



ENDURANCE FUELS
& SUPPLEMENTS

PRODUCT USAGE MANUAL

Product & usage suggestions to optimize your
fueling and supplement program

Save for future reference

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None of the statements in this manual should be construed as dispensing medical advice, making claims regarding the cure of diseases nor can these products prevent heat stroke, hyponatremia, or any other results of excessive physical exhaustion. You, the athlete must listen to your body and use common sense to avoid serious injury. None of the statements contained in this manual have been evaluated by the Food and Drug Administration. You should consult a licensed health care professional if you have any pre-existing medical conditions.

Welcome!

Thank you for purchasing Hammer Nutrition fuels and supplements. We know you'll be completely satisfied with our products because they are exactly what your body craves before, during and after any training session and race.

Smart athletes know that the proper use of high quality fuels, as well as the consistent use of an intelligent supplement program, are integral factors in achieving the highest quality performance in their training sessions and races. In fact, they're as important in achieving success as all the time you put into training and all the money you spend on equipment. In addition, high-quality fuels and supplements work in tandem with your exercise routine to help optimize overall health.

That's where this handy manual comes in. It supplies all the vital information you need regarding proper application, mixing instructions (where appropriate), suggested usage and special notes for each Hammer Nutrition product. Please keep this manual filed in a safe place along with your copy of *The Endurance Athlete's Guide to Success* as you will want to refer to both of these resources many times in the future. If you do not already have one, we highly recommend you download a free copy from our web site at www.hammernutritionuk.co.uk/free_knowledge.php.

As always, should you need assistance with your fuel or supplement program, or if you have any questions about any of the Hammer products, simply email (support@hammernutritionuk.co.uk) away.

Thank you again for your purchase of our fuels & supplements and best wishes to you for success in your chosen endeavor!

The Hammer Health Team

Hammer Gel®

RAPID ENERGY FUEL THAT LASTS

Application

Use as a primary source of calories during exercise/competition lasting up to two hours.

Mixing / Usage Instructions

Consume 1-3 servings per hour (see chart below) along with 455-795 grammes (approx 475-830 ml) of plain water per hour from a separate source.

Notes

Hammer Gel may be used as the sole source of calories during workouts and races up to two hours and as a partial source of calories when exercising for longer periods. When training sessions or races go much longer than two hours, select either Perpetuem or Sustained Energy as your primary fuel source.

- *Hammer flask holds 5-6 servings*
- *Espresso Hammer Gel contains 50mg caffeine per serving*
- *Tropical Hammer Gel contains 25mg caffeine per serving*
- *You can use Hammer Gel to flavor Sustained Energy, Hammer Soy or Hammer Whey smoothies, etc*

Suggested Doses by Body Weight

Up to 120 lbs (approx 54.5 kg) - up to 2 servings/hr

120-155 lbs (approx 54.5-70 kg) - up to 2.5 servings/hr

155-190 lbs (approx 70-86 kg) - up to 3 servings/hr

190+ lbs (86+ kg) - up to 3.5 servings/hr

HEED[®]

A REAL, EFFECTIVE SPORTS DRINK

Application

HEED may be used as the sole fuel during exercise lasting up to two hours, fulfilling all your calorie and fluid requirements, and most-to-all of your electrolyte needs. HEED may also be used as a partial source of calories and electrolytes when exercising for periods in excess of two hours.

Mixing / Usage Instructions

Mix 1-3 scoops (see chart below) of HEED in 455-680 ounces (approx 475-710 ml) of water. Sip continuously during exercise.

Notes

When training sessions or races go much longer than two hours, select either Perpetuem or Sustained Energy as your primary fuel source. In these instances, HEED can still be used intermittently for variety as long as your total hourly caloric intake does not exceed your training determined maximum.

Each scoop of HEED contains the equivalent amount of electrolytes as approximately 2/3 of an Endurolytes capsule. For many athletes, under normal conditions, one or two scoops of HEED will completely fulfill electrolyte requirements. When heat stress increases significantly, you will need to consume additional Endurolytes.

Suggested Doses by Body Weight

Up to 120 lbs (approx 54.5 kg) - up to 1.5 scoops/hr
120-155 lbs (approx 54.5-70 kg) - up to 2.5 scoops/hr
155-190 lbs (approx 70-86 kg) - up to 2.75 scoops/hr
190+ lbs (86+ kg) - up to 3 scoops/hr

Perpetuem®

Application

THE FUEL FOR EXTREME ENDURANCE

Use as a primary source of calories during exercise/competition lasting more than two hours.

Mixing / Usage Instructions

IMPORTANT NOTE: Due to potential spoilage issues, Perpetuem cannot be premixed and left for several hours in warm weather. Please read the FAQ's on pages 8-11 for more detailed information on this important topic.

You can mix and consume Perpetuem three different ways depending on individual preference and logistical concerns. Please experiment with the following options to determine which works best for you.

The One-Hour Bottle - Mix the suggested amount of Perpetuem for your bodyweight (see chart on next page) in a 520-710 ml water bottle. Consume one bottle hourly. This method is ideal when training or racing with a support crew and vehicle. If you're without a support crew but still want to use this option for mixing, keep in mind that it's obviously less convenient as you'll have to stop more frequently to mix your fuel drink. Also, because you are trying to fulfill both hydration and caloric requirements from one source you have limited ability to adjust one without affecting the other; you may need to consume additional water to satisfy hydration requirements.

The Multi-Hour Bottle - This is by far the most convenient method of fueling because it allows you to be self-sufficient for many hours, requiring only additional plain water along the way. The only limitation is how many scoops you can fit into a bottle. Determine your proper hourly intake of scoops by experimenting with the numbers from the dosage charts. Let's say you've determined through testing that 2 scoops of Perpetuem per hour is your ideal caloric intake. For a 4-hour workout, you'll need 8 scoops in a bottle, then filled with water and shaken

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well. You may need to add a few scoops at a time to get it all to mix well, then “nurse” this bottle, taking small sips every 15-20 minutes. At this concentration, the water in the mixed bottle does not contribute much at all to your hourly fluid intake needs. To meet your fluid requirements, you carry a second and possibly even a third bottle of plain water, or use a hydration system, or know where you can refill along your route. Drink according to the temperature/humidity and your exertion level so that you consume in the range of approx 475-861ml of plain water per hour.* This way, as long as you can obtain water along the way, you’re set for hours of hard training.

**Note: Please refer to the article "Hydration—What you Need to Know" in The Endurance Athlete's Guide to Success for more detailed information on hydration requirements.*

Gel or Paste - If you want to carry the highest volume of calories in the least amount of space, making a thick mix is your best option. Perpetuem can be made into a super-concentrated, near paste-like consistency and dispensed from a Hammer Gel flask. Using a blender or bowl and spoon, mix scoops of powder with a small amount of water, gradually adding water as necessary to create the consistency desired. If you're using the orange-vanilla flavor of Perpetuem, remember that the heavier and more concentrated you mix it, the sweeter and stronger the flavor will become. You can also add Hammer Gel or HED for flavor, if desired. Depending on how many scoops per hour you require, and how concentrated the mix is, each flask of Perpetuem can supply you with 2-4 hours of fuel. As with the multi-hour bottle, you must carry additional bottles of plain water or use a hydration system to meet your fluid requirements.

Suggested Doses by Body Weight

Up to 120 lbs (approx 54.5 kg) - up to 1 scoop/hr

120-155 lbs (approx 54.5-70 kg) - up to 1.5 scoops/hr

155-190 lbs (approx 70-86 kg) - up to 2 scoops/hr

190+ lbs (86+ kg) - up to 2.5 scoops/hr

Sustained Energy[™]

THE ORIGINAL ULTRA FUEL

Application

Use as a primary source of calories during exercise or competition lasting more than two hours.

Mixing / Usage Instructions

IMPORTANT NOTE: Due to spoilage issues, Sustained Energy cannot be premixed and left for several hours in warm weather. Please read the FAQ's on pages 8-11 for more detailed information on this important topic.

You can mix and consume Sustained Energy three different ways depending on individual preference and logistical concerns. Please experiment with the following options to determine which works best for you.

The One-Hour Bottle - Mix the suggested amount of Sustained Energy for your bodyweight (see chart on next page) in approximately 520-710 ml water bottle. Consume one bottle hourly. This method is ideal when training or racing with a support crew and vehicle. If you're without a support crew but still want to use this option for mixing, keep in mind that it's obviously less convenient as you'll have to stop more frequently to mix your fuel drink. Also, because you are trying to fulfill both hydration and caloric requirements from one source, you have limited ability to adjust one without affecting the other; you may need to consume additional water to satisfy hydration requirements.

The Multi-Hour Bottle - This is by far the most convenient method of fueling because it allows you to be self-sufficient for many hours, requiring only additional plain water along the way. The only limitation is how many scoops you can fit into a bottle. Determine your proper hourly intake of scoops by experimenting with the numbers from the dosage charts. Let's say you've determined through testing that 2 scoops of Sustained Energy per hour is your ideal caloric intake. For a 4-hour

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workout, you'll need 8 scoops in a bottle, then filled with water and shaken well. You may need to add a few scoops at a time to get it all to mix well. You then "nurse" this bottle, taking small sips every 15-20 minutes. At this concentration, the water in the mixed bottle does not contribute much at all to your hourly fluid intake needs. To meet your fluid requirements, you carry a second and possibly even a third bottle of plain water, or use a hydration system, or know where you can refill along your route. Drink according to the temperature/humidity and your exertion level so that you consume in the range of approximately 475-830 ml of plain water per hour.* This way, as long as you can obtain water along the way, you're set for hours of hard training.

**Note: Please refer to the article "Hydration—What you Need to Know" in The Endurance Athlete's Guide to Success for more detailed information on hydration requirements.*

Gel or Paste - If you want to carry the highest volume of calories in the least amount of space, making a thick mix is your best option. Sustained Energy can be made into a super-concentrated, near paste-like consistency and dispensed from a Hammer Gel flask. Using a blender or bowl and spoon, mix scoops of powder with a small amount of water, gradually adding water as necessary to create the consistency desired. Depending on how many scoops per hour you require, and how concentrated the mix is, each flask of Sustained Energy can supply you with 2-4 hours of fuel. As with the multi-hour bottle, you must carry additional bottles of plain water or use a hydration system to meet your fluid requirements.

Suggested Doses by Body Weight

Up to 120 lbs (approx 54.5 kg) - up to 1.5 scoops/hr

120-155 lbs (approx 54.5-70 kg) - up to 2 scoops/hr

155-190 lbs (approx 70-86 kg) - up to 2.5 scoops/hr

190+ lbs (86+ kg) - up to 3 scoops/hr

Important information and FAQ's regarding Perpetuem and Sustained Energy

By design, neither Perpetuem nor Sustained Energy contain any artificial preservatives. Preservatives provide absolutely no benefits for athletic performance or general health—we consider them health hazards, in fact—which is why we do not include them in either of these products, or any of the Hammer Nutrition fuels.

As a result of this, however, once mixed in solution the protein component in both Perpetuem and Sustained Energy is affected in the following ways:

1. At some point in time it will eventually sour and no longer be acceptable for consumption.
2. It tends to separate after awhile and may settle on the bottom of a bottle or hydration pack bladder.

We believe that not having artificial preservatives in the products is far more important than these two inconveniences; however, they are things that you need to remember when using Perpetuem or Sustained Energy. With that in mind, here are some questions we frequently receive, along with the answers to those questions:

Q: How soon after I make Perpetuem or Sustained Energy do I have to drink it?

A: Ideally, it should be within 3-5 hours, with up to perhaps 6-8 hours (depending on the temperature) being the longest we recommend. Dr. Bill Misner explains:

Energy drink powders (such as Perpetuem and Sustained Energy)

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contain no preservatives and are predisposed to change when in solution. Time, temperature, humidity, environmental airborne or endogenous microbes, oxidation factors may cause fatty acids to turn rancid or proteins to "sour" in the presence of long chain or short chain carbohydrates. A prime example is found in pasteurized milk. Milk typically sours in stages as one type of bacteria is replaced by another. Bacilli convert protein into ammonia products, and the pH rises. The odor or taste of spoiled milk is apparent once this has happened. We have observed this phenomenon in our soy-based products, Perpetuem and Sustained Energy if the product is mixed prior to an event then not kept cold or consumed within 3-5 hours.

Athletes should be encouraged to keep pre-mixed protein-enhanced or lipid-containing carbohydrate drinks under 15° C or ideally at a cooler approximately 4.5 – 7.25° C in order to keep fermentation of environmental bacteria from proliferating in the drink mixture. Freezing the drink the night before an event may result in keeping the macronutrient contents intact and inhibit bacterial growth potential. Once the drink is soured to taste or has become noxious to olfactory sensed odor, then it is advised that the drink not be consumed.

Q: If I mix Perpetuem or Sustained Energy and keep it in the refrigerator for a day or two, will it break down any of the desired properties due to sitting for a while and not being used right away?

A: The effectual benefits ("desired properties") are not lost, but the l-carnitine in both products may deteriorate somewhat, forming crystals within the mix since it is very hygroscopic (has an affinity for water). The deterioration, if any, is minimal in 48 hours post-mix, refrigerated.

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However, for best results we recommend using Sustained Energy or Perpetuem as soon as possible after mixing.

Q: Can I use Perpetuem or Sustained Energy in a hydration pack?

A: You could, but we don't recommend this practice. First, neither Perpetuem nor Sustained Energy contain any preservatives, and as a result, the protein component tends to separate after awhile and may settle on the bottom if the mixture is not agitated on occasion. Keeping a carbohydrate/protein fuel thoroughly mixed can be difficult to do when using a hydration pack. Also, when you mix the product in a water bottle, you're better able to see exactly how much you're consuming. Lastly, cleaning the bladder of any hydration pack is substantially easier when you use it for drinking water only. Our recommendation is to use water bottles to mix Sustained Energy and Perpetuem and hydration packs for water only.

Q: I'm doing a full iron-distance triathlon, and the weather is going to be hot. I want to use Perpetuem for the bike portion. How do you suggest I mix it so that it doesn't get warm and unpalatable?

A: Let's say that the bike portion will take you six hours. You can make all six hours of fuel in two bottles. For example, if you have found (through testing in training) that two scoops of Perpetuem will provide an hour's fuel, put six scoops in and make a 3-hour bottle, fulfilling your hydration requirements with plain water approximately 600 - 830 milliliters per hour) from another bottle or hydration system. Make two 6-scoop bottles and you've got your six hours worth of fuel taken care of.

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Mix the bottles the night before the race and freeze them. That will keep them cold and palatable as they thaw during the bike portion of the race. If, however, the weather on race day is going to be very hot, or you don't have a way to keep the bottles cold until the bike leg, then try this method: mix and freeze one bottle as above, but in the other put only the six scoops of Perpetuem, and add no water. When you finish your first 3-hour bottle you will need to stop and take a few moments to add cold water to this second. It just takes a few seconds, but now you have a fresh, cold bottle of fuel for the second half of the bike ride. Using insulated bottles also helps, if you don't mind the slight extra weight.

One athlete who completed a hot-weather Ironman Australia used this method and wrote us saying, "I did as you recommended – had the second bottle of dry Perpetuem powder in my bike Special Needs bag, and just added cool water. It only took 30 seconds or so and I was underway with a bidon of cold Perpetuem for the second half of the bike. Great suggestion, it works like a treat!"

Endurolytes[®]

ELECTROLYTES DONE RIGHT

Application

Use prior to, during, and after workouts to satisfy the body's electrolyte requirements with maximum precision.

Mixing / Usage Instructions

Use as needed but primarily when:

1. Exercise lasts for more than two hours, regardless of temperature or humidity.
2. Exercise lasts less than two hours and:
 - a.) Temperature is above 25 degrees and/or 70% humidity or
 - b.) Temperature and humidity is 5 degrees or more above what you are accustomed to.

- *1-3 capsules 30-60 minutes prior to exercise*
- *1-6 capsules each hour during exercise*
- *1-3 capsules after exercise*

Powder Note: Taste will limit you to 1-3 servings per hour. If conditions warrant more, additional capsules should be used.

Notes

Bodyweight, level of fitness, weather conditions, acclimatization level, and biological predisposition all greatly affect electrolyte depletion so you must do your own trials with Endurolytes dosing, under a variety of conditions, to determine individual requirements.

Endurolytes DOES NOT prevent heat stroke, hyponatremia, or any other dangerous physical condition resulting from over exertion in the heat.

Hammer Bar[®]

THE ULTIMATE ENERGY BAR

Application

Use as a pre-exercise meal, post workout/race recovery food, or healthy snack any time.

Usage Instructions

Used occasionally during extended workouts and races, Hammer Bars are an ideal solid food choice, augmenting the other Hammer Nutrition fuels perfectly. Suggested use is one bar per hour.

Notes

Don't confuse the Hammer Bar with other energy bars, many of which are loaded with refined sugar, saturated fats, and possibly other unhealthy ingredients. A quick look at the list of ingredients in the Hammer Bar will let you know that you're consuming an ultra-healthy food that just happens to come in the convenience of a bar.

The Hammer Bar contains only healthy fats (no trans fatty acids) and is an excellent source of phytosterols and sterolins, all of which have multiple health benefits.

Each Hammer Bar contains 220 calories from 26 grams of carbohydrates (none from refined sugar), 9 grams of organic brown rice protein, and is fortified with 9 grams of healthy fats. When a solid food choice is desired, Hammer Bar satisfies your hunger in ideal fashion without excess calories.

After workouts or races, if solid food is desired, or when the use of Recoverite is not practical, the Hammer Bar is a superb post-workout/race food, providing high quality carbohydrates and protein in an ideal 3:1 ratio.

Hammer Whey™

POWERFUL PROTEIN

Application

97.9% lactose free, glutamine enhanced whey protein. Consume for recovery enhancement immediately following workouts and races or as part of a do-it-yourself Meal Replacement Powder (MRP). *See chart on page 15 to determine your daily protein intake requirements.*

Mixing / Usage Instructions

- Mix 1 ¼ - 1 ½ scoops Hammer Whey with 3-4 servings (6-8 Tbsp.) of Hammer Gel in approximately 235 - 500 ml or more of water. This provides 366-476 calories from a 3:1 ratio of complex carbohydrates (69-92 grammes) and 22.5-27 grammes of protein.
- Mix 1 ½ - 1 ¾ scoops of Hammer Whey with 3-4 scoops of HEED in approximately 300 - 475 ml of water. This yields 408-526 calories in a 3:1 ratio of 75-100 grammes of complex carbohydrates (69-92 grammes) and 22.5-27 grams of protein.
- Mix 2-3 scoops of Sustained Energy with 1 scoop of Hammer Whey in approximately 350 - 710 ml of orange juice. This provides approximately 460-575 calories from 27-31 grammes of protein and approximately 81-105 grammes of carbohydrates.
- To support a strong immune system during periods of stress and/or high training volume, and to safely raise levels of hGH (up to 400%!) take 1 scoop of Hammer Whey in approximately 118 - 177 ml of water only, no carbohydrates, up to 30 minutes prior to bedtime.

Notes

Whey protein should not be used immediately before or during exercise due to its tendency to produce ammonia, which causes muscle fatigue.

For protein supplementation before or during exercise we recommend Hammer Soy (with Hammer Gel or HEED mixed in), Perpetuem, or Sustained Energy.

Hammer Soy™

PREMIUM VEGETABLE PROTEIN

Application

Add to diet to increase daily protein intake. Hammer Soy is an ideal protein component of a pre-exercise meal or as part of a do-it-yourself MRP. See chart below to determine your daily protein intake requirements.

Mixing / Usage Instructions

- Mix ½ scoop Hammer Soy with 2-3 servings (4-6 tablespoons) of Hammer Gel in water. This yields approximately 46-70 grammes of carbohydrates and approximately 12.5 grammes of protein equaling roughly 240-330 calories.
- Mix ½ scoop Hammer Soy with 2-3 scoops of HEED in water. This yields 50-75 grammes of carbohydrates and 12.5 grams of protein equaling approximately 255-355 calories.
- Mix ⅓ scoop Hammer Soy with 2-2.5 scoops of Sustained Energy in water. This yields approximately 49-61 grammes of carbohydrates and 15-17 grams of protein equaling roughly 265-320 calories.

Notes

Hammer Soy is best used prior to and during exercise, because it produces almost no ammonia, a primary cause of muscle fatigue.

Daily Protein Intake Chart

How much protein do endurance athletes need? Numerous studies have demonstrated that endurance athletes in heavy training need more protein than recreational athletes do. This chart gives you a good reference as to how much protein you should consider consuming daily from all sources, diet and supplemental protein powders. More information can be found in "The Endurance Athlete's Guide To Success" and in the Knowledge section of our website.

	Off-season and/or light workouts*	In-season and/or long workouts*
100-110 lbs (aprx. 45-50 kg)	64-70g	77-85g
120-130 lbs (aprx. 54-59 kg)	76-83g	93-100g
140-150 lbs (aprx. 63-68 kg)	89-95g	108-116g
160-170 lbs (aprx. 72-77 kg)	102-108g	124-131g
180-190 lbs (aprx. 81-86 kg)	115-121g	139-147g
200-210 lbs (aprx. 91-95 kg)	127-134g	155-162g
220-230 lbs (aprx. 100-104 kg)	140-146g	170-178g
240-250 lbs (aprx. 109-113 kg)	153-159g	185-193g

*All measurements shown in grams needed per day

Recoverite®

RECOVERY MADE EASY

Application

Use immediately following workouts and races to optimize recovery - glycogen replacement, electrolyte replacement and muscle tissue repair. Recoverite can also be used as a Meal Replacement Product (MRP).

Mixing / Usage Instructions

Combine one serving (2 scoops) in approximately 235-355 ml (or more, if desired) of cold water and consume immediately after completion of a workout or event. This supplies 30 grammes of complex carbohydrates, 10 grams of whey protein isolate, plus 3 grams of glutamine. Consume a second serving one hour later if you will not be sitting down to a full meal at that time. If you train two or three times per day, this would be done following each workout.

To use as a MRP, simply consume 1-3 servings (2-6 scoops) in place of a meal.

Notes

Recoverite and whole foods serve to refuel and refresh the body during the critical 2-hour “window of opportunity” after exercise. Thus, a reasonable amount of your post-exercise calories can and should be consumed from whole foods. That's why it's ideal to sit down to a healthy meal containing both carbohydrates and protein no more than two hours after the conclusion of your exercise. If this is not possible, additional servings of Recoverite can and should be taken at a rate of one to two servings per hour until you are able to eat a complete meal.

If you are using Recoverite as a MRP, you should not replace more than one or two meals per day.

Product Application

QUICK REFERENCE CHART

This table shows Hammer Nutrition product applications. All Hammer Nutrition fuels are completely compatible with one another and can be used in combination as desired.

✓ Primary Fuel Choice
✗ Secondary/ Complementary Fuel Choice

	Pre-exercise meal: 3 hrs. prior to start	10 min. prior to training & competition	10-15 min. into training & competition less than 2 hours	Use continually during training & competition longer than 2 hours	Following training & competition	Add to diet for increased daily protein intake.
Hammer Bar	✓			✗	✓	✓
Hammer Gel	✗	✗	✓	✗	✗	
HEED	✗	✗	✓	✗	✗	
Perpetuem	✓	✗	✗	✓	✗	
Sustained Energy	✓	✗	✗	✓	✗	
Endurolytes		✗	✓	✓	✓	
Recoverite					✓	✓
Hammer Soy	✗				✗	✓
Hammer Whey					✓	✓

Hammer Nutrition Supplements Product Selection & Usage Guide

We at Hammer Nutrition firmly believe that in addition to a high quality fueling plan, an intelligent and consistently used supplement program is a key factor in not only achieving athletic success, but for overall health as well. As an athlete, you place enormous physiological demands on your body. Your nutrient requirements - just to maintain health - are much greater than the average person. But your goal isn't to just maintain health at a minimally acceptable standard; your goal is to achieve supreme health. In addition, you want to get the absolute most out of your body so that it can do what you want it to in your workouts and races, while you have more fun and achieve more success in the process.

That's where the Hammer Nutrition supplements come in. Like our fuels, they are the highest quality products you can use. They contain no contaminants of any kind, are completely safe & legal, and are highly effective. We guarantee your complete satisfaction with whichever of the Hammer Nutrition supplements you choose to use. Speaking of choice, because we offer so many great products, we oftentimes hear questions such as, "Where do I start? Which supplements should I take?" That's where this manual will help. In the following pages we've divided the products into four categories:

Daily Essentials - The three primary products in the Hammer Nutrition line: Premium Insurance Caps, Race Caps Supreme, and Mito Caps. These should be the foundation of your supplement program, as they provide the widest range of benefits for enhancing both athletic performance and overall health. You should take these three products daily throughout the year. In fact, because of the tremendous benefits they provide for general health, we even recommend them for daily use by non-athletes.

- continued on next page

Very Important - These supplements do not replace the three Daily Essentials, but would be the next logical step, complementing the Daily Essentials products wonderfully by providing additional support and benefits. You can use these products daily or on an as needed basis.

Important - These products are not crucial in comparison to those found in the Daily Essentials or Very Important categories but provide additional benefits beyond the nutrient strength of the products in those two categories. Mostly, these are taken as needed at various times throughout the year. If you're seeking the ultimate supplement program then you should consider the products in this category.

Specific - Most of these products are not taken on a regular basis; however, they may actually become essential for certain athletes and/or under specific conditions.

More information about these products can be found online (go to the "Free Knowledge" link at www.hammernutritionuk.co.uk). Of course, you can call us (07968 063646) or email (support@hammernutritionuk.co.uk) and we'll be happy to help.

Premium Insurance Caps™

PREMIUM MULTIVITAMIN/MINERAL

Application

Comprehensive nutritional foundation to maintain peak overall health and well-being through the rigors of training, competition and everyday life.

Usage Instructions

Please read chart carefully.

	<i>Non-workout days</i>	<i>Workouts under 1.5 hrs</i>	<i>Workouts over 1.5 hrs</i>
Any athlete younger than 20 years old OR Athletes weighing less than 68 kgs.	4-7 capsules daily in divided doses	4 capsules after workout with food, the other 3 at another time during the day with food.	14 capsules (equal to 2 packets) per day in divided doses with 7 capsules (1 packet) taken with food after workout. The other 7 capsules/packet is to be split into two doses and taken at other times of the day with food.
Athletes weighing more than 68 kgs.	4-7 capsules daily in divided doses	4 capsules after workout with food, the other 3 at another time during the day with food.	14 capsules (equal to 2 packets) per day in divided doses with 7 capsules/1 packet taken with food after workout. The other 7 capsules/packet is to be split into two doses and taken at other times of the day with food.

Notes

High potency, all vegetable capsules, vitamins, chelated minerals, amino acids, broad spectrum antioxidants, digestive enzymes and more replace a dozen supplements in one convenient formula. Compare our ingredients with all of the other supplements in your cabinet; you may find many of them to be unnecessary now.

Supplementation with this product is not necessary and not recommended prior to workouts unless at least a 3-hour window exists between consumption of the product and the beginning of the workout.

Race Caps Supreme[®]

ENERGY ENDURANCE RECOVERY

Application

The most potent, legal way to enhance your training and improve your race results. Energy levels and endurance are greatly increased while recovery after hard efforts and workouts is significantly reduced. Helps maintain a strong immune system and supports overall health and well-being.

Usage Instructions

Please read chart carefully.

	<i>Non-workout days</i>	<i>Workouts under 1.5 hrs</i>	<i>Workouts over 1.5 hrs</i>
Any athlete younger than 20 years old OR Athletes weighing less than 68 kgs.	1 capsule twice daily with food	1 capsule 30-90 min. before exercise (with or without food) and 1 after workout with food.	1 capsule 30-90 min. before and 1 after workout with food. If workout is longer than 2 hours, 1 additional capsule may be taken every hour during exercise.
Athletes weighing more than 68 kgs.	1 capsule three times a day with food	2 capsules 30-90 min. before exercise (with or without food) and 1 after workout with food.	2 capsules 30-90 min. before and 1-2 after workout with food. If workout is longer than 2 hours, 1-2 additional capsules may be taken every hour during exercise.

Notes

Coenzyme Q10 and idebenone, both cornerstone nutrients in Race Caps Supreme, are highly regarded antioxidants with multiple benefits, especially in regards to cardiovascular health.

Mito Caps™

CELL VITALITY

Application

Help your body's mitochondria (the thousands of energy-producing "furnaces" in the cells) work more efficiently and stay healthier. One nutritional expert states, "The longer you can stimulate the lifespan or health of the mitochondria, the longer you will live and the better you will perform in endurance events. The athlete who has the most healthy/efficient mitochondria is the athlete who performs at their best."

Usage Instructions

Please read chart carefully.

	<i>Non-workout days</i>	<i>Workouts under 1.5 hrs</i>	<i>Workouts over 1.5 hrs</i>
1 capsule three times daily, with food	1 capsule 30-90 minutes prior to workouts (with or without food) and 2 capsules after workouts with food. A 4th capsule may be taken with dinner on workout days that were 60-90 minutes in length.	2 capsules 30-60 minutes prior to exercise (with or without food), 2 capsules after exercise with food, 2 capsules with dinner. If workout exceeds two hours, 1 additional capsule may be taken every hour during the workout.	

Notes

The two primary nutrients in the Mito Caps formula - acetyl l-carnitine and r-alpha lipoic acid - have numerous general health benefits. Therefore, every athlete or active person should take this product daily, all year round. Athletes desiring increased benefits can experiment with higher dosages.

Super Antioxidant™

ADVANCED ANTIOXIDANT SUPPORT

Application

Get the upper hand on free radicals with this ultra potent, non-vitamin, antioxidant formula. Enhances recovery by reducing soreness and fatigue, improving circulation, and helping to maintain optimal immune system functioning.

Usage Instructions

For enhanced recovery take 1 or 2 capsules with food after workouts (use the higher dose after workouts over 2-3 hours and after races). For supporting enhanced performance (via free radical neutralization) during ultra distance workouts and races, Super Antioxidant may be used at a suggested intake of 1 capsule every 2-3 hours.

Notes

For supporting enhanced cognitive function (via the ginkgo biloba and vinpocetine components), Super Antioxidant may be taken on a daily basis throughout the year. Suggested dose is 1 capsule in the morning with food.

Any athlete subjected to excess free radical production - especially those living in a polluted environment or those under very high stress levels (physical, mental, environmental, emotional) - should take this product every day, all year round.

Phytomax[™]

CONCENTRATED VEGETABLE NUTRITION

Application

Phytomax is a live green Super Food containing ample amounts of easily assimilated organic minerals, as well as thousands of enzymes and phytochemicals. These are nutrients your body must have for proper health that it can't always obtain even from the best of diets.

Usage Instructions

3 capsules per day with meals.

Notes

3 capsules daily is sufficient for an athlete who consistently eats 5-7 servings a day of fresh, organic leafy green and cruciferous vegetables. If you eat non-organic store bought vegetables higher doses may be necessary. If you honestly do not consume anywhere near 5-7 servings a day, or just don't like vegetables at all, a 6-capsule daily dosage is recommended.

Of the numerous benefits Phytomax provides, many athletes report that consistent use helps with improved moods and mental clarity, and a higher quality of sleep.

SUPPLEMENTS - VERY IMPORTANT

REM Caps[™]

SLEEP ENHANCEMENT

Application

Better sleep = higher hGH levels = better recovery. Fall asleep faster, accrue more quality REM time, wake up in the morning feeling refreshed.

Usage Instructions

1-3 capsules one hour before bedtime.

Notes

Start by taking 1 capsule for the first week. If desired results are not achieved, increase to 2 capsules nightly. If desired results are still not achieved after the second week, increase to three capsules nightly.

REM Caps contain melatonin, which is not only a superb sleep-enhancing nutrient, but a powerful antioxidant as well. As such, REM Caps may be used on a regular basis, if desired.

The strong odor you may notice in REM Caps occurs naturally from the valerian root extract component in the product.

Do not operate machinery or drive a motor vehicle after taking.

Do not take with alcohol.

Tissue Rejuvenator™

SUPERIOR JOINT HEALTH

Application

Protect and maintain healthy joints and connective tissue with this ultra potent formula. Four different active ingredients and a multi-nutrient anti-inflammatory pain relieving component make this supplement ideal for recovering from joint injuries as well.

Usage Instructions

4 capsules once or twice daily during periods of injury.

1-2 capsules once or twice a day may be used for prevention/maintenance purposes.

Notes

1 capsule every 2-3 hours has been successfully used during ultra marathon races as an alternative to NSAIDS, common over-the-counter pain relievers.

The effects/benefits of Tissue Rejuvenator are cumulative so consistent use is vital to achieve best results.

Xobaline™

ACCELERATED MUSCULAR RECOVERY

Application

Use after workouts to optimize production of red blood cells, reduce fatigue and related symptoms, and enhance muscle repair and regeneration. Ideal for athletes concerned about anemia.

Usage Instructions

1 tablet dissolved underneath tongue after workouts or with a meal. Take one tablet on days off.

Notes

If Premium Insurance Caps (which contains both folic acid and vitamin B12, the same nutrients that are in Xobaline) is not being used regularly then a second Xobaline tablet may be taken daily (at a separate time) for enhancing recovery and for general health benefits.

Both vitamin B12 and folic acid play key roles in lowering dangerously elevated levels of homocysteine, considered a primary culprit in cardiovascular disease, so daily use of Xobaline is suggested.

Chromemate™

INSULIN EFFICIENCY

Application

The potent trace mineral chromium regulates insulin function, insulin being one of the most powerful anabolic hormones in your body. Normal food sources no longer contain measurable amounts of chromium. Daily use of Chromemate, the most bio-available form of chromium, ensures proper insulin function, healthy cholesterol levels, enhanced recovery, curbs sugar cravings and reduces low blood sugar tendencies. This product is a must for anyone with hypoglycemia.

Usage Instructions

1-3 capsules daily with food, with one of those doses taken after workouts with post-workout recovery fuel.

Notes

Current research indicates that higher amounts of chromium—up to 1000 mcg daily—may provide optimal benefits. Therefore, taking additional Chromemate capsules with food at key times during your day—augmenting the 200 mcg contained in 7 capsules/1 packet of Premium Insurance Caps—is a wise strategy.

Digest Caps™

INTESTINAL HEALTH

Application

Use daily to maintain proper levels of healthy bacteria in the digestive system. This helps improve intestinal health, immune and digestive system function, and nutrient absorption.

Usage Instructions

1-2 capsules daily with or without food.

Notes

Healthy intestinal flora balance helps prevent the liberation of high levels of ammonia caused by digestion of protein-containing foods. This may help alleviate or even prevent ammonia-produced fatigue.

Each capsule contains 2 billion cells comprised of "the friendly three" - *L. acidophilus*, *B. bifidum*, and *B. longum* - and the patented *L. plantarum* OM strain, a potent combination for promoting intestinal health

For severe cases (such as after a course of antibiotics, diagnosis of candida, or illness), we recommend two weeks of iFlora as the first line of support, then Digest Caps daily for maintenance.

Boron™

HORMONAL HEALTH

Application

Safely and naturally restores normal hormone levels which are depressed as a result of endurance training. Normalizing your hormone levels dramatically enhances recovery, workload tolerance and libido. This supplement is an absolute must for anyone over 40.

Usage Instructions

1 capsule per day, preferably with a post workout/race meal.

Notes

Desirable dosage ranges for athletes over 40 are 5-10 mg of boron per day. Premium Insurance Caps contain 2.5 mg per 7 capsules/1 packet. If you typically take this amount of PIC's daily, one additional capsule of Boron will be highly beneficial.

Boron is a key mineral for bone health, it aids in the prevention/reduction of hypertension and arthritis, it plays a role in preserving cognitive function, and is a valuable ally in the prevention of kidney stones.

Anti-Fatigue Caps™

AMMONIA NEUTRALIZER

Application

Helps remove excess, fatigue-causing, performance-robbing ammonia from cell pathways. Especially effective in reducing fatigue in extended endurance events while also providing electrolytic mineral support. Additionally, many of the nutrients in Anti-Fatigue Caps are excellent for helping counteract everyday fatigue, even chronic fatigue.

Usage Instructions

Take 2-4 capsules one hour prior to workout or races.

During extended endurance sessions an additional 1-2 capsules each hour - beginning at the two-hour mark and every hour thereafter - is suggested.

Notes

2-4 capsules one hour prior to training provides an initial dose of 500-1000 mg magnesium/potassium aspartate, 200-400 mg l-citrulline, and 280-560 mg OKG. This is an excellent dose at the onset of an endurance workout or race as well as during ultra distance events.

Race Day Boost[™]

ULTIMATE RACE DAY ADVANTAGE

Application

Enhances the functions and performance of your body's three energy production pathways, and effectively buffers lactic acid. Use for four days prior to a major event and enjoy up to an 8-10% improvement in performance time.

Mixing / Usage Instructions

Take 1 level teaspoon of Race Day Boost 4 times per day, for 4 days prior to competition. We suggest mixing each teaspoon serving in 85-110g of warm/hot water. After the powder dissolves consume immediately. 45-110g ounces of fruit juice/ice can be added if desired. Do not take Race Day Boost the day of the event.

Multi-day event protocol:

- Follow the same 4-day loading protocol as described above.
- Take 1 level teaspoon of Race Day Boost with your recovery drink as soon as possible after the race, with another dose of Race Day Boost (mixed in warm/hot water as described above) later in the day/evening.
- Follow this twice daily "maintenance dose" protocol after each stage.
- Do not take Race Day Boost in the morning prior to the start of the next stage.

Notes

All the components of Race Day Boost will NOT mix completely in solution. Make sure all residue in the glass is consumed.

Because of the extreme alkaline nature of Race Day Boost, if you choose to mix the product in juice, a semi-acidic one is suggested. Orange juice or apple juice are a great choices.

Because this product has a "tolerance factor" or biofeedback mechanism, it should not be used for every race. Ideally, it should be used 5-6 times per year, preferably with a minimum of 14-21 days between loading cycles.

Energy Surge™

ENERGY ON DEMAND

Application

Use on an “as needed” basis for a quick energy boost during interval or speed workouts, just prior to increased efforts during training or competition (such as a big climb or an attack), or all day long during ultra distance events.

Usage Instructions

For high intensity, short duration events (less than one hour), take 1-3 tablets 5-30 minutes before the start. For longer duration events, 1-3 tablets can be taken as needed, preferably every hour, to counter extreme fatigue.

Notes

Because this is a sublingual (under the tongue) tablet, absorption can only occur if the tablet is held in the mouth, preferably under the tongue until it dissolves.

For faster absorption, chew tablets into a paste then dissolve under the tongue.

Liquid Endurance[™]

UPGRADE YOUR HEAT DEFENSES

Application

Traditional Loading Dose: Prior to an important race where heat is going to be a factor, a 3-day loading dose is recommended to increase fluid storage capacity.

Daily Use: When a full 3-day loading dose is neither practical nor possible, Liquid Endurance may be used immediately prior to and during hot-weather workouts.

Off-season Use: The glycerol/l-carnitine components of Liquid Endurance work synergistically to enhance the utilization of body fat stores for energy, making Liquid Endurance ideal for use in helping manage weight during the off season.

Mixing/Usage Instructions

Traditional Loading Dose: 1 Tbsp. Liquid Endurance per (approximately) 45 kg of bodyweight mixed in approximately 475-830 ml of water. Consume three times daily for three days prior to event. It is very important to weigh yourself each day. If you gain 3% or more of your bodyweight before the 3-day loading is finished, it is time to stop loading as water weight gain beyond 3% is performance-inhibiting (note: most athletes gain 1-2%, which is the desired amount).

Daily Use: ½ to 1 Tbsp. per 620 - 710 ml bottle of water prior to exercise and if desired, in each bottle of water or fuel during exercise.

Off-season Use: ½ to 1 Tbsp. per 620 - 710 ml bottle of water once or twice daily, with or without food.

Notes

All protocols with Liquid Endurance **MUST** be tested in training-do not attempt to use this product for the first time before a race.

Liquid Endurance **DOES NOT** prevent heat stroke, hyponatremia, or any other dangerous physical condition resulting from overexertion in the heat.

Appestat™

APPETITE RESTRAINT

Application

The sensible, healthy approach to weight loss. Use to control cravings and support your weight loss program.

Usage Instructions

1-2 capsules one hour before lunch and dinner. Use in a cycle of 3 weeks ON with one week OFF before starting another 3-week cycle.

Notes

It has been clinically demonstrated that weight loss exceeding approximately 1-2 $\frac{1}{3}$ kg) per month results in losing more lean muscle mass than body fat. In order to lose the most body fat and the least muscle mass, we strongly encourage you to lose the weight slowly, limiting your weight loss to approximately 2 $\frac{1}{3}$ kg) per month.

For more information regarding sensible weight loss, read the article “What 24 ‘Helpful Hints’ increase lean muscle mass and lose extra body weight?” in the Free Knowledge section at www.hammernutritionuk.co.uk

PSA Caps[™]

PROSTATE SUPPORT FORMULA

Application

Effective, non-prescription nutrient support for prostate health. For males in their 30's, this product is recommended to help prevent prostate-related problems from occurring (note that 5-10% of men in their 30's already experience enlarged prostate). For males 40 and older this is an essential, daily-use product.

Usage Instructions

1 capsule in the morning and 1 capsule at night with fruit juice or carbohydrates, 60 minutes apart from meals (not with protein-rich foods).

Notes

This is an important product for all men, especially those age 40 and older, as well as male athletes who are engaged in cycling events. Cycling may increase the risk of nerve damage, impotence, impaired urinary flow, and disorders to the male genital organs, especially the prostate gland.



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More detailed information regarding all aspects of proper fueling can be found in *The Endurance Athlete's Guide to Success*. 120+ pages of valuable information you can use right now to take the guesswork out of your fueling program and ensure higher quality training sessions and better race results.

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