Sports Nutrition—Part II
(Electrolyte Replacement and Recovery)

In part II of our nutrition testing, we focused on some of the electrolyte replacement products on the market for use during a workout, as well as a few recovery products for immediately after exercise.

As in “Part I—Bars”, testers tried the products and reported their preferences for taste, ease of use, packaging and any other observations they made about their experience with the products. Nutritionist and endurance athlete Rachel Chambers, RD/LDN, helped us understand the basics, but as in part I, a detailed breakdown of the ingredients in these products or precise performance data is beyond the scope of this review. Chambers encourages readers to consult with a nutritionist who has expertise in sports nutrition and swimming’s specific training demands. She also advocates self-education. “Consider reading a reputable sports nutrition manual such as ‘Sports Nutrition for Endurance Athletes’ by Monique Ryan, RD, to be able to objectively evaluate the ingredients in products and how they could be used to enhance performance,” says Chambers.

ELECTROLYTE REPLACEMENT

These products are designed to replace electrolytes that are lost during vigorous exercise. There are five main electrolytes, which are, essentially, minerals that contain an electrical charge. They are lost through sweat, urine and the gastrointestinal tract during exercise.

“Salt or sodium chloride is the major electrolyte, as are potassium, magnesium, and calcium. Electrolytes play a key role in fluid balance, nerve function, muscle contraction, and acid-base balance with needs and losses varying greatly among athletes,” says Chambers, adding, “Even an acclimatized female with a low sweat rate can lose 2,000 milligrams of sodium in a 2-hour training session. The other electrolytes are lost in smaller amounts and some products contain small amounts of them to replace sweat losses.” Endurance athletes training throughout the hot and humid summer months lose a large amount of magnesium, which, in addition to playing a major role in muscle contractions, also aids in glucose metabolism.

Hammer HEED | $25 (32 servings) | Five flavors | hammernutrition.com
Most testers enjoyed the taste of HEED, although one felt that it was too sweet, and another reported an unpleasant aftertaste. The powder mixes easily, with no clumping. Single-serve pouches are available, which some testers liked for easy use at a meet or when traveling, although many say they are more likely to purchase in bulk for everyday use.

Tester Comments
“Excellent mild flavor; not too sweet and easy on the stomach.” “Too mild, I prefer something stronger.” “Great for prolonged, intense training.” “Definitely helped with that depleted feeling during a meet. I also used it during workout and felt no hunger pangs like I usually get during an intense workout.” “Unpalatable.”

1st Endurance EFS Energy Drink | $25 (25 servings) | Four flavors | firstendurance.com
Testers reported that 1st Endurance’s electrolyte powder has a stronger flavor than Hammer’s HEED, which appealed to those who felt that HEED was too mild. Label-reading testers appreciated the balance of electrolytes and the calories in this product and felt that they could rely on it for extra-long workouts without having to take additional electrolyte supplements.

Tester Comments
“Tastes great! Appreciate the amino acid blend to ease muscle soreness.” “Mix was too heavy and I lost some of my focus to deal with some discomfort.” “Good mix of calories and electrolytes, but didn’t like the flavor.” “Way too tart.”

Advocare Rehydrate | $52 (70 servings) | Three flavors | advocare.com
Testers who prefer their sports drinks extra sweet and strong also liked Rehydrate. For the testers who prefer mild flavors, Rehydrate was too strong. Testers also noted that with many companies offering all natural ingredients they are less likely to purchase ones with artificial flavors or sweeteners.

Tester Comments
“Very sweet; love the flavor.” “Reminded me a bit of fruit punch Gatorade.” “Too sweet, has an artificial taste.” “Not all natural ingredients means it doesn’t make my list.” “Sucralose? Really?”
These products are geared to give the training athlete a quick boost of energy. Hammer, GU and CLIF all offer a few flavors with caffeine for those needing a bigger boost than carbs alone. GU and CLIF also throw in some electrolytes. For testers who were not regular caffeine users, the caffeine-containing gels sometimes had a detrimental effect on performance and gave them the jitters. Regular caffeine users had no problems with this. The single-serve packets are easily squirreled away in a swimsuit during long open water swims or rubber-banded to water bottles for use at the pool. Hammer also offers their gels in bottles for decanting into small squeeze bottles, an economical and environmentally friendly option that some testers prefer.

**GU Brew | $6.50 (12 servings) | Three flavors | guenergy.com**

GU Brew’s tablets dissolved in water bottles easily and testers loved the one flavor we tested, lemon lime. GU Brew made drinking from the water bottle between reps a little too easy and water bottles were refilled during practice.**

**Tester Comments**

“Relatively light and worked well without being noticed.”
“Good for some extra sodium in the heat.”
“Great product to flavor up your water and get some electrolytes.”
“Kept me hydrated on a hot swim.”

**Hammer Endurolytes Fizz | $6.50 (13 servings) | Four flavors | hammernutrition.com**

We only tested the peach, which testers loved. The tablet form is easily dissolved in a water bottle. Testers found the taste so good that they drank much more water than they normally would have during a workout.**

**Tester Comments**

“Too delicious; I went through it too quickly and had to refill my water bottle halfway through practice.”
“Peach flavor is great—adds just the right amount of zest to the water without being overpowering.”

**GU Roctane Ultra Endurance Gel | $20 (eight servings and six flavors) | guenergy.com**

We only tested the new cherry lime flavor, which polarized testers—some loved it and others did not. Most acknowledged the extra kick from the caffeine, and label-reading testers noticed a higher percentage of electrolytes than other gels tested.**

**Tester Comments**

“Costs twice as much as regular GU. Best used on those very long sessions.”
“Not a great flavor, but the caffeine works!”
“Noticed a kick in performance.”
“Sweeter and stickier than most.”

**Hammer GEL | $1.30 (one serving) | Nine flavors | hammernutrition.com**

Montana huckleberry, Hammer’s newest flavor, drew rave reviews from nearly all testers. Testers noted that Hammer GEL has fewer electrolytes than the other gels tested, but some testers mixed it with electrolyte replacement drinks to get both. Two of the nine flavors contain caffeine.**

**Tester Comments**

“Perfect single use, easy to carry, even in the ocean.”
“My favorite gel on the market.”
“I love this product, best out there. Provides great energy output.”
“The fact that it is all natural makes this one of my favorite products.”
“Not too sweet and easy on the stomach.”
CLIF Shot Gel and Turbo Energy Gel | $1–$2 (single serving) | Eight flavors

CLIF’s flavors fared well with testers. Two of the flavors (Turbo) contain caffeine. The chocolate cherry contains a whopping 100 milligrams of it, which testers liked for a morning workout, but advised against later in the day. CLIF also received big kudos for its “Litter Leash” feature that keeps the tear-off tab attached to the package upon opening.

Tester Comments

“Overall, a fantastic product.” “Vanilla was a smooth vanilla flavor without any foil or plastic bite to it.” “Thick and syrupy.” “Great product.” “I like much of what CLIF makes; all-natural with good percentages of each product organic.”

Jelly Belly Sport Beans and Extreme Sport Beans | $30 (24 servings) | Seven flavors | sportbeans.com

We had a real problem with these as the testing supply was pilfered frequently and we had to go out and buy more. Difficult to resist, Sport Beans provided testers with something different for a quick treat during long workouts. However, most agreed that the Beans would be a supplement to other carb and electrolyte replacement products. The individual zippered bags were quite handy, made it easy to share (although there was not a lot of sharing going on) and could be resealed on a wet pool deck without getting water inside. Two of the flavors (Extreme) contain caffeine.

Tester Comments

“Awesome—addictive.” “Fine for a quick pick-up—not for endurance.” “Good flavor and taste—not too sweet.” “Citrus flavor great on a hot day.” “A great treat during a long, hot ride.”

1st Endurance EFS Liquid Shot | $6 (one serving) | Two flavors | firstendurance.com

This liquid is formulated to replace electrolytes and carbs. Testers were not wild about the wild berry flavor, but recognized the value in having both carbs and electrolytes in the same product. One 5-ounce squeeze bottle is billed as a single serving, and some testers reported that at $6 per serving, they would use it only for special extra-long training sessions or on race day, when they would expect to go through three or four individual gel packets of other products. The squeeze bottle is refillable and Liquid Shot is available in bulk, an environmentally friendly option.

Tester Comments

“Really helped me during a grueling hot swim meet where I swam quite a few events back to back.” “Tastes like aged cough syrup.” “Interesting, would have to experiment with it.” “Has 400 calories—I don’t see this as a single serving.”

ALL TOGETHER NOW (CARBS + ELECTROLYTES)
Recovery Drinks

Most high-level athletes consider recovery drinks an essential part of their routine, and the sooner they are ingested after the workout, the better. Chambers suggests within 30-60 minutes post-workout.

“It is best to take advantage of this crucial window post-exercise as our bodies are like a sponge, replenishing glycogen stores with high glycemic carbohydrates, using the protein for muscle rebuilding and reestablishing our hydration and electrolyte status,” says Chambers. Ideally, recovery drinks will have a four to one ratio of carbs to protein. All these products, except where noted, were close to this ratio.

The makers of recovery products have a tall order making these concoctions palatable, as well as economical and environmentally friendly. Part of the challenge is that the ready-to-drink products taste better cold, which means packing a cooler.

Many testers felt that throwing away or recycling a container each time they needed a recovery drink created a lot of waste. These swimmers say they are much more likely to purchase the powdered recovery drinks.

Hammer Recoverite | $50 (32 servings) | Three flavors | hammernutrition.com

Recoverite was already popular with several of the testers, but they had not tried all the flavors. Citrus and chocolate are solid favorites, with the strawberry a little on the sweet side for some. Label readers who had not tried Recoverite prior to testing were impressed with the ingredient list and the performance.

Tester Comments

“Very good, I felt great after my workout.” “Excellent. Can use between events since it sits light in the stomach.” “The strawberry tastes like Frankenberry cereal.” “This is great stuff. Love it! All natural and clean.”

Fluid Muscle Recovery | $30 (16 servings) | Three flavors | livefluid.com

Of the three flavors, chocolate, berry treasure, and tropical escape, only the chocolate was praised for taste. Several testers also reported that the powder took longer to dissolve than other powdered recovery drinks they tested.

Tester Comments

“Easy to digest, not too filling.” “I didn’t really like the way it mixed or tasted, but the end result was undeniable. It works.” “Hard to mix with cold water, a little gritty.” “Protein taste was a bit too strong.” “Used it after weight training and I feel it does a great job as a recovery drink.”

1st Endurance Ultragen | $45 (15 servings) | Three flavors | firstendurance.com

Ultragen received very high ratings from most testers. The cappuccino flavor was a favorite. Testers also were impressed with the nutrition profile of the Ultragen, noting that it contains a good mix of protein, carbs, electrolytes, vitamins and minerals. Several noted that this high quality comes at a price, though, at about $3 per serving.

Tester Comments

“Easy to use, great taste, promoted recovery, I would use it again.” “Mixed well with water. Did not clump together and get stuck in my squeeze bottle.” “Delicious.” “This might be an alternative to the product I already use in the event I cannot get it.”

Advocare Post Workout Recovery Sports Drink | $76 (25 servings) | Two flavors | advocare.com

The Advocare powder was rich and chocolatey to some testers, and too thick or “fake” tasting to others. The serving size was noticeably larger than other recovery powders. Calories, 230, was higher than the other recovery drinks.

Tester Comments

“The flavor was heavy and the taste was not as good as some of the other recovery drinks.” “This is the best chocolate powder recovery drink I have tried.” “Artificial ingredients, so I probably wouldn’t buy it.” “I liked this enough that I ordered some from their website. Interesting that it contains creatine.”

ReGen Muscle Recovery Beverage | $50 (18 servings) | One flavor | regen2recover.com

ReGen’s chocolate milk flavor and consistency was a hit with testers, who reported that they would use this product when on the go.

Tester Comments

“This was my favorite recovery drink because of its ease of use and great taste.” “Good and easy to carry with you, but I wasn’t sure that chocolate milk itself wouldn’t have been better and maybe cheaper.” “Good amount of protein, natural ingredients.”

Powder Mix
Mix 1 Protein Shake and Lean Performance Shake | $23–$24 (12 Servings) | 11 Flavors | mix1forlife.com

Testers were impressed with the exotic flavor options, including acai-pomegranate, strawberry-banana, blueberry-vanilla and mango. Most agreed that they all tasted best when cold. The Lean shakes, available in four flavors, provide recovery fuel with 90 calories rather than the 200 in the regular shake, which is a nice option for those who have just started swimming and are following a weight loss plan. Label-reading testers noticed that the regular shake has a two-to-one ratio of carbs to protein and the Lean shake a one-to-one ratio.

Tester Comments
"It curbed my hunger with sustained energy until I could eat a meal." "Very easy, great for a.m. swims since no prep time required. Grab and go product." "Very pleasant taste if thoroughly chilled." “Like the quality ingredients, 15 grams of whey protein isolate with antioxidants and fiber, but without lactose or gluten.”

Gatorade G Series FIT 03 Recover | $3 | Three flavors | gatorade.com

Gatorade was another product that polarized testers—the flavors either went down very easy or were unpleasant, depending upon the tester. According to the labels, FIT 03 Recover has close to a one-to-one ratio of carbs to protein.

Tester Comments
"A nice way to get protein and carbs for under 120 calories." "I used this after a brutal ride. Later in the day I felt much better." “Didn’t really like it that much. A weird combination of a sports drink and whey protein.” “Would not buy—contains sucralose.”
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