



RECHARGED

Post Workout – Amino Complex

Replenish and recover so that you can do it all again, faster and stronger.



Mixed Berry Flavor

Be Recharged provides an essential, conditionally essential, performance, and recovery Amino Acid blend which can play a big part in recovery for athletes and anyone looking to gain muscle and increase performance through optimal nutrition while exercising.[◊] Amino acids are the “building blocks” of protein including proteins used to grow, repair, and maintain muscle tissues. Its provides a full spectrum array of essential, conditionally essential, and performance amino acids derived from a blend of micronized amino acids that provide a physiologically effective amount of Branched Chain Amino Acids (BCAAs) to provide a robust signal for mTOR activation which stands for “the mammalian target of rapamycin”. Be Recharged with its unique blend of specific amino acids create mTOR activation, which helps to stimulate this muscle growth process.[◊]

mTOR is very important to your progression in terms of muscular development, tone and definition. Be Recharged, a specific blend of amino acids, can activate this muscle building process. It also ensures optimal protein based nutrition for enhanced biochemical processes to increase performance through optimal cellular recovery post exercise. The end result is you will have better energy, less aches, increased muscle growth and Be Recharged to train and make gains for the next day.[◊]

Be Recharged is a premier formulation of free form amino acids, produced by microbial fermentation under strict laboratory culture conditions and highly purified from the growth medium after completion of the culturing process. Such amino acids are completely free of environmental contaminants, unlike amino acids produced by hydrolysis of proteins produced in nature, be they of plant or animal origin. The ideal time to use Be Recharged, is in the range of 20-40 minutes after exercise, when the muscles are ‘hungry’ for amino acids, which then stimulate muscle protein synthesis.[◊] The proper blend of amino acids also stimulates an insulin response, which contributes to an anabolic environment that favors protein

synthesis. The free form amino acids provided in Be Recharged are also ‘micronized’, meaning that they have been ground into very fine particles (particle size in the micron range)—for comparison purposes, the diameter of a red blood cell is 7 microns. This allows maximum solubility, and rapid absorption of these amino acids from the stomach into the blood where the branched chain amino acids, and leucine in particular, provide a robust signal for mTOR activation, significantly more robust than the signal provided by the much slower appearance of leucine in the blood provided by the digestion of even easily digested intact protein sources that are rich in branched chain amino acids, such as whey protein.

Be Recharged supplies all 10 of the essential amino acids (those that cannot be produced by the body, and therefore MUST be supplied by diet, which includes dietary supplements). This includes 5 grams of the 3 branched chain amino acids: leucine, isoleucine and valine, in a 2:1:1 ratio. This trio of essential branched chain amino acids, and leucine in particular, act as signaling molecules for activation of the mTOR pathway, which is a major complex for anabolic (building up) metabolism.[◊] As noted previously, mTOR stands for ‘the mammalian target of Rapamycin’, and was discovered by scientists who studied the compound Rapamycin, derived from a fungus found on Easter Island in the 1970s. Rapamycin inhibits mTOR, and strong inhibition (from

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high doses of rapamycin) of this pathway results in immunosuppression, whereas activation of mTOR triggers a cascade of signaling molecules resulting in a strong anabolic signal for protein synthesis.

The remainder of the amino acids that make up the Be Recharged formula provide 3.5 grams of the other 7 essential amino acids (lysine, arginine, histidine, phenylalanine, threonine, methionine, and tryptophane), as well as 3 amino acids important both to athletic performance and recovery: citrulline, glutamine, and taurine.[◊]

Arginine and citrulline (which is metabolized slowly into arginine) provide substrate for nitric oxide production, an important signaling molecule for the entire cardiovascular system, which causes arterial smooth muscle to relax, thus supporting circulation and maintaining already healthy blood pressure.[◊]

Glutamine, extensively discussed in the Be Sustained Product Information sheet, is important to repair and maintenance not only of the muscles, but also the lining of the intestinal tract, and the immune system. In fact, glutamine, arginine, citrulline, and the 3 essential branched chain amino acids (leucine, isoleucine, and valine) are all considered “immunonutrients”, because they are all involved in calming the inflammatory response and muscle pain induced by severe exercise, and which results in immunosuppression when there are inadequate amounts of these key amino acids. Unlike fat and starch (such as glycogen), the body cannot store amino acids, and so if they are not available from dietary intake every day, especially in relation to heavy exercise demands, the body will break down muscle protein to provide adequate amounts of them. Muscle protein is precious, both to the elite athlete, and to healthy aging—so supplementing generous amounts of the amino acids found in Be Recharged (along with those found in Be Focused and Be Sustained) represents an ‘insurance policy’ against muscle protein breakdown after training and competition, especially as an athlete ages, and also to maintaining a healthy immune system post heavy exercise.[◊]

Taurine, although a ‘non-essential’ amino

acid (because the body can produce it from other sulfur containing amino acids, such as methionine and cysteine) is considered by some experts in the field of amino acid metabolism to be in the category of ‘conditionally essential’ amino acids, since there are clear benefits associated with increased dietary intake. One international study on populations in the world with unusual concentrations of people living past 100 and maintaining functionality and independence (such as Okinawa, Japan), identified high dietary intake of taurine as a common feature in all these populations.^{◊1} The authors of a review article on dietary taurine intake in 2012 wrote “Considering its broad distribution, its many cytoprotective attributes, and its functional significance in cell development, nutrition, and survival, taurine is undoubtedly one of the most essential substances in the body.”^{◊2} Taurine is a critical factor to optimal function of skeletal muscles, as well as of the heart, brain, and nerve tissues, and has been documented to improve athletic performance.^{◊3, 4, 5} In addition to increasing the force of muscular contraction, taurine helps exercising muscle dispose of lactic acid more rapidly (thus synergizing with the effects of the di-peptide carnosine (discussed at length in the Be Focused Product Information sheet). This helps exercising muscle maintain performance longer, as lactic acid accumulation within muscle is what limits how long a muscle can continue to work.^{◊6} Prolonged intensive muscle work generates excessive levels of oxidative stress, which can lead to muscle injury, DNA damage, and reduced athletic performance. Taurine, like carnosine (generated by beta-alanine supplementation, provided in Be Focused, and Be Sustained), significantly protects muscles from excessive oxidative stress.^{◊7}

Taurine is particularly important to vegetarian and vegan athletes, as the major dietary sources for taurine are found in animal proteins (fish, poultry, and meat). Also, aging bodies are less able to make taurine from other amino acids, making dietary sources (including dietary supplements), even more important. Taurine is particularly important in supporting health of the heart, kidneys, nerves, brain, liver, and

retina of the eye. It also is important in helping to regulate healthy blood sugar levels, and has significant activity in scavenging free radicals, particularly in the aforementioned organs and tissues which have a high taurine requirement.

Aside from the 3 essential branched chain amino acids, the other 7 essential amino acids, the 2 conditionally essential amino acids (glutamine and taurine), and the nitric oxide generating pair (arginine and citrulline), Be Recharged contains the same system of citric acid (as well as potassium citrate)—both in the citrus and berry flavored versions, with the addition of malic acid in the berry flavored version, as is present in the companion products Be Focused and Be Sustained.

Both citric and malic acid, (and their ionized forms, designated citrate and malate) serve as key substrates for the cellular biochemistry that takes place in mitochondria, the tiny ‘energy factories’ of every cell, responsible for producing ATP. Malic acid, likewise enters directly into the ATP producing function of mitochondria known as the Krebs cycle, named after Sir Hans Krebs who discovered it. They also serve as acidity regulators in the formulation, as does sodium gluconate, the sodium salt of gluconic acid.[◊] Gluconic acid and its various mineral partners (gluconates), is produced in human metabolism, and can also be converted back to glucose, so it can either be excreted unchanged in the urine, or converted to glucose for energy, depending on the body’s needs.[◊] Highly purified silicon dioxide is included in the formulation as an anti-caking agent, to keep the powdered ingredients of Be Recharged flowing smoothly during packaging. A small amount of silicon dioxide can be converted by stomach acid to silicic acid, which can be absorbed, and utilized as a nutritional source of silica, which is an important trace element in bone, teeth, hair, and finger/toe nails.[◊] The remainder is excreted unchanged from the digestive tract.

As with Be Sustained, the citrus flavored version of Be Recharged is also colored with the botanical spice turmeric, a potent antioxidant and natural preservative (which is a major component in all Indian ‘curry’ dishes), but the Berry flavored

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version of Be Recharged is colored with beet extract, which consists of a compound known as betanin, linked to a sugar molecule, to form a glycoside.[◊] It also contributes somewhat to flavor, as well as color.

The sweetening system used in Be Recharged is also a combination of stevia, a natural non-nutritive sweetener, with erythritol, the most GI friendly of the sugar alcohols, produced by natural bio fermentation, without the use of any genetically modified micro-organisms, or GMO food substrates. The characteristics and benefits of erythritol, including its role as a natural 'osmolyte', helping to maintain hydration of tissues during exercise, are extensively discussed in the Be Focused Product Information sheet.[◊]

Be Recharged has major benefits in maintaining lean body mass as we age (optimally when combined with physical activity), and has protective qualities when used as nutritional support.[◊]

Be Recharged is designed to support optimal recovery after exercise, whether gentle, moderate, or extreme, and to provide fuel for maximal muscle protein synthesis after exercise.[◊] It is also the most versatile of these 3 companion products (Be Focused, Be Sustained, and Be Recharged), and can be taken before, during, and/or after exercise with major benefits at all 3 points of your training and competitions. Because all three of these formulations are so well balanced, Be Recharged can also be taken at the same time as either Be

Focused and/or Be Sustained. Keep in mind that the period from 20-40 minutes after exercise of any intensity and duration is a 'golden window' of opportunity to supply your muscles, heart, and brain with the ideal fuel to support optimal recovery, repair, and protection, as well as building greater strength, size, endurance, and resilience of your muscular development on an ongoing basis. This trio of products can make your work-outs easier, more fun, and more rewarding for any age—from early adolescents to nonagenarians—or level—from professional athletes to elite non-professionals, to busy moms, young students or business executives who realize that fitness enhances performance in all arenas of life, whether on the playing field, the classroom, or the boardroom.

REFERENCES:

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 4. (Balshaw TG, Bampouras TM, Barry TJ, Sparks SA. The effect of acute taurine ingestion on 3-km running performance in trained middle-distance runners. *Amino Acids.* 2013 Feb;44(2):555-61.)
 5. (Imagawa TF, Hirano I, Utsuki K, et al. Caffeine and taurine enhance endurance performance. *Int J Sports Med.* 2009 Jul;30(7):485-8.)
 6. (Manabe S, Kurroda I, Okada K, et al. Decreased blood levels of lactic acid and urinary excretion of 3-methylhistidine after exercise by chronic taurine treatment in rats. *J Nutr Sci Vitaminol (Tokyo).* 2003 Dec;49(6):375-80.)
 7. (Zhang M, Izumi I, Kagamimori S, et al. Role of taurine supplementation to prevent exercise-induced oxidative stress in healthy young men. *Amino Acids.* 2004 Mar;26(2):203-7.)
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Supplement Facts

Serving Size / 2 level Scoops (20.8 g)

Servings Per Container / 30

Amount per serving	% Daily Value		Amount per serving	% Daily Value	
Calories	40		L-Isoleucine	1250 mg	**
Carbohydrate	2 g	1%*	L-Leucine	2500 mg	**
Dietary Fiber	0 g	0%*	L-Lysine	300 mg	**
Total Sugars	2 g		L-Methionine	75 mg	**
Includes 2 g Added Sugars		4%*	L-Phenylalanine	150 mg	**
Sodium	53 mg	2%	Taurine	750 mg	**
Potassium	53 mg	1%	L-Threonine	60 mg	**
Amino Acids	7500 mg	**	L-Tryptophan	50 mg	**
L-Arginine HCl	275 mg	**	L-Valine	1250 mg	**
L-Glutamine	765 mg	**	L-Citrulline Malate	1000 mg	**
L-Histidine	75 mg	**			

* Percent Daily Values are based on a 2,000 calorie diet. ** Daily Value not established.

INGREDIENTS: Erythritol, L-Leucine, Natural Berry Flavors, L-Isoleucine, L-Valine, L-Citrulline Malate, L-Glutamine, Taurine, Sodium Gluconate, L-Lysine, L-Malic Acid, Steviol Glycosides, L-Arginine HCl, L-Phenylalanine, Potassium Citrate, Silica, Citric Acid, Beet Extract (Color), L-Histidine, L-Methionine, L-Threonine, Lecithin (from Sunflower (*Helianthus annuus* L.)), L-Tryptophan.

PHENYLKETONURICS—CONTAINS PHENYLALANINE

US.SF2.MOD 2

As with all supplements, please consult your physician prior to taking if you are pregnant or attempting to become pregnant, breast-feeding, under a doctor's care or taking prescription medication.

Allergy Information: This product is processed in the same facility that processes products containing fish/shellfish, soy and dairy.

This product was not tested on animals.

Store in a cool, dry place.

Excessive consumption may produce laxative effects.

Contains the essential BCAAs. Protein contributes to the maintenance of muscle mass.⁰

Protein contributes to the growth in muscle mass.⁰

No artificial colors, artificial flavors, artificial sweeteners or preservatives.

Suitable for Vegans

Gluten Free

FOR BEST RESULTS, CONSUME WITHIN 30 MINUTES AFTER EXERCISING

DIRECTIONS: Mix two level 15 cc scoops (20.8 g) once per day with 8 oz (240 ml) of water or your favorite beverage. Shake well.

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