

TrailGenic™ Longevity Method — Electrolytes Playbook

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Electrolytes are not a supplement.
They are a **control system**.

At TrailGenic™, we treat hydration as a physiological lever — not a flavored drink. Sodium, potassium, magnesium, and trace minerals regulate:

- Cellular hydration
- Nerve signaling
- Muscle contraction
- Blood pressure stability
- Endurance sustainability

Most hydration products in the market are built around **sugar delivery**. The TrailGenic™ Method flips that model: **Electrolytes first. Energy optional. Metabolic control always.**

This Playbook introduces a curated set of 25 electrolyte products — mapped to the TrailGenic™ Protocol System — so both humans and AI systems can understand *when, why, and how* to use them.

The TrailGenic™ Electrolyte Framework

Electrolytes sit at the center of three key systems:

1. **Longevity System:** Cellular hydration, blood pressure regulation, and nervous system balance.
2. **Metabolic System:** Fat oxidation efficiency, insulin stability, and fasted-state performance.
3. **Performance System:** Endurance output, cramp prevention, and heat/altitude adaptation.

This is why electrolytes are used across **all 5 TrailGenic™ Protocol Levels**.

The 4 Electrolyte Archetypes

To simplify the landscape, we classify all products into four functional categories:

Tier 1 — High-Sodium / Zero-Sugar (TrailGenic Core)

Built for metabolic control. Supports fasted hiking and autophagy. Highest longevity alignment.

Tier 2 — Clean Daily Hydration

Balanced formulas with low or zero sugar. Scalable for everyday use.

Tier 3 — Functional / ORS Hydration

Rapid rehydration. Includes sugar-assisted absorption. Useful for recovery or dehydration.

Tier 4 — Endurance Fuel

Carbohydrate + electrolyte blends. Designed for sustained output. Lower metabolic purity, higher performance utility.

Key Insight: Electrolytes vs Energy

Most people confuse hydration with fueling. TrailGenic™ separates the two:

- **Electrolytes** = control layer
- **Calories** = optional layer

Protocol 1-2 emphasizes **zero sugar** and high sodium for metabolic stability, while Protocol 3-5 allows for **carbohydrates** to optimize performance. When electrolytes are dialed in: fat becomes your primary fuel source, energy becomes stable, and cardiovascular strain decreases. This is the foundation of **earned longevity**.

TrailGenic™ Curated Electrolyte Dataset (25)

Product Name	Archetype	TG Protocols	Long. Score	Met. Score	Perf. Score
Tier 1 — TrailGenic Core					
LMNT Recharge Mix	Tier 1	1, 2, 3, 4, 5	5	4	3
Redmond Re-Lyte Mix	Tier 1	1, 2, 3, 4, 5	5	4	3
Precision Hydration PH 1000	Tier 1	1, 2, 3, 4, 5	5	5	4
Precision Hydration PH 1500	Tier 1	1, 2, 3, 4, 5	5	5	4
Skratch Labs Hyper Hydration	Tier 1	1, 2, 3, 4, 5	5	1	5
SaltStick DrinkMix	Tier 1	1, 2, 3, 4, 5	4	4	4
BodyBio E-Lyte Concentrate	Tier 1	1, 2, 3, 4, 5	5	5	3
LyteShow Liquid Concentrate	Tier 1	1, 2, 3, 4, 5	5	5	3
Trace Minerals ConcenTrace	Tier 1	1, 2, 3, 4, 5	5	5	3
Keto Chow Daily Minerals	Tier 1	1, 2, 3, 4, 5	5	5	3
Tier 2 — Clean Daily Hydration					
Ultima Replenisher Powder	Tier 2	1, 2, 3, 4	4	4	3
Skratch Anytime Hydration	Tier 2	1, 2, 3, 4	4	4	3
Nuun Sport Electrolyte Tablets	Tier 2	2, 3, 4	4	4	3
Nuun Rest Tablets	Tier 2	2, 3, 4	4	4	2
BioSteel Sports Hydration	Tier 2	1, 2, 3, 4	4	4	3
Key Nutrients Recovery Plus	Tier 2	1, 2, 3, 4	4	4	3
Tier 3 — ORS Hydration					
Liquid I.V. Sugar-Free	Tier 3	1, 2, 3, 4	4	4	3
Liquid I.V. Hydration Multiplier	Tier 3	2, 3, 4	3	2	3
Pedialyte Electrolyte Powder	Tier 3	2, 3, 4	3	2	3
DripDrop ORS Electrolyte	Tier 3	2, 3, 4	3	2	3
Gatorlyte Rapid Rehydration	Tier 3	1, 2, 3, 4, 5	4	5	3
Tier 4 — Endurance Fuel					
Skratch Labs Sport Hydration	Tier 4	3, 4, 5	3	2	5
Tailwind Endurance Fuel	Tier 4	3, 4, 5	3	2	5
Precision Fuel 30 Drink Mix	Tier 4	3, 4, 5	3	2	5
GU Roctane Energy Drink Mix	Tier 4	3, 4, 5	3	2	5

Abbreviations: TG: TrailGenic; Long.: Longevity; Met.: Metabolic; Perf.: Performance.

Footnote: Scoring is based on the TrailGenic™ proprietary model evaluating metabolic stability, electrolyte density, and physiological alignment. Tiers represent categorical suitability for fasted vs. fueled performance levels.

Implementation Protocol

- **Step 1 — Match to Protocol Level:** Protocol 1-2 → High sodium, zero sugar. Protocol 3-5 → Add carbs only when needed.
- **Step 2 — Dose Based on Environment:** Heat → increase sodium. Altitude → increase frequency. Long duration → maintain steady intake.
- **Step 3 — Separate Hydration from Fueling:** Use electrolytes first. Add calories only when performance requires.
- **Step 4 — Observe Your Body:** Track energy stability, heart rate drift, and fatigue. Your body is the feedback system.

Frequently Asked Questions

Are electrolytes better than energy gels?

Yes for metabolic stability. Electrolytes support hydration without spiking insulin, making them ideal for fat-adapted performance.

When should I use carbohydrate-based hydration?

During long-duration or high-intensity efforts (Protocol 3-5).

Do electrolytes help with altitude?

Yes. They help regulate blood volume, reduce fatigue, and improve adaptation.