8-Week Miami Marathon

Performance Nutrition Program

By Joey Hassett, MS, RDN – Program Manager of Nutrition and Metabolism for LTH and Performance and Nutrition coach for Boundless Coaching

This comprehensive **8-week performance nutrition program** is designed to prepare athletes for the unique demands of the Miami Marathon — specifically heat, humidity, and endurance fueling. It integrates macronutrient planning, gut training, electrolyte balance, and carbohydrate loading to ensure athletes are metabolically, physiologically, and nutritionally prepared for race day.

Contents

Phase 1 (Weeks 1–2):

Foundation — Nutrition Education & Habit Building

The foundation phase builds awareness around energy balance, hydration, and macronutrient needs — the building blocks of all performance nutrition. Many runners underfuel during training, which can compromise adaptation, recovery, and immune health. By eating consistently and hydrating properly, you teach your body to handle training stress and maintain steady blood sugar and energy levels.

When running in Miami's humidity, the body diverts blood to the skin for cooling, which reduces gut blood flow and slows digestion. Maintaining hydration and fueling regularly helps preserve gut integrity and minimize the risk of nausea or cramps when training intensifies later.

How to Calculate Individual Macronutrient Distribution

Step 1: Estimate Total Energy Needs — Endurance athletes typically require 35–50 kcal per kg of body weight per day, depending on training volume. (Body weight in pounds / 2.2 = Body weight in kg)

Example: A 65 kg (143 lb) runner training 5–6 days/week would need roughly 2,275–3,250 kcal/day.

Step 2: Assign Macronutrient Ratios — Performance distribution: Carbohydrates 55–60%, Protein 15–20%, Fat 20–25%.

Step 3: Convert to grams using the following conversions: Carbohydrates = 4 kcal/g, Protein = 4 kcal/g, Fat = 9 kcal/g.

Macronutrient	% of Calories*	kcal	Grams/day
Carbohydrates	55%	1,430	357 g
Protein	20%	520	130 g
Fat	25%	650	72 g

*Based on 2600 kcal per day

Step 4: Adjust for training load — Reduce carbohydrates slightly (4–5 g/kg) on easy or recovery days, and increase to 7–10 g/kg on long or hard training days to ensure glycogen replenishment and recovery.

Baseline Targets

Carbohydrates: *5–6 g/kg/day*
Protein: *1.6–1.8 g/kg/day*
Fat: *25–30% of total calories*
Fluids: *35–45 ml/kg/day (adjust based on sweat rate)*
Sodium: *400–600 mg per liter of water consumed.*

Phase 2 (Weeks 3–5):

Build — Gut Training & Carbohydrate Optimization

This phase teaches the gut to tolerate higher carbohydrate intake and fluid volumes under stress. As training load increases, blood is redirected away from the gut toward muscles and skin, slowing gastric emptying and carbohydrate absorption. Practicing fueling during runs trains your gut to absorb multiple carbohydrate types (glucose and fructose), improving tolerance and reducing GI distress during long runs.

In Miami's heat, dehydration and sodium loss exacerbate GI issues. Dehydration as little as 2% of body weight can impair carbohydrate oxidation and reduce performance. Thus, this phase emphasizes carbohydrate tolerance and electrolyte calibration.

Lastly, if you are someone who uses caffeine while training and racing, this is when you want to begin practicing with that product. For most individuals, one caffeinated gel (50- 100mg) every 3 hours is going to be sufficient to maintain a steady circulating level of caffeine. Remember that caffeine tolerance is extremely variable depending on the individual!

Fueling Guidelines

Guidelines for increasing your total carbohydrate intake during training

Week	Goal	Carbs/hr	Practice
3	Introduce fueling	30–45 g/hr	1 gel or chew/hr
4	Increase tolerance	60 g/hr	Add isotonic* drink
5	Race-level fueling	75–90 g/hr	Mix glucose + fructose fuels (e.g. Gel and/or Drink mix)

Guidelines to begin developing your race day fueling strategy

Duration	Sodium*	Fluids*	Carbs
<1 hr	400–600 mg	300–500 ml/hr	Optional
1–2 hr	600–900 mg	500–700 ml/hr	30–60 g/hr
>2 hr	900–1200 mg	700–900 ml/hr	60–90 g/hr

**It is important to note that sodium and fluid needs are very dependent on the individual and you should consider how much fluid you typically lose as well as how salty your sweat is. For more information on this feel free to reach out to one of our LTH dietitians at nutrition@lt.life.*

Daily Nutrition Periodization:

Easy Days:

3–5 g/kg carbohydrates — train low for improved fat metabolism.

Moderate Days:

5–7 g/kg — maintain glycogen stores.

Hard/Long Days:

7–10 g/kg — train and race fueling practice.

Phase 3 (Weeks 6–7):

Peak — Race Simulation & Precision Hydration

This phase focuses on race simulation and heat adaptation. Miami's humidity increases cardiovascular strain and accelerates carbohydrate use while reducing digestive capacity. Training under similar conditions teaches your body to efficiently use fuel, manage heat, and maintain hydration balance. Heat-acclimation runs and precise hydration planning will prepare your gut and muscles for race-day demands.

Day Type	Carb Range (g/kg)	Purpose
Easy	3–5	Fat metabolism, recovery support
Moderate	5–7	Fuel steady efforts
Hard/Long	7–10	Maximize glycogen for endurance

Key Workouts:

Two race simulations *(28–32 km) using full race fueling.*
Two to three heat-acclimation sessions per week.
Track sweat loss and replace 100–150% of fluid lost.
(see appendix for how to calculate)
Monitor energy, gut comfort, and hydration during long runs.

Phase 4 (Week 8):

Taper & Race Execution

During taper, the focus shifts to recovery and glycogen supercompensation — maximizing carbohydrate storage in muscles and the liver. Training volume decreases, but carbohydrate intake remains high to fill glycogen reserves. This process can increase muscle glycogen by 25–50%, adding 400–600 kcal of stored energy for race day. In hot weather, the body burns more carbohydrates for cooling, so loading is especially crucial to delay fatigue and maintain steady blood sugar.

Carbohydrate Loading Strategy

Days 1-4: Maintain 5–7 g/kg carbs per day

Days 5-6: Increase to 8–10 g/kg per day using easy-to-digest foods like white rice, white pasta, pancakes, and other lower fiber carbohydrates.

Day 7: Eat small, frequent, low-fiber meals (~1 g/kg every 2–3 hours) to maintain energy and reduce GI risk.

Example:

A 65 kg runner consuming 9 g/kg = 585 g carbohydrates/day, equivalent to ~2,340 kcal from carbs alone.

Day of Fueling

Time	Fuel	Goal
3 hrs before	2–3 g/kg carbs + 400–600 ml electrolyte drink	Top off liver glycogen
30 min before	1 gel (~25 g carbs)	Raise blood glucose
During	60–90 g carbs/hr + 500–750 ml fluid/hr + 600–1000 mg sodium/hr	Maintain energy and hydration
Post-race	1.2 g/kg carbs + 25 g protein + electrolytes	Accelerate glycogen recovery

Sodium loading 2–3 days before the race (~1–2 g extra per day) supports plasma volume expansion and helps prevent cramping or hyponatremia.

Key Takeaways

Heat reduces digestive blood flow and slows carbohydrate absorption — practice fueling under heat stress.

Gut training improves comfort and carb oxidation rates.

Dehydration >2% bodyweight impairs power and digestion.

Carbohydrate loading replenishes glycogen depleted by training.

Sodium loading supports thermoregulation and hydration.

Periodize nutrition based on training intensity for metabolic flexibility.

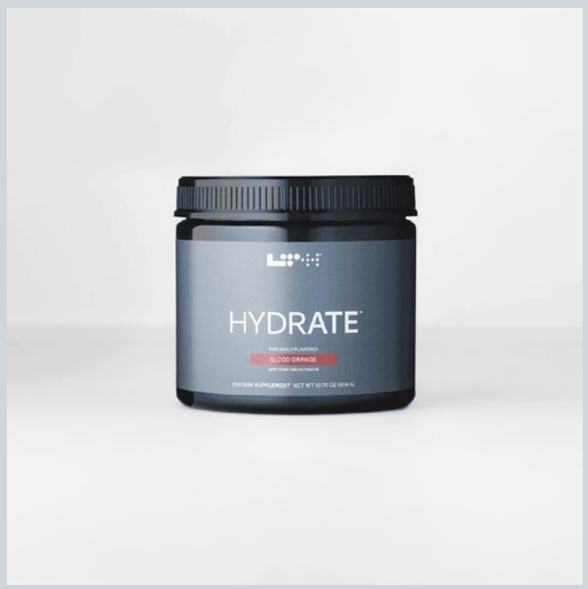
Product Recommendations

Check out the **LTH Story Here** and learn about all the great products we have to offer. You are sure to find all of the products you need to get to the start strong, push hard during the race, and recover like a pro. Below are a few of our favorite training products for you to try!

If you are interested in more recovery products, please reach out to our team (nutrition@lt.life).

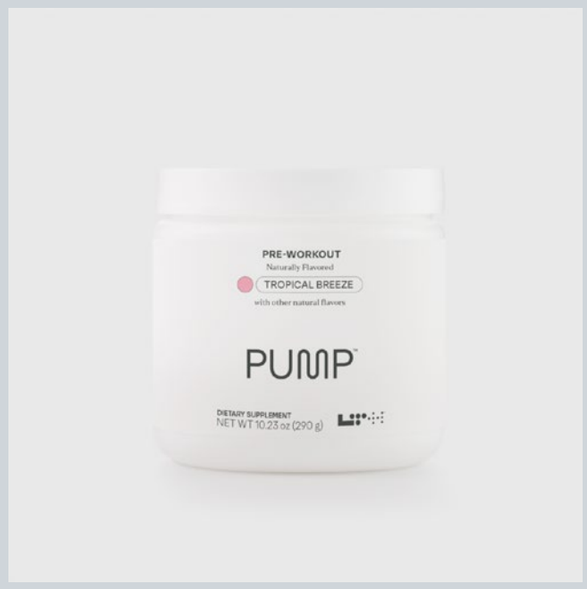
Learn More

Pre-Race Favorites



HYDRATE
Electrolytes

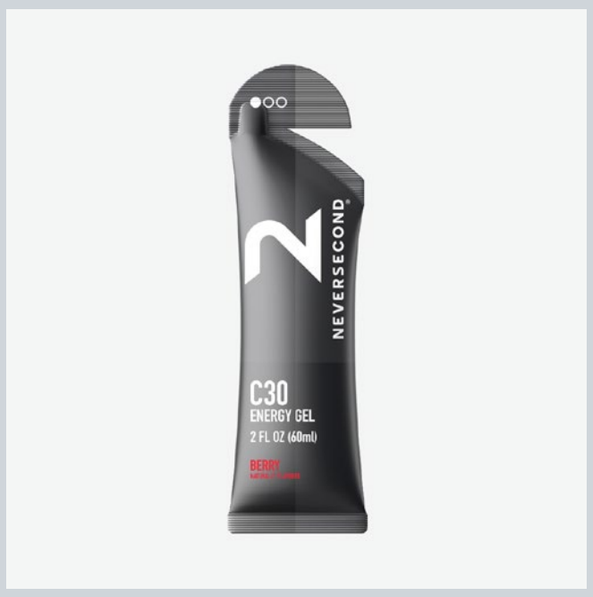
Shop HYDRATE



PUMP
Pre-Workout

Shop PUMP

During Racing & Training



Neversecond C30 Gel

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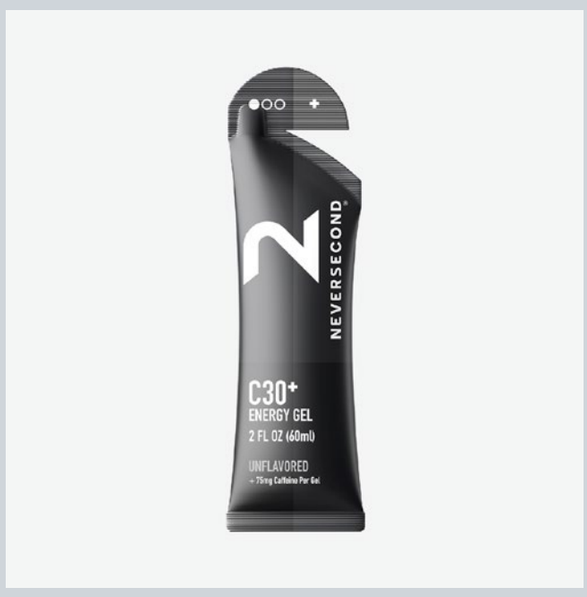

Neversecond C30+ Caffeine Gel

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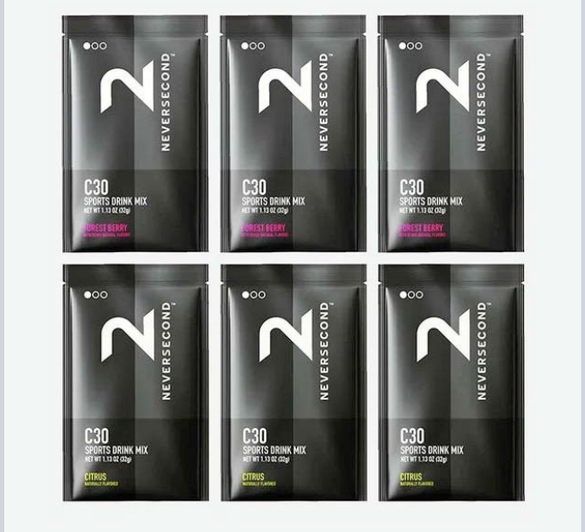
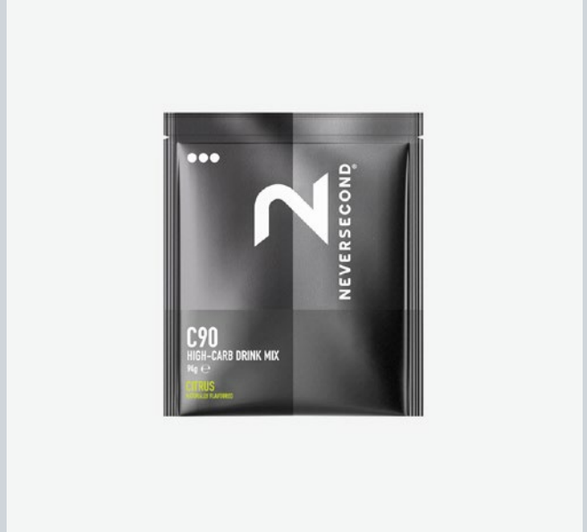


Neversecond C30 Drink Mix

Shop C30 DM



Neversecond C90 Drink Mix

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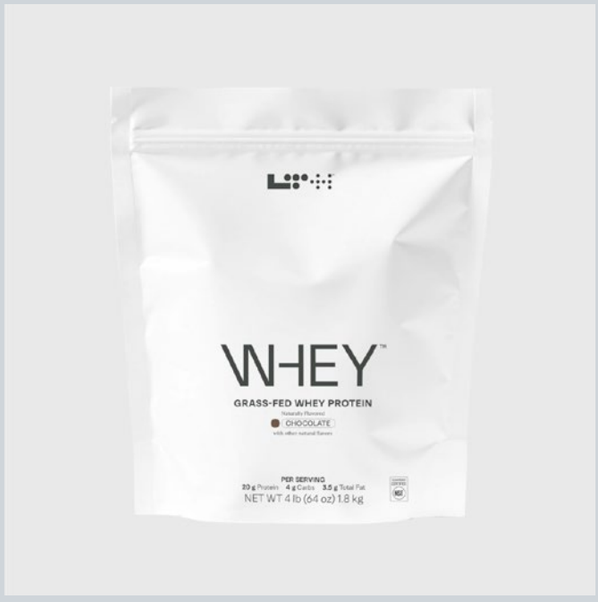
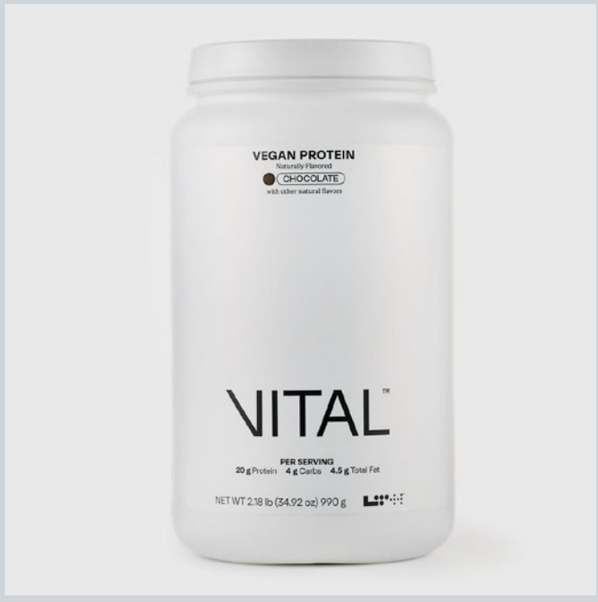
Post-Race



WHEY

Our whey-based protein powder

Shop WHEY



VITAL

Our plant-based protein power

Shop VITAL

Appendix

Isotonic Drink Mix

A drink mix that contains water, carbohydrates (sugar), and electrolytes. The isotonic part means the concentration of the solution is similar to that of human body fluids. This makes for a fluid that can be quickly absorbed and utilized by the body.

Sweat Loss Calculation:

Sweat Loss = (Pre-workout Weight – Post-workout Weight) + Fluid Intake – Urine Output

1. Weigh yourself before your workout: In minimal to no clothing, record the number (e.g., 70.2 kg).

2. Track everything you drink during the workout. Measure in milliliters or ounces. Example: 500 mL bottle, drank the whole thing → +500 mL.

3. Weigh yourself immediately after finishing. Again, the same clothing or no clothing—but if clothes are sweaty, take them off. Record the number (e.g., 69.4 kg).

Example:

- Pre: 70.2 kg
- Post: 69.4 kg
- Drank: 0.5 L (0.5 kg)
- No bathroom break
- Sweat loss = (70.2 – 69.4) + 0.5 = 1.3 liters of sweat lost.
- Rehydrate with 1.3 to 1.95 L of water + electrolytes. Aim to drink 25-50% of this within 30 min. and the remaining 75-50% within 2-4 hours.

Carbohydrate Loading Physiology:

The Physiology

Carb loading increases glycogen storage in muscle (from ~100 mmol/kg to 150–200 mmol/kg). For a marathoner, that's an extra 400–600 kcal of readily available energy — enough for roughly 30–45 minutes of additional running before "hitting the wall." Heat further increases carbohydrate metabolism and fluid turnover, so maintaining full glycogen and sodium stores helps delay fatigue and stabilize blood glucose longer.

The Method

Days 1-4 of Taper Week:

Maintain moderate carb intake (5–7 g/kg).

Days 5–6 (Final 48 hours):

Increase to 8–10 g/kg/day — this is the true "loading" phase.

Example:

- 65 kg athlete × 9 g/kg = 585 g carbs/day.
- Spread across 5–6 meals to aid digestion.
- Use easily digestible sources: white rice, pasta, pancakes, potatoes, bread, smoothies, juice.

Pre-Race Day (Final 24h):

- Focus on simple carbs and low-fiber foods.
- Avoid heavy fats, dairy, or high-protein meals.