

BEAM Recovery Aminos: Stop the Soreness!

written by Mike Roberto | April 1, 2022

BEAM Recovery Aminos are a full-spectrum essential amino acid (EAA) formula designed to improve recovery with added ingredients like tart cherry and Aquamin!

You can *Be Amazing*, but it's a bit more of a challenge if you're sore and cranky for the majority of your athletic life! This is why Michael Yewdell and his team at BEAM put together a strong intra-workout / recovery supplement in **BEAM Recovery Aminos**.



BEAM Recovery Aminos: Amazingly Not-So-Sore

This isn't a brand new supplement, but as new flavors like *Sour Blue Slushie* have joined the menu, it's one we keep going back to on those "ugly" days. BEAM Recovery Aminos includes the following to keep your muscles from feeling torn to shreds:

- Full-spectrum BCAA/EAA blend with high doses of leucine-loading threonine and phenylalanine as well as anabolic methionine
- Aquamin for better hydration
- Added recovery antioxidants in *tart cherry*, *grape seed extract*, and *wild blueberry*
- Targeted vitamin and mineral blend to prevent oxidation

We dig into the hefty 16 gram scoop below, but first, check the flavors

available through PricePLOW's price comparisons:

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BEAM Recovery Aminos Ingredients

In a single *one scoop* serving of BEAM Recovery Aminos, you get the following:

- **Branched-Chain Amino Acid (BCAA) 3:1:1 Blend – 5,000 mg**

SUPPLEMENT FACTS

Serving Size 1 Scoop (16.1g)
Servings Per Container 30

	Amount per serving	% Daily Value
Calories	5	
Total Carbohydrate	1g	< 1%*
Vitamin C (as Ascorbic Acid)	180mg	200%
Vitamin E (as d-alpha tocopheryl acetate)	50mg	333%
Iron	3mg	17%
Sodium (as Himalayan Pink Sea Salt)	120mg	5%
Potassium (as Potassium Citrate)	40mg	1%
L-Leucine	3000mg	**
L-Isoleucine	1000mg	**
L-Valine	1000mg	**
L-Lysine (from L-Lysine HCL)	900mg	**
L-Threonine	825mg	**
L-Phenylalanine	675mg	**
Aquamin™ (as Red Seaweed-derived Calcium Complex)	500mg	**
L-Tryptophan	350mg	**
Tart Cherry (<i>Cerasus pseudocerasus</i>) Fruit Extract	300mg	**
L-Methionine	225mg	**
White Tea (<i>Camellia sinensis</i>) Leaf Extract	100mg	**
Grape Seed Extract	75mg	**
L-Histidine	25mg	**
Wild Blueberry Fruit Extract	25mg	**
Theobromine [from Cocoa Bean (<i>Theobroma cacao</i> L.) Seed]	20mg	**

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

Other Ingredients Citric Acid, Malic Acid, Natural and Artificial Flavors, Tartaric Acid, Sucralose, Silicon Dioxide, Calcium Silicate, Beta-Carotene (for color), Acesulfame Potassium



Leucine, isoleucine, and valine are known as the *branched-chain amino acids* (BCAAs), so-called because the diagram of their chemical structure resembles a tree with branches.

BCAAs stand out from other aminos because of their uniquely anabolic effects. They're usually taken immediately before, during, or after a workout so that their release into the bloodstream occurs during the "anabolic window" that begins with the initiation of a workout.

The basic reason why BCAAs work to build and preserve muscle is that leucine is the primary activator of the mammalian *target of rapamycin* (mTOR), [1-4] which initiates muscle protein synthesis in the human body.

These three aminos resemble each other because they are *isomers* of each

other,[5,6] meaning that they have the same *chemical* formula but subtle differences in *structure*. As you might expect, this means they have similar, but complementary effects.

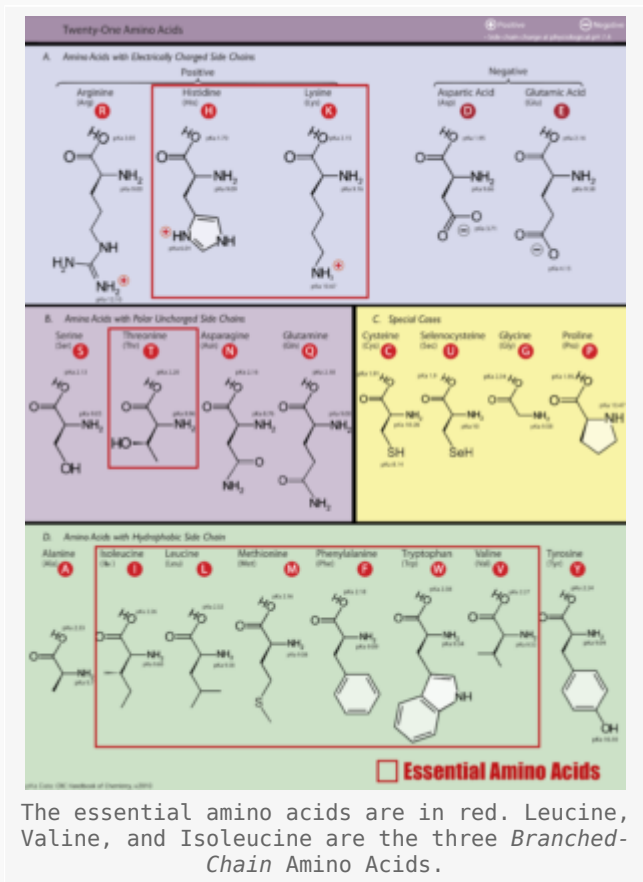
The leucine content of a BCAA is usually disproportionately high, as we see here, because of leucine's uniquely effective role in the mTOR pathway.[2-4,7-9] Nonetheless, all three BCAAs have documented anti-catabolic properties,[10-12] and increase athletic *endurance*[13-15] as well.

Moreover, our body's requirement for leucine, an *essential amino acid* that we *must* obtain from food or supplements, goes up significantly as we age.[16]

5g is the go-to dose for BCAAs, so we're off to a good start in this heavy-handed scoop.

• L-Lysine – 900 mg

Lysine is an important *carnitine* precursor,[17] which means we definitely want to get a lot of it because *carnitine* confers big benefits on human health. Lysine also aids with muscle growth and recovery following exercise, as has been shown in animal models studying lysine supplementation.[18,19]



Lysine is also important for absorbing *calcium*[20] and producing *collagen*,[21]

which means that the EAA is crucial for ensuring the structural integrity of, well, basically your whole body. Without enough calcium your bones won't be as strong as they could be, and the tendons that hold your bones together consist of collagen. Bones and tendons take a lot of punishment during intense cardio and weightlifting, so if you're training hard, a little lysine supplementation to help them repair is definitely a good idea.

Besides absorbing calcium, lysine also helps direct where that calcium is *deposited*, [21] much like vitamin K2. You don't want calcium in your blood vessels where it can contribute to cardiovascular disease: you want it in your bones, which is where it belongs. And lysine will help your body achieve that.

We would like to conclude this section by emphasizing lysine's status as a *carnitine precursor*, because we at PricePlow love carnitine and write about it all the time. If you're looking for a good discussion about carnitine and its potential, check out our long-form article, *L-Carnitine is Underrated. New Meta Review Reminds Us Why*.

- **L-Threonine – 825 mg**

Threonine is one of the precursors to *glycine*, [22] an incredibly important essential amino acid with tons of health benefits.

**Full
spectrum
bcaa + eaa's**

**Vegan
friendly**

Electrolytes

Antioxidants

**Naturally
sourced
color**

Some intriguing research from animal models suggests that threonine might have anti-obesity effects by regulating lipid metabolism.[23] Threonine also helps maximize muscle growth,[24] so taking a little extra can help you avoid bottleneaking your *gains*.

Threonine is one of the EAAs (phenylalanine is the other) that can improve *leucine's* uptake when used alongside the BCAA[25] – one of the many reasons we like adding EAAs to BCAAs. Here we have quite a nice dose, and the same goes for the next one:

- **L-Phenylalanine – 675 mg**

Like threonine above, **phenylalanine** also promotes better leucine uptake,[25] so we're thrilled that it's also high up on the label. Phenylalanine is one of the precursors to *tyrosine*. [26]

Tyrosine is among our favorite amino acids here at PricePLOW because it triggers the production of important *neurotransmitters*, including dopamine, epinephrine and norepinephrine.[27]

But more importantly for a *recovery* formula, phenylalanine levels are consumed during exercise and recovery from exercise,[28] restoring those levels once you've finished your workout is just part of the full recovery process.

- **Aquamin – 500 mg**

Taking a brief pause from our EAAs, **Aquamin** is a *multi-mineral complex* sourced from seaweed that consists mostly of *calcium* and *magnesium*. [29]

The real question, of course, is whether Aquamin is efficacious enough to meet the expectations we have when supplement with these minerals—and the answer appears to be yes. Researchers have done a couple of studies on Aquamin specifically, finding that it does indeed improve bone and joint health.[29,30]

Aquamin also contains trace amounts of minerals like *boron* and *manganese*, which have also been shown to improve joint and bone health.[31]

There's also a small body of evidence that shows boron has the ability to decouple steroid hormones from the transporter *sex hormone binding globulin*, [32] thereby *possibly* raising blood levels of *free* testosterone, [33] the biologically active form. However, research on this subject remains inconclusive and should be considered preliminary.

The big picture here is that because electrolytes are lost during exercise, we want to replenish them as quickly as we can in order to optimize recovery.

• L-Tryptophan – 350 mg

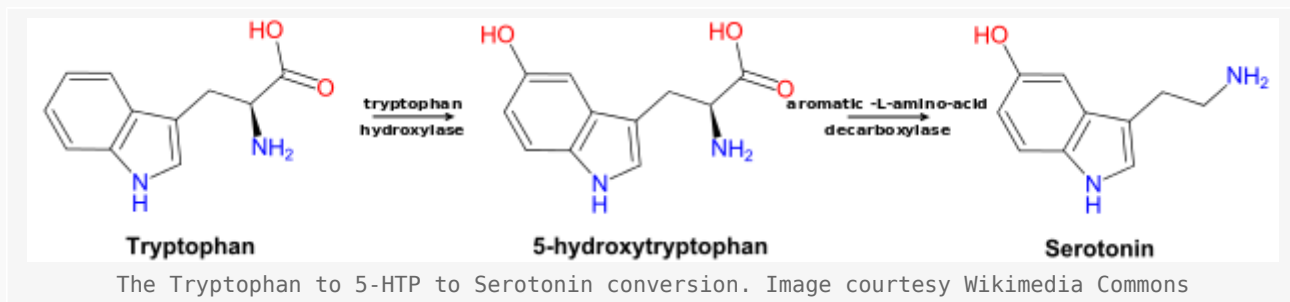
Tryptophan is another essential amino acid and also a *serotonin precursor*. At the appropriate point in your circadian rhythm, the EAA will convert into *melatonin*,[34] the hormone we naturally produce in response to darkness.

It's known for *sleep*, given how much it's mentioned on Thanksgiving, but it doesn't work instantaneously as the media suggests. But if you're training hard, especially in the late afternoon or early evening, some tryptophan supplementation may later provide you with the tools to fall asleep faster *and* sleep well, which translates into a boon for exercise recovery.

The pathway from tryptophan to melatonin is, briefly:

1. Conversion of *serotonin L-tryptophan* to *5-hydroxytryptophan (5-HTP)*
2. Conversion of 5-HTP into serotonin via the enzyme *aromatic L-amino acid decarboxylase*
3. Conversion of serotonin to *N-acetyl-serotonin* via the enzyme *hydroxyindole-O-methyltransferase*
4. Conversion of N-acetyl-serotonin to melatonin.[35]

Going through tryptophan depletion is generally a bad experience,[36] and BEAM is trying to prevent that with a decent dose in here.



A feel good, recovery amino – just like the product states.

• Tart Cherry Fruit Extract – 300 mg

The juice from **tart cherries** have been investigated as an anti-inflammatory compound and preliminary studies indicate that it *can* in fact promote recovery and *decrease* muscle pain following intense exercise.[34,37-39] This is probably because tart cherry is extremely high in *antioxidants* and specifically *anthocyanins*, which have been identified in the research literature as powerful anti-inflammatory compounds.[35]

- **L-Methionine – 225 mg**

Methionine is an essential acid with *antioxidant properties* that enable it to defend your body from the effects of *stress*,[40] including the type induced by exercise. Excess ingested methionine is eventually converted into *taurine* and *cysteine*, which have both been shown to improve athletic performance and aid recovery.



Methionine is also needed for the production of carnitine,[41] which we discussed above. Researchers consistently observe a positive correlation between the amount of methionine a person consumes and his or her blood carnitine levels.[41]

- **White Tea (*Camellia sinensis*) extract – 100 mg**

White tea is, like its famous cousin *green tea*, brewed from the leaves of the tea plant, *Camellia sinensis*. However, whereas *green tea* leaves are harvested at the plant's peak of maturity, *white tea* leaves are harvested when the plant is very *young*. This gives it an antioxidant profile distinct from that of green tea.

Much like green tea extract, white tea leaf extract has been shown to increase metabolic rate and inhibit the growth of fat cells, largely because of *epigallocatechin gallate* (EGCG),[42,43] a much-studied antioxidant that's also found in green tea.

This is a unique addition to an amino supplement, but it makes sense – *antioxidants* for improved *recovery*, hence the name.

- **Grape Seed Extract – 75 mg**

Grape seed extract (GSE) is rich in *proanthocyanidins*, which have a number of positive effects on human health through their interaction with *endothelial nitric oxide synthase* (eNOS), an enzyme that synthesizes nitric oxide. GSE can increase eNOS expression via *kinase B (Akt) phosphorylation*.^[44]



According to a 2016 meta analysis, GSE significantly lowers blood pressure and promotes healthy circulation,^[45] which is definitely going to help with recovery, since recovery depends largely on the efficient removal of lactic acid and the delivery of nutrients to damaged tissues. Other identified effects of GSE include cognitive benefits, lower levels of inflammation and blood sugar, and improvements to organ function.^[46-49]

- **L-Histidine – 25 mg**

Histidine is a necessary precursor for *carnosine*, a molecule that increases muscular endurance and speeds recovery by buffering lactic acid.^[50]

Some research from animal models suggest that high levels of histidine can actually boost muscle synthesis above baseline rates.^[51] So taking a histidine supplement could help you even if you're not deficient.

- **Wild Blueberry Fruit Extract – 25 mg**

Blueberry extract is similar to tart cherry's antioxidant profile and overall effects. Rich in *anthocyanins*, it has been shown to speed up recovery[52] and reduce general inflammation and oxidative stress.[53]

- **Theobromine – 20 mg**

Here's a unique inclusion to an amino supplement!



Theobromine is a *methylxanthine*, just like its famous relative, *caffeine*. It has the ability to decrease appetite and increase energy levels,[54,55] it helps blunt post-exercise fatigue by crossing the brain-blood barrier and inhibiting *phosphodiesterase* and *adenosine*,[54] which is the same mechanism of action behind most of caffeine's effects. However, unlike caffeine, theobromine has a significantly longer half-life, so you won't feel withdrawal effects as it wears off.

Also, like caffeine, theobromine can potentially help encourage a lean body composition by increasing the action of *cyclic adenosine monophosphate* (cAMP),[56] which speeds up fat burning in the body.[57] However, this isn't a large enough dose for us to noticeably burn fat, but it may help blunt any post workout crash.

- **Other ingredients**

Besides the ingredients discussed above, we also have a generous serving of vitamins C and E, which probably need no introduction as anti-stress and antioxidant compounds.



For instance, scientists have documented **vitamin C**'s ability to reduce muscle damage markers and soreness thanks to its ability to reduce oxidation.[58,59] There's also a study where vitamin C led to better endurance in overweight dieters running caloric deficits.[60] In addition, having vitamin C *deficiency* can markedly reduce performance,[61] so it's good to avoid that.

BEAM Recovery Aminos also has a little bit of **iron**, which is a good idea since iron is one of the many minerals that is eliminated from the body during exercise.[62]

Overall, the angle here is clear – a ton of ingredients to keep your body from feeling utterly destroyed. Don't get us wrong – if you're training hard, you're still going to get sore. But we posit that *all other things equal*, you'll probably feel *less* sore.

Flavors Available:

This is a *strong*, well-dosed amino acid profile, so it's going to need some strong flavor systems to power through:

Takeaway: BEAM Recovery Aminos gets you back on track

When you weight train, you actively tear down your muscles. Post-workout inflammation is a good thing, but it's great to give your body the tools it needs to *rebuild and repair*. BEAM Recovery Aminos does that, and includes ingredients that can help you from feeling forever drained from that one last set.

Worth mentioning, this is a *vegan-friendly* supplement that is *naturally colored*, so you won't find any artificial dyes inside. It is sucralose-sweetened though, and this shouldn't be surprising given such a *monster* EAA formula.

So if you're finding yourself sore all the time, it could be time to consider throwing some BEAM Recovery Aminos at the problem... and some BEAM Whey Protein may not hurt either!

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