. Once food is tallied and each mineral is converted to an absorbable amount, training bottles and office glasses stop being interchangeable.

# 01

## Count meals before buying powder

No stick can be judged before kitchen intake is known. Sodium, potassium, magnesium and calcium from food establish background, then sweat on active days adds loss. Quiet indoor days frequently call for plain water, because usual eating already passes the upper guidance value for sodium.

Reference values frame the work. Intake considered adequate sits near 1,500 mg sodium daily while the guidance ceiling sits at 2,300 mg, and typical eating already runs beyond it. Potassium targets sit at 3,400 mg for men and 2,600 mg for women, while sodium starts around 1,500 mg and rises with exertion. Recommended allowances for magnesium in adults list 400 to 420 mg for men and 310 to 320 mg for women from age 19 upward, varying by age bracket. Roughly 30 percent to 40 percent of magnesium in foods and drinks is normally taken up by the gut.

Record three typical days. Capture bread, cheese, soup, condiments, tinned beans, pickles and restaurant plates, because those supply most sodium. Capture fruit, potatoes, beans, yogurt and milk for potassium. Capture nuts, seeds, pulses and whole grains for magnesium. Then layer training on top. Sweat averages near 900 mg sodium plus 200 mg potassium per litre, yet spread among people is wide. Sodium in sweat spans about 460 to 2,300 mg per liter, and sweat output spans 0.5 to 2 or more liters hourly.

### How to log it

Hold one simple table across a week. Enter sodium, potassium, magnesium and calcium from meals. Flag workout duration, heat, layers and pale streaks dried on clothing. Describe thirst, urine shade and stool habit in ordinary terms. Carry that record to a clinician when sodium

counsel seems contradictory, because advice on sodium remains unsettled between lower targets for blood pressure and larger replacement during heat, keto eating or profuse sweating, so setting governs.

#### FROM THE EDITORS

Track intake, form, dose and tolerance across weeks, since a lone lab value leaves gaps. Serum magnesium alone cannot reveal whole body status, because blood concentrations do not mirror tissue reserves completely.

## 02

### Match sodium and potassium to the session

Flip the sachet and read sodium mg per stick or serving before anything else. Set high sodium products near 500 to 1000 mg against lighter daily blends. A workable entry range is 300 to 600 mg sodium hourly during hard work in heat, tuned to how salty the sweat appears. That interval derives from exercise journals, not from flavor titles or front panel promises.

Potassium appears next to sodium in most blends. Measure potassium per serving beside kitchen totals, because daily food goals already reach into the thousands of milligrams. Powder design weighs sodium, potassium, magnesium and calcium together with dissolution, bitterness cover, steadiness and shelf span. Sugar belongs in the same check. Research on output and tiredness has pointed to carbohydrate levels of 60 to 80 g per L in rehydration beverages. Sugar paired recipes employ glucose for uptake, so inspect sugar because the decision alters energy, flavor and transport together.

Sports beverages with osmolalities spanning 275 to 295 mOsm per kg water are sold to restore salts shed in workouts. Osmolality reports how many dissolved particles crowd the fluid. Fruit style recovery blends can prove difficult to hold steady at acidic pH while preserving osmolality and pleasant mouthfeel, which explains why recipes diverge even where sodium figures seem alike.

| USE CASE                         | SODIUM SIGNAL ON LABEL                                                                                      | POTASSIUM AND SUGAR CHECK                                                             |
|----------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Long, hot or heavy sweat session | Greater sodium per portion, near 500 to 1000 mg per stick, aligned with 300 to 600 mg sodium hourly in heat | Record potassium mg plus sugar grams, because glucose paired formulas depend on sugar |
| Short session under an hour      | Lighter sodium blend or plain water, because meals already furnish background sodium                        | Hold sugar modest when effort was brief and a meal comes next                         |
| Desk work or office day          | Minimal sodium choice or straight water, since habitual intake already tops 2,300 mg                        | Weigh potassium against food totals before pouring added powder                       |

Sodium and potassium mg per stick for one named brand cannot appear here, which makes reading that package necessary. Batches rotate, flavors rotate and serving sizes rotate. Photograph the Supplement Facts box plus the other ingredients row while shopping, then rank sticks in milligrams rather than promotional language.

03

Translate compound weight into elemental magnesium

Panels report elemental magnesium, such as Magnesium 200 mg, rather than gross weight of glycinate, citrate or oxide. The separation controls the entire comparison. Bulk compound weight looks impressive. Elemental quantity governs intake arithmetic.

Magnesium glycinate holds near 14 percent elemental magnesium by mass, hence a 1,000 mg capsule supplies close to 140 mg elemental. Magnesium citrate holds near 11 percent elemental, hence a 1,000 mg portion yields near 110 mg elemental. Common evening amounts span 200 to 400 mg elemental magnesium for glycinate, and 200 to 400 mg elemental taken with water for citrate. For many adults a careful test is 100 to 200 mg elemental magnesium each day, then revise upward or downward with effect and stool tolerance.

Form shifts solubility and gut response. Magnesium oxide dissolves less readily than most alternative forms, so surplus undissolved mineral may remain inside the lumen and draw water toward the bowel. Magnesium citrate passes into solution more easily than oxide, so uptake is usually fuller, although larger amounts may still soften stools. Magnesium glycinate pairs magnesium with amino acid glycine and tends to sit gently, with lower likelihood of purging.

## Which form fits which need

Reserve oxide for occasions where the package itself identifies a laxative purpose. Select citrate when the package pairs support with bowel regularity and the buyer tolerates softer stools at larger amounts. Select glycinate for mild routine use alongside meals, beginning small and titrating against stool response. Temper midday hopes for malate, because magnesium findings shift with endpoint, showing mixed outcomes for sleep and scant backing for malate energy promotion. Evidence draws on Examine pages for magnesium, zinc and sodium balance, which collect trials while guaranteeing no result for any individual.

To decode what 1,000 mg of blend truly contributes, scale compound milligrams against elemental fraction. A scoop declaring 1,000 mg magnesium citrate blend does not contribute 1,000 mg magnesium. At near 11 percent elemental it contributes near 110 mg. A capsule declaring 1,000 mg magnesium glycinate contributes near 140 mg. Then sum food magnesium, then set the sum beside 400 to 420 mg for men and 310 to 320 mg for women. Personal sweat volume and sweat salt content differ broadly and reshape need, and uptake from food remains near 30 percent to 40 percent, so treat arithmetic as approximate and monitor tolerance.

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## 04

### Weigh flavor, mixing and gut response

Flavor determines whether powder survives past week two. Magnesium and potassium minerals can throw bitter or metallic notes, demanding precise masking and recipe tuning. Citrus tang, salt bite, bitterness and chalk trace back to minerals themselves, not merely added aroma. A blend that buries harshness under heavy sweetening can please on first sip and fatigue by the third week.

Inspect fast and full dispersal. Pour the stick into the listed water amount at listed temperature. Agitate for listed duration. Scan for sand, slick, froth or settled layer inside the cup. Manufacturing control spans identity, strength and purity assays, microbe screens, stability trials and panel accuracy review. Behavior in water never proves uptake inside the person, but weak mixing commonly accompanies gut grumbles.

Connect dense osmolality plus heavy carbohydrate to delayed fluid uptake and belly distress. An intensely sweet, highly concentrated bottle can rest uneasily while running or riding. Rich carbohydrate burdens slow stomach clearance in certain users. When cramps, queasiness or hurried stools trail a new blend, dilute further, add water, move magnesium away from workout carbohydrate, or revert to water for brief bouts. Seek professional input where cramps, lightheadedness, swelling or pressure issues continue.

#### FROM THE EDITORS

Credit a maker who identifies farms and releases documents while flagging any stage kept unclear, and ask the translation behind terms such as pure and natural. Demand what the term denotes in milligrams, in assay ceilings and in batch codes before accepting it.

## 05

### Require batch papers and banned substance screens

A Certificate of Analysis belongs to a single lot or batch, never to a label indefinitely. Request a Certificate tied to the exact lot. Seek confirmation of each electrolyte mineral identity, strength in milligrams per serving, plus purity work including microbe assays. Begin from published caps for lead, cadmium, arsenic and mercury. USP General Chapter 2232 places daily exposure caps at 10 micrograms per day for lead, 15 for inorganic arsenic, 5 for cadmium and 15 for total mercury. Such caps govern daily exposure, so both milligrams per portion and portions daily count.

Favor current certification marks above one dated report. Certification strengthens confidence yet never supplants good manufacturing adherence and never assures lawful status or absent hazard. Compliance of a given tub with metal or sport thresholds remains unknown absent its lot Certificate or searchable certification entry. Encapsulation plus fill mass can drift, so verify the code stamped on the container equals the code on the sheet.

For tested competition, pick screened batches and cross check codes against the registry. NSF Certified for Sport examines each lot for more than 290 compounds barred by bodies including WADA, NFL, MLB, NHL, PGA, LPGA and MLS. Informed Sport reports that as many as one in ten products carry contamination with sport prohibited ingredients and compounds. USADA points to NSF Certified for Sport as the scheme best placed to lower athlete hazard from supplements. Screening raises expense and administration, which explains why screened powders print batch codes with searchable certificates. Where a claim of screening lacks a registry entry for that lot, regard the trail as unverified until produced.

## 06

### Assign strong salt to sweat, water to desks

Keep stronger sodium solely for extended, hot or drenching sweat bouts. Keep lighter sodium or water for short workouts and desk hours. Partitioning holds daily sodium nearer food goals while still replacing major sweat deficits where they happen.

Training days begin from length and heat. Efforts beyond sixty minutes, efforts under pads or heavy kit, and efforts leaving white crust on skin argue for added sodium. The working entry range of 300 to 600 mg sodium hourly in heat offers comparison against stick data. Two mild sticks might match one strong stick. Water still performs most hydration labor. Log consumption and tune with thirst, sweat saltiness and clinician direction.

Office days begin from meals. When food already clears 2,300 mg sodium, another salty stick contributes mainly taste. Water plus food potassium plus food magnesium generally suffice. A modest evening magnesium powder can suit household rhythm more sensibly than a salty desk drink, with amount read as elemental milligrams and tolerance observed. For a partner, a child or a parent, separate the products, separate the amounts and separate clinical counsel, because requirements diverge with age, mass, drugs and movement.

Reassess selection with seasons. Heat, volume, travel and sickness alter sweating and appetite. Maintain a lean shelf. Hold one stronger sodium choice for training, one lighter sodium choice or water for routine days, and one magnesium form at a known elemental amount. Store batch sheets beside containers. Once data no longer favor a product, retire it.

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# The checklist

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- ☐ Record dietary sodium, potassium, magnesium plus calcium across three days
  - ☐ Mark workout length, heat plus visible salt lines on training days
  - ☐ Inspect sodium mg per stick and set 500 to 1000 mg sticks beside daily blends
  - ☐ Count potassium mg against sugar grams on each serving label
  - ☐ Inspect elemental magnesium mg in Supplement Facts, not bulk compound mass
  - ☐ Scale compound mg using 14 percent for glycinate or 11 percent for citrate
  - ☐ Open magnesium at 100 to 200 mg elemental and titrate against stool tolerance
  - ☐ Mix in the listed water amount and inspect for sand
  - ☐ Demand the lot specific Certificate of Analysis and align batch codes
  - ☐ Measure metal findings versus USP 2232 daily exposure caps
  - ☐ For sport, verify screened batch standing inside the certification registry
  - ☐ Direct stronger sodium toward long hot bouts, water toward desk days
  - ☐ Consult a clinician over intake when pressure or medicines factor in
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Hailey produces the Half Life interviews: the reading, the question lists, the follow-ups. She asks every founder for the study behind the claim and, more often than you would expect, gets the PDF the same afternoon.

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