

THE SECRETS

- Pre-Exercise Fueling
- Calories Count
- Proper Hydration
- Electrolyte Replenishment
- Recovery Done Right



WHAT'S INSIDE

Powerful recommendations for fueling and recovery

Practical, time-tested advice

Clear, concise information for peak performance

This guide distills the knowledge we've gained through decades of rigorous research and field testing. Put these principles to work, and you will succeed

We guarantee it!



Fueling help, one scan away
Chat with us on Viber

Fuel Right, Feel Great!®



Guaranteed since 1987



5 SECRETS OF SUCCESS

FOR ENDURANCE FUELING

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sales@hammernutrition.ph

5 SECRETS OF SUCCESS

FOR ENDURANCE FUELING

SOS

For 38+ years, we have been THE fueling experts! Our “Less is Best” fueling protocols have helped countless athletes successfully fuel for every endurance endeavor imaginable - without cramps or GI distress! You name it, we’ve done it, or helped other athletes do it. By following the fueling practices revealed in this book, you’ll be able to Fuel Right and Feel Great for anything you do.

Informed by rigorous science and proven in use, our methods and products are the surest path to optimal performance and health.

If you have fueling questions feel free to call to speak with one of our friendly, knowledgeable client advisors. We’re here to help!

Brian Frank

Brian Frank, Owner



Brian Frank at NATC Round 1 in Muenster, Texas

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Cover: Chris Hammer takes 1st place in the 2024 World Triathlon Para Series in Yokohama, Japan
Photo Credit: World Triathlon

*Athlete: Tor Gudmundsen runs
on a lonely desert road*

FUEL TO WIN with
100% SUCCESS

Our Philosophy:

LESS IS BEST



Fueling your body: Less is Best for 100% success!

Hammer Nutrition has advocated a “Less is Best” approach for over three decades. Proper fueling is achieved by consuming the LEAST amount of calories, fluids and electrolytes necessary to perform at your best, hour after hour, without side effects like cramps and GI distress! This philosophy guides all of our fueling recommendations.

What makes us so sure we’re right? Beyond a wealth of supporting scientific research, every athlete that has followed our protocols has proven it! We have a 100% success rate! Follow this approach and you too will reach your fullest athletic potential, recover well, and feel great every day. **100% guaranteed since 1987.** ▶

PRE-EXERCISE FUELING

When to eat before exercise



Our Recommendations

Three hours before exercise starts, complete your meal of 300–500 calories of low-fiber, easy-to-digest complex carbs and a small amount of protein, and some fat. Then, allow for digestion – sip water, no liquid or solid calories until shortly after the start.

For events like triathlons, motocross and others where you cannot consume calories during the first 20-30 minutes: Consume a serving of **Hammer Gel**® 5-10 minutes prior to beginning your activity.

Only for high intensity, short duration events lasting less than 30 minutes – follow the above, then consume a serving of **Hammer Gel**® or a bottle of **HEED**® 30 minutes prior to start time.

Pro Tip: 30 minutes before, consume one serving of **Fully Charged** in 4–8 oz of water.

Observe the 3-Hour Rule

Nail your pre-exercise meal timing, especially for high intensity, short duration events and all field sports. The goal is to start every workout/event in the optimal “ready state” - Stomach empty, muscle and liver glycogen stores full, insulin and blood sugar levels at baseline. **Eating within three hours of endurance exercise is a bad idea!** It raises blood sugar and insulin levels in the body, which in turn prevents fat burning - just the opposite of what you want! It will also divert blood from your muscles to your stomach, also not what you want during exercise.

To do it right, you must complete

your meal three hours before your workout or race, regardless of your event’s duration. Consume only water during this three hour window (No liquid calories). Three hours is required to fully digest the meal, avoid intestinal distress and put you in an optimal “ready state” when the gun goes off. You’ll feel “light on your feet” as your body devotes all blood and oxygen supplies to your physical efforts rather than digesting your meal.

Never Sacrifice Sleep for Food!

If your event has an early start that would require you to wake up too early (6-7 am start time), go to

plan B - Eat nothing before you start exercising/competing. Instead, sleep in as long as you can, then start your fueling 10 minutes before start. Stored body fat and muscle glycogen are more than adequate to start with for even the most grueling events. The science is clear: **for optimal performance, abstain from eating for three hours prior to your start time, or not at all.**

Pre-Exercise Meal

Consume 300–500 calories of mostly low-fiber, easy-to-digest complex carbohydrates, a small amount of protein, and some fat.

The purpose of your pre-exercise meal is simply to top off the liver glycogen stores your body expends during sleep. Muscle glycogen, which constitutes about 80% of your total carbohydrate stores, remains intact overnight, so if you had a proper recovery meal after your last workout, your muscle glycogen will already be full.

Depending on your event type, begin fueling 10 minutes prior or 10 minutes after start. See our recommendations on previous page.

If you have an early start, skip breakfast and go light!

Bottom Line

Follow these recommendations consistently and watch your performance soar! Properly timing your caloric intake before every activity will ensure you get the most out of your efforts and perform at your best. After 38+ years offering this advice, we have yet to hear from a single person that it did not work! ➤

PRE-EXERCISE FUELING



SECRET #1



Don’t “carbo-cram” the night before. It only fills your intestines.



For dinner, eat light and clean. That means no refined sugar, saturated fats, or alcohol. Eat until you’re satisfied and call it a night.



If you have an early start, skip breakfast altogether.



Proper fueling starts 10 minutes after the gun goes off.



EXAMPLE PROTOCOL

6:00 PM Night Before

Enjoy a light, healthy dinner with no refined sugar, saturated fats, or alcohol.

6:00 AM 3 Hrs Before

Enjoy a 300 to 500 calorie light, easily digestible breakfast.

6:15-8:45 30 Min Before

Sip ONLY water, with or without **Endurolytes Fizz**. No calories during this fasting window.

8:50 AM 10 Min Before

One serving of **Hammer Gel**, **Endurolytes**, and **Fully Charged** with water.

9:00 AM Hammer Time!

This example is for an exercise with a **9:00AM start time**. Adjust these time intervals to the schedule of your event.



Athlete: Keller Norland



Athlete: Erik Koenig running at golden hour on a hot day.

CALORIES COUNT

Know your magic number



Our Recommendations

Consume one calorie per pound of bodyweight/per hour during prolonged exercise periods. This number, plus or minus 20% will be your optimum hourly caloric intake. No joke, this works for athletes of any age, gender or performance level.

Fuel with complex carbohydrates like maltodextrin instead of simple sugars or blends. Both of these prevent fat metabolism.

For exercise longer than 3 hours, your primary fuel should include protein in a ratio of about 8:1 carbs to protein. This encourages fat metabolism.

HEED®, **Hammer Gel®**, **Perpetuem®**, **Perpetuem Solids**, **Sustained Energy**, or a combination of these products can be used for activity of any duration.

It is necessary to consume calories while exercising for more than 30-45 minutes. How many and what kind has vexed athletes for decades, with most erring on the side of consuming too many. Successful fueling means consuming the fewest amounts of calories needed to get you to the finish line as fast as you are capable of going. Any more calories consumed are wasted and make more work for your body. Remember when it comes to calories consumed during exercise, **Less is Best!**

Athletes competing in events lasting less than 30 minutes, as well as those competing in team sports, motor sports should consult our sport-specific fueling guides for more detailed usage instructions.



Athlete: Michelle McGee
Photo Credit: Wes Esquivel



How many? How much do you weigh?

High calorie replacement during exercise does not work and only leads to stomach upset, GI distress and cramps! Ridiculous suggestions of replacing what you are burning (400-600+ calories per hour) from the 80's has been replaced by even more ridiculousness lately! The "90 or more grams per hour" of a 2:1 ratio of glucose to fructose number being promoted today is a danger to your health, AND won't make you faster, unless you are in the Tour de France.

The liver can theoretically convert 240 calories per hour to energy from carbohydrates consumed. However, most athletes do not even tolerate this level well. More importantly, we are concerned with determining the FEWEST number of calories we can consume without slowing us down while allowing for maximum fat utilization, which can be upwards of 2/3 of calories expended.

Knowing your optimum hourly caloric intake is as easy as getting on a scale. Your bodyweight is your target, plus or minus 20%! Guaranteed to work every time!

CALORIES COUNT



SECRET #2



Replenish calories hourly in proportion to your bodyweight $\pm 20\%$ for the most efficient energy production.



During efforts of 2-3 hours or longer, it's important to include protein in your fuel supply as about 10% of calories burnt will come from protein, whether from fuel or muscles.



Use complex carbohydrates for fuel to avoid erratic blood sugar levels, extra electrolyte needs and inhibited fat burning.



Plant proteins are preferred for use during exercise because their metabolism doesn't produce ammonia like whey protein will, which is a big factor in combatting fatigue.



What Kind of Calories? Carbohydrates

Athletes know “carbs are king” when it comes to fueling for endurance exercise. But you can’t consume just any carbohydrate at any time. Here’s what works:

Complex carbohydrates offer steady, reliable energy without stomach distress.

Products containing simple sugars—sucrose, fructose, glucose, dextrose, or any other “ose” sugar—must be extremely diluted (a 6 to 8% solution in water) to avoid stomach blockage. This solution will be too weak to meet your hourly caloric needs. However, increasing the solution will cause the sugars to sit in the gut while fluids are recruited from elsewhere in the

body. This “osmotic pressure” in the gut increases rates of dehydration and electrolyte depletion resulting in severe GI issues, as well as cramping.

In contrast, complex carbohydrates (such as those found in HEED®, Hammer Gel®, and Perpetuem®) can be efficiently digested at solution concentrations of up to 18%. You can therefore absorb sufficient calories to fuel your exercise hour after hour, without over-consuming fluids or causing digestive distress.

Fast Energy, Without the Crash

The complex carbohydrate source in Hammer Nutrition’s fuels is maltodextrin. This easily-absorbed starch elevates blood sugar rapidly for the quick energy you need

during exercise. However, the body takes longer to break down the molecular structure of complex carbohydrates like maltodextrin, keeping blood sugar levels stable over time. While simple sugars spike insulin levels and then quickly drop them—leading to “peaks and valleys” of energy—complex carbohydrates raise blood glucose just as effectively, but without the corresponding “crash.” Your energy will be stable and reliable, no matter the distance.

Avoid Multiple Carbohydrate Sources During Exercise

Some sports fuels contain a mix of simple sugars and complex carbohydrates. However, like simple sugar alone, these blends are only absorbable at either very low caloric amounts or exceedingly low heart rates (like when taking a brisk walk). If you want steady energy while pushing the pace, steer clear

of simple sugars, regardless of what they’re mixed with.

Fatty Acids

Even the leanest athletes have vast stores of caloric reserves in the form of body fat, with larger athletes’ bodies holding upwards of 100,000 calories of expendable energy. When exercise goes beyond two hours, these fatty acids should be the body’s primary fuel, providing approximately 60–65% of your energy needs. However, when you consume too many calories, your body switches gears to use the food you’ve eaten instead of your carbohydrate reserves. In order to support your body’s natural ability to efficiently access energy stores from fat, consume just enough calories to feel your best during exercise 1 calorie per pound of bodyweight per hour, plus or minus 20%). ➤

THE GRAY AREA: EXERCISE LASTING 2-3 HOURS

During “gray area” workouts and races—those over 2 hours and up to 3 hours or slightly longer—the issues involving ammonia will be very minimal because you’ll have completed your workout or race before they truly become problematic. That’s why you can use either a “carb + protein” fuel or a “carb only” fuel...whichever you find works best for you. The longer you go, however, the more problematic the ammonia issues will be, which is why your primary fuel should contain both carbs and protein for any exercise longer than three hours.

Protein

For activities lasting longer than 90–120 minutes, 5%–15% of your calorie expenditure will come from protein. If your fuel doesn't supply protein, your body will scavenge it from muscle tissue, causing ammonia-induced muscle fatigue and muscle tissue breakdown, post-exercise soreness, and a weakened immune system.

To avoid muscle cannibalization, your fuel should incorporate protein in a ratio of about 8:1 (by weight) of carbs to protein. **Sustained Energy**, **Perpetuem®**, and **Perpetuem Solids** meet this requirement and are your best fuel choices for long-duration exercise. For these sessions, use a fuel containing protein from the get-go.

These four fuels will fuel your exercise hour after hour, without digestive distress. ➤

HEED®

- Rock-solid sustained energy

Hammer Gel®

- No sugar crash

Perpetuem®

- Buffers lactic acid

Sustained Energy

- High-glycemic-index (GI) complex carbs



Fuel Right, Feel Great!

Hammer International Athlete: Juraj Koreň, mountaineering in Slovakia



THE MAGIC NUMBER

Calories / Hr = Body Weight ± 20%

Use this formula to determine your optimal caloric intake during exercise.

3 PROPER HYDRATION

What you need to know to stay in the flow

Our Recommendations

To avoid performance and health problems associated with low blood sodium, your fluid intake during exercise should not routinely exceed 26 oz per hour, depending on weight and conditions.

Average athletes or average temps: 16-26 oz of fluids per hour (approx. 473–769 ml)

Lighter athletes or cooler temps: 16–18 oz of fluids per hour (approx. 473–532 ml)

Heavier athletes or hotter temps: up to 28 oz of fluids per hour (approx. 828 ml)

Water is the most critical component in exercise fueling and life. It cools your body, transports nutrients, allows healthy cellular functioning and energy release, joint health and more. Unfortunately, most athletes get this wrong everyday by under-consuming water, then make matters worse by trying to “load” water in the days leading up to a hot event. We are not camels, we cannot hold water in reserve. The sudden increase in water intake only serves to confuse the body and flush out electrolytic minerals BEFORE they are needed.

Luckily, there is a much better way to go about hydrating your body, both in daily life and for exercise/competition in the heat. Mastering your daily hydration is the key!

Daily Hydration Goal:

Minimum of 1/2(.5) ounce per pound of bodyweight. 3/4 ounce per pound being optimal.

Days leading up to a hot weather event:
NO CHANGE in daily fluid intake!

During heat stress exercise: **16-26 ounces per hour, depending on body size.**

The Science

The fact is you can finish an activity of any length with a water weight loss of about 2% (3-4 pounds or about 1/2 gallon, for most athletes without suffering any performance declines or negative health impacts. So forget the advice to “drink to replace.”



Athlete: Lizzie Jones running the RUFA Moab 12 Hour

Photo Credit:
Andrew Kalinyak

PROPER HYDRATION



SECRET #3



Hydrate effectively all day, every day.



During exercise, practice measured fluid consumption, adjusting intake to match temperature and sweat rate.



Do not attempt to replace the fluids you lose in 1:1 equal amounts. It always leads to failure and can be dangerous.



Don't try to super-hydrate prior to exercise.

Instead, abide by the following principle:

Replace only as much fluids as your body can effectively absorb!

The goal with hydration, like caloric consumption, is to consume an amount your body can process without causing additional side effects. Research shows that endurance athletes can efficiently absorb 16–26 fluid oz per hour. Consuming more than this does not improve performance. In fact, overconsumption can have grave consequences. When blood sodium concentrations become too low, performance immediately declines.

In severe cases, excessive fluid intake can overwhelm the body's levels of electrolytes, leading to water intoxication or dilutional hyponatremia, which can be fatal. ▶

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Discover a wealth of free information and education, specially authored and curated with your peak endurance performance in mind.

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Photo Credit: Jason Peters



KNOWLEDGE BASE

Athletes: Lisa Marie and Rene Fosdal Griffin

ELECTROLYTE REPLENISHMENT

They can be the difference between crushing it and being crushed



Our Recommendations

To keep your body functioning smoothly through a long workout or race, replenish the full spectrum of electrolytes consistently and completely.

Low sodium eaters: Consume 100-300 mg sodium per hour of exercise depending on heat stress levels.

High sodium eaters: Consume 300-900 mg sodium per hour

Note: Extreme conditions may warrant higher levels of electrolyte replenishment. Athletes consuming high sodium diet and or attempting to sodium-load before an event may require even more than this. Do what you have to do to get through your event, then put the salt shaker down before your next event!

The most misunderstood component of fueling your body! Electrolytes are like the motor oil in your car: they don't make the engine run, but they're absolutely necessary to keep everything operating smoothly. Just as you wouldn't wait for your engine to seize before you top off the oil, don't wait to cramp up before you replenish electrolytes. Long before you cramp, your output will suffer from mineral depletion.

Electrolytes 101

The goal of electrolyte replenishment is smooth, uninterrupted, uncompromised performance. Without the proper levels of electrolytes, your body can't carry

out critical body functions such as muscle contractions, normal heart rhythms, and nerve impulses, all of which are critical for performance and health.

Salt Tablets are not the Answer

Salt tablets are an unacceptable choice for electrolyte replenishment for two important reasons:

They can oversupply sodium, overwhelming your body's ability to regulate electrolyte and fluid balance.

They provide only two electrolytes, sodium and chloride, when your body requires many types of electrolytes.

Your body has very effective mechanisms for monitoring and conserving its stores of sodium. Consuming excessive amounts of sodium interferes with this natural process. If your body detects a drastic increase in sodium from outside sources (salty food or electrolyte products too high in sodium), your body will stop filtering and recirculating sodium and instead begin purging the excess. The immediate results of this are swelling and elevated blood pressure, with extreme cases resulting in lethargy, muscle weakness, seizures, and even death.

Skip the Salty Foods

A similar process occurs if your diet routinely includes high levels of sodium. Consistently consuming excess sodium encourages the body to routinely dump sodium. If you're consuming more than 2,300 milligrams per day, sodium loss during activity will be increased, increasing your risk of cramping and the need for electrolyte supplementation.

By building your diet around natural, unprocessed foods, you will consume sufficient sodium without interrupting your body's natural regulatory processes. The average person stores 8,000 milligrams of dietary sodium in body tissues.



SECRET #4



Electrolyte replenishment is essential, before and after short, high intensity efforts and every 15-20 minutes during prolonged endurance exercise, regardless of outside temperatures.



Eat a low sodium diet! The body only needs 2000 - 3000 milligrams of sodium a day, an amount easily supplied with natural, unprocessed foods. High sodium levels lead to increased sodium loss during exercise, which leads to more required sodium later on.



Adding **Endurolytes®**, **Fizz**, or **HEED®** to your water bottle is an easy way to help replenish electrolytes consistently throughout your workout or race.

Reducing sodium in your diet and replenishing sodium levels during exercise with the minimum amount necessary will enable your system to make the best use of your stores. Attempting to “sodium load” prior to activity triggers your body to rapidly dump it during exercise, perpetuating a cycle of high-sodium consumption and expenditure.

Full-Spectrum Electrolyte Replenishment

Proper electrolyte replenishment requires a consistent approach that properly balances all the necessary minerals—not just “salt.”

Endurolytes® are designed to meet your body’s complete electrolyte requirements, which include sodium, chloride, potassium, magnesium, calcium, and manganese. These minerals help counter the effects of overheating, optimize bodily functions, and enhance performance, especially for activities that last longer than two hours.

We don’t formulate Endurolytes to reflect the amount of electrolytes lost through exercise. As sweat loss varies greatly from person to person and depends on dietary habits and climate, there is no “one size fits all” approach to replenishment. It is essential that you correlate your dosing to dietary habits, the climate, and active temperatures.

When selecting your dosage, it is important to remember that the human body can assimilate only

about 1/3 of the electrolytes it loses during exercise. Trying to replace more than this could cause gastric distress, edema, muscle spasms, cramping, and a host of other performance-wrecking symptoms.

Hammer’s Endurolytes products help your body maintain proper electrolyte levels regardless of conditions or duration of exercise. They allow your body to perform better, especially in heat, by providing a full range of minerals in a proper balance that helps the body’s normal control systems perform.

“Adopt a low-sodium approach in your daily diet with mineral-rich whole foods, and comprehensive electrolyte support during exercise.”

Bottom Line

Salty foods and salt tablets won’t cut it when it comes to electrolyte replenishment. Instead, adopt a low-sodium approach in your daily diet with mineral-rich whole foods. During exercise, provide your body with comprehensive electrolyte support without compromising internal regulation. ➤



Hammer team member Camryn Lingle replenishing his electrolytes while biking



Complete ELECTROLYTE SUPPORT

Salt tablets provide only two of the electrolytes your body requires. **Endurolytes®** provides the full spectrum, with complementary micronutrients. Precisely formulated without excess salt, refined sugars, or artificial ingredients, our full-spectrum electrolyte products support peak performance in the toughest conditions.

Essential ELECTROLYTES

Calcium: Necessary for normal heart rhythm, healthy nerve transmission, and strong muscle contractions. During exercise, calcium-dependent enzymes produce energy from fatty acid and amino acid conversion.

Chloride: Critical for maintaining a proper balance and consistency of body fluids and electrolytes.

Manganese: Trace amounts help convert fatty acids and protein into energy.

Sodium: The average athlete already has a vast store of available sodium, so consuming excess amounts can cause serious problems. Endurolytes contain moderate amounts of sodium for proper replenishment.

Magnesium: Required for many of the enzymatic reactions for converting fuel to muscle energy.

Potassium: Needed for optimal concentrations of sodium.



Athlete: Hosava Kretzmann in Flagstaff, AZ
Photo: Steven Toya



Original Endurolytes® Capsules

Ideal for athletes consuming a low-sodium diet. Introduced in 1996, this full-spectrum, proportionately balanced electrolyte supplement provides 100 milligrams of sodium chloride. Depending on heat stress levels, 1 to 6 capsules per hour are recommended.



Endurolytes® Fizz

Equal to approximately two capsules of Endurolytes, this product is for athletes who are unable to consume capsules while exercising and/or those who prefer flavor in their water.



Endurolytes® Extreme Capsules

Triple the sodium, chloride, and potassium compared to original Hammer Nutrition Endurolytes, Endurolytes Extreme allows for a 3:1 reduction in the number of capsules consumed. For athletes who tend to consume a high-sodium diet (evidenced by salt stains on clothing and skin).

ELECTROLYTE REPLENISHMENT



Endurolytes® Extreme Powder

All the benefits of our best-selling Endurolytes Extreme capsules in an easy-to-mix powder. This formula dissolves quickly and completely, with a subtle, natural watermelon flavor. With three times the sodium chloride and potassium, and a softer flavor profile than Fizz, this is the perfect solution for multi-hour bottles of fuel, those who dislike consuming capsules, and those whose electrolyte needs are high.



HEED®

Hammer Nutrition's complex carbohydrate-powdered sports drink contains the same full-spectrum electrolyte profile as Endurolytes. Some athletes find that a scoop or two of HEED in their water bottle will keep them going strong for an hour or more. Others satisfy their complete electrolyte needs by consuming both HEED (an excellent base) and Endurolytes products.

RECOVERY DONE RIGHT

Recover right today, Hammer tomorrow!

Our Recommendations

Within 30 minutes after your finish, consume:

16 to 26 oz of water

30 to 60 grams of high-glycemic carbohydrates

10 to 20 grams of protein (preferably whey isolate)

Complementary amino acids and micronutrients

At the conclusion of every exercise period, you have a 30-minute “window of opportunity” where your body is most receptive to receiving fluids and nutrients to repair and rebuild the body for the next effort. But, it decreases with every minute that passes, so get serious about taking care of your recovery immediately post workout/event.

Proper recovery requires the introduction of:

Fluids - water

Calories-complex carbohydrates, protein, fat

Electrolytic minerals and other key nutrients

within minutes of finishing.

Rehydration

Rehydrate immediately following your exercise session and continue throughout the day. Consume at least 16 oz of water immediately following exercise and continue based on temperature, sweat rate, and thirst. You should consume at least 16 oz of water per pound of body weight lost during a strenuous session.

Calorie Requirements

The recovery process relies on two essential macronutrients: carbohydrates and protein. Consuming carbohydrates after exercise will replenish glycogen (carbs stored in muscles) and help your body assimilate protein.



You can minimize time needed and maximize your glycogen storage capacity through timely recovery practices. To maximize glycogen storage and usage, always consume complex carbohydrates immediately post exercise.

Choose High-Glycemic Complex Carbohydrates

A high-glycemic complex carbohydrate is ideal because it raises levels of insulin in the blood. This is desirable after exercise as insulin drives the storage of glycogen, stimulates protein synthesis for repairing and rebuilding muscles, and decreases muscle breakdown. Though simple sugars will also spike insulin levels, those levels rapidly drop again, leading to decreased energy for the rest of the day. Given simple sugar's inflammatory nature and propensity to cause stomach distress, it is a poor choice for recovery. Instead, choose high-quality complex carbs such as those found in **Recoverite®**.

Protein

Protein provides the raw materials your body needs to rebuild stressed muscles, enhance glycogen storage, and support the immune system. **Hammer Whey Protein** isolate is the best protein choice for recovery.

RECOVERY DONE RIGHT



SECRET #5



Use **Hammer Whey Protein** isolate (not concentrate), it's virtually free of lactose and fat and is the best protein for recovery.



Using a 3:1 carbohydrate-to-protein ratio (such as found in **Recoverite®**) decreases muscle soreness.



A full-spectrum supplement like **Premium Insurance Caps** replenishes vitamins and minerals lost during exercise.

For those with muscle/joint discomfort post exercise add **Tissue Rejuvenator**, see below.

Tissue Rejuvenator

This has been one of our most popular products for decades. Supports joint health and reduces muscle and joint discomfort that can result from exercise. Containing four active ingredients and a complete array of herbal anti-inflammatories, it's no wonder athletes love this product.

RECOVERITE®

Part of your post-workout routine

Whey protein isolate, the purest form of whey protein, has the highest BV of any known source at 154. Many other recovery products use less-absorbable whey protein concentrates which include production by-products, fat, and lactose. **Hammer Whey Protein®** and **Recoverite®** use the purest whey protein isolate on the market. It is 90 to 97% protein, derived from US-raised grass-fed cattle, and virtually free of fat and lactose.

Superior Muscle Repair

Compared to other sources, whey protein isolate is a superior source of all nine essential amino acids, which includes those most crucial to the muscle tissue repair process: the BCAAs—leucine, isoleucine, and valine.

Immune System Support

Whey protein contains excellent levels of the amino acids associated with immune system health. Poor protein status and chronic muscle breakdown lead to a decline in immune system health and eventually to many of the sicknesses and ailments associated with over-training.

MICRO-ESSENTIALS

Research has revealed recovery benefits from the consumption of other key antioxidants and amino acids. While many nutrients will enhance recovery, we consider the following to be truly essential:

L-Glutamine

Preserves and rebuilds lean tissue, boosts the body's natural immune defenses, and aids gastrointestinal health.

L-Carnosine

Offers antioxidant support. This nutrient neutralizes all forms of free radicals, thus helping to remove the “waste products” left behind after your workout. It also serves to protect body proteins.

Chromium Chelate

Boosts glycogen synthesis, thus improving your use of post-workout carbohydrates. Studies suggest that athletes who consume chromium along with ample carbohydrates can experience a 300% increase in glycogen synthesis.



The Perfect Recovery Tool

Recoverite supplies everything your body needs to jump-start the recovery process. It offers easily-assimilated complex carbohydrates from maltodextrin, and premium protein from whey protein isolate in the 3:1 ratio scientifically proven to speed recovery times. With all the essential nutrients as well as a full-spectrum blend of electrolytes, Recoverite is truly the perfect tool for the job.

If you want to feel your best, maximize your gains, and make the most of your time, recovery must be a priority in your training. Putting an emphasis on properly refueling when your body is at its

most receptive — immediately following exercise — will help restore your body's premium fuel (glycogen), rebuild muscle, and strengthen your immune system.

Make Recoverite part of your post-workout routine. To further maximize recovery, consider Hammer Nutrition's line of supplements. **Premium Insurance Caps, Race Caps Supreme**, and our other high-potency nutritional supplements are 100% guaranteed to improve your health, recovery, and performance.

Photo: Customer reading the Recoverite 2.0 label at the 24hr of Riverside.

Photo Credit: WayTay images



5 SECRETS OF SUCCESS

FOR ENDURANCE FUELING

SOS

1 Pre-Exercise Fueling

Consume a 300 - 500 calorie meal 3 hours before exercise, then take one Fully Charged serving 30 minutes before, and "top off" with a Hammer Gel 10 minutes after you start.

2 Calories Count

Consume one calorie per pound of bodyweight/per hour during prolonged exercise periods, using complex carbohydrates like maltodextrin instead of simple sugars.

3 Proper Hydration

Hydrate properly by taking in 16 - 26 oz of water per hour. Practice measuring fluid consumption during exercise.

4 Electrolyte Replenishment

Avoid salt tablets and use Endurolytes to replenish your body with the full spectrum of electrolytes.

5 Recovery Done Right

Within 30 minutes of finishing your workout or event, consume water, high-glycemic carbohydrates, whey protein isolate, and antioxidants.

FUELING CHECKLIST

Use the 5 secrets and put your plan into action.



Pre-Exercise:

- ☐ 3 hours prior: eat 300 - 500 easily digestible calories
- ☐ 30 minutes prior: No food. Only water and 1 serving of **Fully Charged**
- ☐ 10 minutes after: 1 serving **Gel®**, **Endurolytes®**

During:

Endurolytes®: electrolyte dosage varies by individual needs

- ☐ **Endurolytes®** ____ capsules/hour
- ☐ **Endurolytes® Extreme** ____ capsules/hour
- ☐ **Endurolytes® Extreme Powder** ____ grams/hour (2 grams per scoop)
- ☐ **Endurolytes® Fizz** ____ tablets/hour

Caloric Fulfillment: 120 - 180 calories/hour

- ☐ **Hammer Gel®** ____ servings/hour (90 calories per serving)
- ☐ **HEED®** ____ scoops/hour (110 calories per scoop)
- ☐ **Perpetuem®** ____ scoops/hour (90 calories per scoop)
- ☐ **Perpetuem® Solids** ____ solids/hour (100 calories per 3 tablets)
- ☐ **Sustained Energy** ____ scoops/hour (100 calories per scoop)
- ☐ **Hammer Bars®** ____ bars/hour (200 - 240 calories per bar)

Recovery:

- ☐ **Tissue Rejuvenator**
- ☐ **Recoverite®:** 2 scoops in 4 - 8 oz water within 30 minutes of exercise
- ☐ **Endurolytes®**
- ☐ **Premium Insurance Caps**

For a complete guide to fueling, refer to Hammer's product usage manual *How to Hammer*, or write to us at sales@hammernutrition.ph



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Piper Sheldon in the Ruby cycling kit
Photo: WayTay Images



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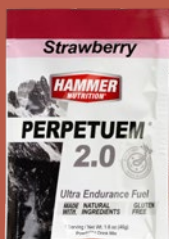
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Rider in the Glacier cycling kit at 24 Hours of Riverside



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