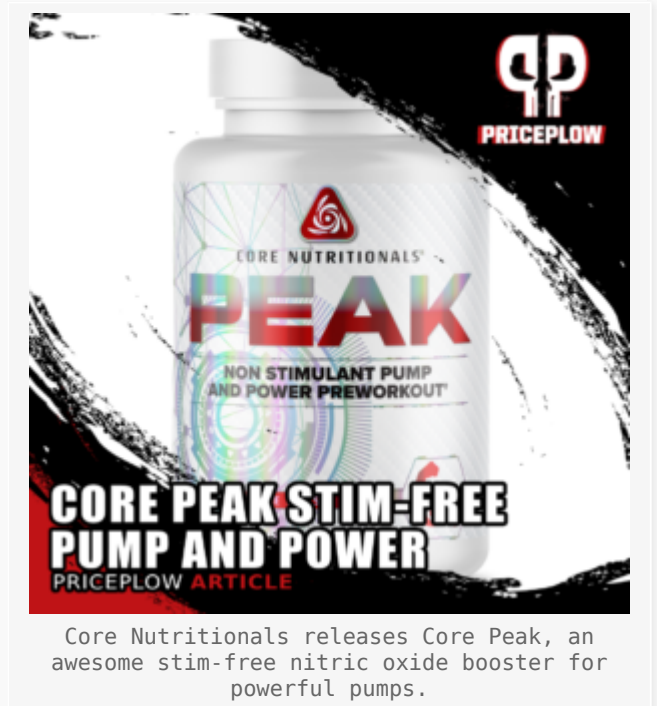


Core PEAK: Stimulant-Free Nitric Oxide Booster for PEAK Pumps

written by Mike Roberto | January 9, 2023

We always look forward to new releases from Core Nutritionals and the way Doug Miller and his team straddle the line between battle-tested and the innovative with unusual sophistication. This is a company that's not afraid to use new ingredients, but chooses them *carefully*.



Core PEAK: Innovative Nitric Oxide Boosting Capsules

That's exactly what they've done with **Core PEAK**, their latest *capsule-based nitric-oxide booster*. Although not explicitly marketed as a pre-workout supplement, it will obviously be used as one – it stacks *perfectly* with the recently-updated Core Fury pre-workout, providing no overlap and additional pump mechanisms.

In fact, Peak uses well-studied ingredients that aren't in many pre-workouts *at all*, so nearly every stack will get a pump bump with this one.

However, the effects aren't just for athletes. *Improving general cardiovascular health* is just as valid a use case here, as we'll show you with the four key ingredients inside.

Let's get into it, but first, check PricePlow's Core Nutritional news and coupon-based deals:

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Core Peak Ingredients

In a single *6-capsule* serving of PEAK from Core Nutritionals, you get the following:

- Arginine Nitrate (NO3-T) – 2,000 mg

	Amount Per Serving	% DV
Arginine Nitrate (NO3-T®)	2000 mg	**
VasoDrive-AP®	508 mg	**
PEAK ATP®	450 mg	**
CitraPeak™ Glucosyl-Hesperidin (from modified <i>Citrus aurantium</i> and <i>Citrus sinensis</i> Fruit Extracts)	200 mg	**

****Daily Value not established.**

OTHER INGREDIENTS: Hypromellose (capsule), Silicon Dioxide, Magnesium Stearate.

ALLERGEN INFORMATION: Contains milk. Manufactured in a facility that also process ingredients containing milk, eggs, fish, shellfish, tree nuts, peanut, wheat, sesame, and soy.

CITRAPEAK
CitraPeak™ and is protected by a trademark under exclusive distribution by Pinova US LLC.

PEAK ATP
Uses of ATP are licensed to Core Nutritionals under U.S. Patent #7,629,329.

VASODRIVE-AP
VasoDrive-AP® is the registered trademark of Nova Nutra LLC.

NO3-T
NO3-T™ is a registered trademark of ThermoLife International LLC, this mark covers the use of one or more patents listed at www.NO3-T.com/patents.

Arginine nitrate is a *nitric-oxide* (NO) *boosting double whammy*.

We want to *boost* NO production because the compound triggers *vasodilation*, a phenomenon where your blood vessels *expand* in diameter to allow for more blood flow.[1] The resulting improvement to circulation sets off a series of events that results in *increased athletic performance* and faster recovery. It enhances oxygen and nutrient delivery and *removes* metabolic waste more efficiently.

Arginine is famous for being the *direct precursor to NO synthesis*,[2] and consistent arginine supplementation in the 1.5 to 2-gram daily range has been shown to improve athletic performance.[3]

This is because arginine intake correlates with NO blood levels.[4]

With *nitrates*, on the other hand, we have a more unique mechanism: Bacteria in your mouth and stomach converts *nitrate* into *nitrite*, which is then used alongside arginine as a key ingredient in NO synthesis.[5]

Most of this conversion takes place in your mouth.[6-8] So it's worth noting that regular use of antibiotic mouthwash has actually been linked to *lower* levels of NO production. Such mouthwashes usually kill NO-producing bacteria along with the pathogenic bacteria you're trying to get rid of.[9]

Nitrate supplementation is a powerful way to potentially increase NO synthesis. Taking nitrate supplements is associated with:



- Better circulation[10]
- Higher aerobic efficiency[10-13]
- Increased strength[14,15]
- Increased cellular energy production[15-17]

When it comes to fitting low-doses of ingredients into capsules, *nitrates* are often a great way to go. We simply don't have room for citrulline or plain arginine aminos in here. And below, we get into even more ingredients that pack a huge punch in a small serving size.

Note: Core Nutritionals' stimulant-free pre-workout pump powder, Core PUMP, also has a nitrate in the form of betaine nitrate. You could stack Core PEAK with it, but note that the combined total dose of nitrate ingredients would be 4500 milligrams, which is pretty close to our total nitrate maximum and best reserved for experienced users.

- **VasoDrive-AP – 508 mg**

VasoDrive-AP is a combination of *isoleucyl-prolyl-proline* (IPP) and *valyl-prolyl-proline* (VPP), two milk proteins derived from the casein fraction of whole milk.



These two proteins yield similar benefits as arginine nitrate because they *also* increase vasodilation... but *not* by increasing NO production. Instead, what VasoDrive proteins do is *decrease vasoconstriction*, the opposite of vasodilation, by inhibiting *angiotensin-converting enzyme* (ACE).[18]

The research on VasoDrive shows that it's on the same order of effectiveness as NO-boosting ingredients. People who supplement with VasoDrive have been observed to have significantly lower blood pressure, with effect sizes roughly equivalent to what you'd see with a NO booster.[18]

We love seeing this ingredient paired with NO boosters like arginine nitrate – the one-two punch (increasing vasodilation with NO while decreasing vasoconstriction with ACE inhibition) is a *powerful* strategy for improving

cardiovascular function.

How to learn more about VasoDrive-AP

For those who are looking at Core PEAK for general cardiovascular health, note that *VasoDrive-AP* is the same ingredient named *AmealPeptide* – so you can look at the information on that ingredient to learn more.

For those scientifically-minded, however, the best place to learn about this class of molecules is in the 2015 meta-analysis titled *Casein-Derived Lactotripeptides Reduce Systolic and Diastolic Blood Pressure in a Meta-Analysis of Randomised Clinical Trials*.^[18]

• PEAK ATP – 450 mg

So you've probably heard all about *adenosine triphosphate* (ATP), your body's basic energy currency that's produced by your *mitochondria*, the "powerhouses" of your cells. **Peak ATP** is an *orally bioavailable ATP supplement*.



We usually talk about ATP in the context of *athletics*, as increased cellular energy supply can translate to improvements in athletic performance. But ATP is crucial for so much more than that.

For one thing, **scientific research has connected ATP to *arterial vasodilation***. ATP upregulation leads to *endothelial nitric oxide synthase* (eNOS) upregulation, increased NO production, and improved arterial function.^[19]

Normal vasodilation proceeds like this: Your red blood cells, platelets, and endothelial cells release ATP in response to certain *triggers*. This ATP then increases calcium concentration in your endothelial cells, which moves eNOS into those same endothelial cells. That translocation of eNOS is what activates it, and causes it to produce NO, which drives vasodilation.^[19]

One study summarizes the process like this:

Once released, ATP binds to purinergic (P2X and P2Y) receptors on endothelial cells. **Binding results in the endothelial cells releasing nitric oxide via endothelial nitric oxide synthase, prostacyclin, and endothelium-derived hyperpolarizing factor, all 3 of which affect the smooth muscle of the vasculature via cyclic guanosine monophosphate, cyclic adenosine monophosphate, and hyperpolarization, respectively.**[20]

So what if you supply your body with *exogenous* ATP? Could that help increase vasodilation?

Peak ATP increases *arm* circulation

One study gave 12 collegiate males 400 milligrams of Peak ATP daily and measured blood flow through their *brachial* arteries at various points throughout the three-month study period. Measurements were conducted *immediately* after the study participants had completed an arm exercise. The purpose was to see whether Peak ATP was changing their arterial response to the exercise.

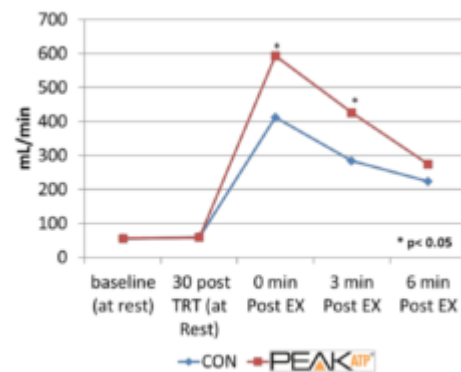


Figure 4. Ultrasonography-determined mean volumetric blood flow in the brachial artery in 12 college-aged resistance-trained subjects with PEAK ATP* and control (CON).

Supplementation with Peak ATP significantly increased the body's vasodilation in response to exercise. The Peak ATP group had 50% greater blood flow than the control group.[20]

Peak ATP improves body composition and athletic performance

So does this improvement in circulation translate to real-world benefits? A 2013 study published in *Nutrition & Metabolism* indicates that, yes, it does. In this study, healthy young completed a 12-week training program. By the end of the study period, the men taking Peak ATP had better whole-body strength, vertical power, and muscle thickness compared to a placebo-control group.[21]

To better understand this effect, let's see what the authors of the study had to say:[21]

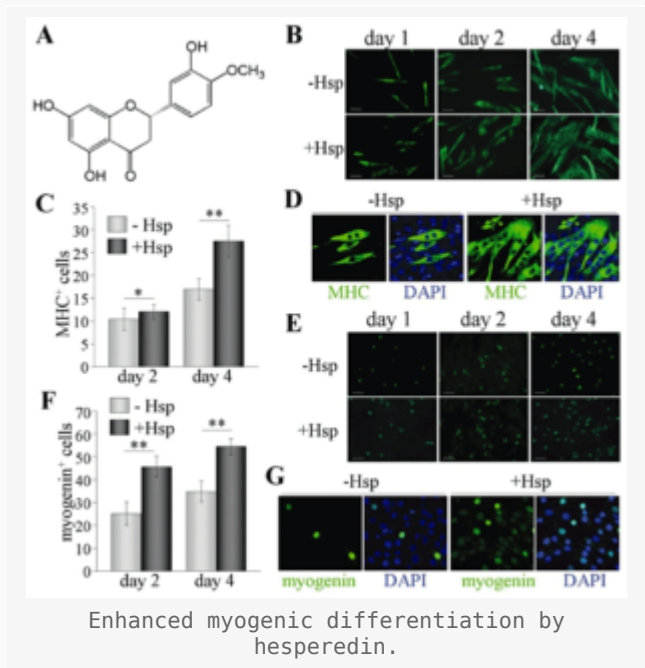
“It has been reported that the half-life of infused ATP is less than one second, ATP is rapidly taken up and stored by erythrocytes. This rapid uptake by erythrocytes is central to its role in affecting blood flow and oxygen delivery to oxygen-depleted tissue. Specifically, there is a tight coupling between oxygen demand in skeletal muscle and increases in blood flow. Erythrocytes regulate this response by acting as “oxygen sensors”. When oxygen is low in a working muscle region, the red blood cell deforms, and releases ATP. The result is vasodilation and greater blood flow to the working musculature, thereby enhancing nutrient and oxygen delivery.”[21]

We tend to think of cellular energy as *fuel for high-intensity workouts*, but it's so much more than that. Your body needs ATP for *everything*, including cardiovascular function and circulation.

We've come to love this ingredient. *Anything* that maintains ATP levels during training is a phenomenal tool, and this has been demonstrated to do that in well-run research.

- **CitraPeak Glucosyl-Hesperidin (from modified *Citrus aurantium* and *Citrus sinensis* Fruit Extracts) – 200 mg**

Now it's time for the *newest* ingredient in Core PEAK – the novel to balance out the above ingredients we've long known about:

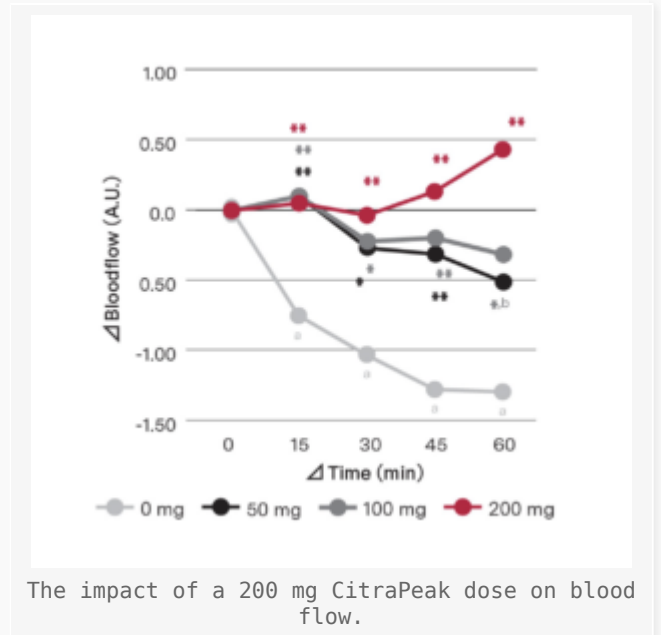


Hesperidin is a *flavanone glycoside* sourced from various citrus fruits. It occurs at particularly high concentrations in *oranges*.

Hesperidin can boost NO[22,23] to such an extent that it's actually been shown to improve the *facial color* of women with certain skin conditions[23] and increase the *surface temperature* of their skin,[24] both of which reflect a significant vasodilation-driven improvement in circulation.

Your body converts ingested hesperidin to *hesperetin*, a flavonoid that increases the expression of *endothelial nitric oxide synthase* (eNOS), the enzyme that generates nitric oxide in arteries.[22]

CitraPeak is a trademarked form of hesperidin – *glucosyl-hesperidin* – that's standardized to maximize these vasodilatory effects.[25] It differs from generic hesperidin in that it's enzymatically bound to a *glucosyl* group. The resulting glucosyl-hesperidin has been shown in *animal studies* to be almost four times as bioavailable as generic hesperidin.[26] The early studies on CitraPeak indicate that it can be effective within 30 minutes of ingestion.[25]



One study found that glucosyl-hesperidin reduced *serum triglyceride levels* during the six-month study period.[27] According to the study authors, the impressive bioavailability of CitraPeak, compared to generic hesperidin, can be explained by the fact that “*G-Hesperidin is very soluble in water, and its solubility is about 10,000 times greater than that of conventional hesperidin.*”[27,28]

Hesperidin has also been shown to help defend skin from UV-induced damage, reduce systemic inflammation, improve insulin sensitivity, among other things.[29]

Note that CitraPeak is *also* in the new *Core Fury* stimulant-based pre-workout supplement, so Core’s doubling down on this ingredient in a big way.

This packs a *serious* punch in six capsules – and we’ve actually tested it and felt effects in as low as 3-4 capsules!

Dosage and Directions

Per the label, take 6 capsules 15-30 minutes before training. If stacking with *Core PUMP*, it’s suggested to start at 3 capsules to assess nitrate tolerance.

For users taking this for general cardiovascular health, you can take 3 capsules in the morning and 3 capsules in the evening. We’ve found that using nitric oxide boosters before bed can greatly improve sleep, and this is why we like having an evening dose.

Conclusion: Core Peak Brings the Peak of Pumps



Core really went for something different with this formula. The usual NO-boosting ingredients are conspicuously absent and, instead, they're substituted by some heavy-hitting new kids on the block. Does the formula work? Without a doubt, from our personal testing.

The first two ingredients alone are a nice little spin on the classic NO-boosting strategy: upregulating NO while inhibiting the enzymes that degrade it. Only here, you're experiencing the inhibiting effect of NO degradation – vasoconstriction – rather than the prevention of NO degradation itself.

Add Peak ATP and CitraPeak – the two “Peak” ingredients in *Core PEAK* – and you've got a formula with serious potential. In fact, using this next to an energy drink would provide all the pumps you really need if you don't want to travel with a ton of powder.

Far too often, we see the same four or five ingredients over and over again in the pre-workout space. *This* is how you change it up. Core Nutritionals is trying to take this genre in a new direction, and we're pretty excited to watch it play out.

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business relationship. We work hard to keep pricing current, but you may find a better offer.

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Key ingredients in Core PEAK may:

- Improve blood flow and nitric oxide production
- Support ATP production
- Increase muscle power and strength
- Delay onset of fatigue

WARNING: Consuming this product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.P09Warnings.ca.gov.

WARNING: This product is only intended for use in healthy adults 18 years of age or older. Pregnant or nursing women should not use this product. Consult your healthcare provider before using this product, especially if you are taking any medication, over the counter medication, dietary supplement product, or if you have any pre-existing medical condition including but not limited to high or low blood pressure, cardiac arrhythmia, sleep, head, low, kidney or thyroid disease, fatigue, diabetes, psychiatric disease, diabetes, difficulty swallowing due to plastic enlargement or if you are taking a MAOI (Mongamine Deplete inhibitor) or any other medication. Discontinue use and consult your health care professional if you experience adverse reaction to this product. Discontinue use 2 weeks prior to surgery. Do not exceed recommended serving. Do not use if bulging caps or broken or missing. Keep out of reach of children.

DIRECTIONS: Take 6 capsules 15-30 minutes prior to your workout.

Supplement Facts

Serving Size: 6 Capsules
Servings Per Container: 20

	Amount Per Serving	% DV
Arginine HCl (95% L-Arg)	2000 mg	**
Acetyl-L-Carnitine	500 mg	**
PEAK ATP®	400 mg	**
CorePeak™ (Ginseng, Magnesium, Iron)	200 mg	**

OTHER INGREDIENTS: Hypromellose (capsule), Silicon Dioxide, Magnesium Stearate.

ALLERGEN INFORMATION: Contains milk. Manufactured in a facility that also processes ingredients containing milk, eggs, fish, shellfish, tree nuts, peanuts, wheat, soybeans, and soy.

Crush It!

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

120 VEGETABLE CAPS

DIETARY SUPPLEMENT

Manufactured in a U.S. cGMP Facility
Distributed by:
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