

Revive MD Glucose: The ‘Mic Drop’ of Glucose Disposal Agents

written by Mike Roberto | January 8, 2020

*Physique-coach-elite Matt Jansen and hormone expert Dr. Domenic Iacovone recently rocked our worlds with **Revive MD Turmeric+**, and end-all be-all to protect from joint pain and gut inflammation. Can they make lightning strike twice with their glucose disposal agent, **Glucose**? The answer is a resounding **yes**.*

Carbohydrates make for quite the conundrum when it comes to the balance between our physique, strength, performance, and overall health goals. Eat *too* many of them for too long, and you displace fat oxidation[1,2] and you threaten yourself with risk of insulin resistance and the diseases that accompany it.[3] But go *without* properly-timed carbohydrates, and you’ll find that you’re “flat” and have a tough time putting on muscle, short of spending over \$15/day on steak.



One of the cornerstones of physique preparation is perfecting the carb equation (doubly true for natural athletes). We need to get our carbs where we *want* them – into the muscle – and then get our bodies back into a useful fat burning

state. Hard resistance training and high intensity interval training definitely make our muscles more “insulin sensitive”, but is there more we can do?

The answer is yes, and the answer comes in the form of **glucose disposal agents** (GDAs) or **nutrient partitioners**. But not all GDAs are built alike. So when we saw what Matt Jansen and Dr. Domenic Iacovone formulated, we *had* to try it. And wow can you put down some potatoes with this bad boy.

Controlling the carb conundrum with Revive MD’s Glucose

Revive MD Glucose (formerly known as *Glucose RX*) is a glucose disposal agent that brings it all. It is one of the first GDAs that *everyone* we’ve talked to, including the team at PricePLOW, *unanimously loves*. Why? Because it’s loaded, and it cuts no corners.

We’ll get right into the science, but first, check out PricePLOW and sign up for our Revive MD alerts, since this is a brand you *always* want to watch:

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Prepare to carb up the **smart** way.

Revive’s Glucose is a capsule based product with 6 capsules per serving holding 3.49grams of active ingredients – this is a *full* day’s supply, and can be broken up into two (or even three) doses.

Ingredients

- Berberine HCL (1.5g)

SUPPLEMENT FACTS

Serving Size: 6 capsules (3.49 grams)
Servings Per Container: 30

Amount Per Serving		% DV*
Vitamine B1 (as Thiamine Mononitrate)	10mg	833%
Vitamin B3 (as Niacinimide)	20mg	125%
Vitamin B6 (as Pyridoxine HCl)	10mg	588%
Vitamin B12 (as Methylcobalamin)	250mcg	10,416%
Vitamin C(as ascorbic acid)	250mg	277%
Vitamin D3 (as Cholecalciferol)	50mcg	250%
Chromium(as piccolinate)	600mcg	1714%
Berberine HCl(Berberis aristate)(bark)	1.5g	**
Citrus Bergamot Extract(Citrus Bergamia)(fruit)	500mg	**
Grapeseed Extract(Vitis vinifera)(seed) (std to contain 50% polyphenols, 150mg)	300mg	**
Cinnamon Extract 4:1(Cinnamomum spp.)(bark)	300mg	**
R-Alpha Lipoic Acid(Yielding 165mg of Active R(+) ALA isomer)	200mg	**
Fenugreek(Trigonella foenum-graecum)(seed)	200mg	**
Gymnema Extract(leaf), 75% Gymnemic acids(131mg)	175mg	**
AstraGin®(Astragalus & Panax Notoginseng Extract)	25mg	**
Bioperine® (Black Pepper Fruit Extract)	5mg	**

*(DV) Daily Value Based on a 2000 calorie diet.

**Daily Value (DV) not established

This is the *day's* supply here. Cornerstone to the Revive MD Glucose Ingredients is a full clinical 1.5g dose of Berberine!

We fully admit that Team PricePLOW has a bias towards certain ingredients, and berberine is definitely one of them. When sourced properly, it's *that* universally good. **Berberine** an ammonium salt derived from several plants – with *Berberis vulgaris* being the source in Revive MD. To empathize how much we love this stuff, this much berberine *alone* in a day's supply would beat most GDAs that don't include it in efficacy. Glucose is nearly 50% berberine which attests to how effective this compound is.

In the postprandial period after a big meal, our blood saturates with sugar as our gastrointestinal system breaks down the carbohydrates we ate into their residual components. To make sure our meal is going to the right place, our body uses hormones like **insulin** to guide the glucose to muscle tissue or fat tissue. However, modern diets have led most people with slight to extreme *insulin resistance* – meaning it's hard for insulin to do its job properly. At some point, your muscle cells are full and if overfat, your fat cells don't want to deal with more sugar. They resist.

When insulin can't get sugar into the proper places, our blood sugar stays elevated which can cause deleterious health effects. Enter *berberine*.

Berberine helps the body sequester glucose by reducing insulin resistance. It is very effective at increasing insulin sensitivity. Berberine matches the potency of metformin and sulfonylureas – two of the most commonly prescribed

anti-diabetic agents.[4-7] The mechanism of berberine gets into some nitty gritty molecular biology, such as the upregulation of AMPK and inhibition of PTP1B, but the take home is that **it improves glucose uptake and makes insulin more effective.**

Monotherapeutic effects of metformin and berberine

	Metformin (n=16)		Berberine (n=15)	
	Baseline	End point	Baseline	End point
HbA _{1c} (%)	9.15 ± 0.57	7.72 ± 0.43**	9.47 ± 0.65	7.48 ± 0.40**
FBG (mmol/L)	9.96 ± 0.64	7.16 ± 0.71**	10.63 ± 0.88	6.85 ± 0.53**
PBG (mmol/L)	20.53 ± 1.87	12.86 ± 0.77**	19.83 ± 1.66	11.05 ± 0.92**
Fasting insulin (µU/ml)	27.3 ± 4.4	22.9 ± 5.2	29.1 ± 5.3	24.0 ± 5.5
Postprandial insulin (µU/ml)	125.3 ± 29.8	110.5 ± 21.4	120.4 ± 31.4	116.0 ± 26.9
Triglyceride (mmol/L)	1.19 ± 0.12	1.17 ± 0.13	1.13 ± 0.13	0.89 ± 0.03*
Total cholesterol (mmol/L)	4.31 ± 0.28	4.27 ± 0.15	4.40 ± 0.21	3.83 ± 0.09*
HDL-C (mmol/L)	1.25 ± 0.06	1.31 ± 0.08	1.33 ± 0.10	1.22 ± 0.04
LDL-C (mmol/L)	2.55 ± 0.38	2.43 ± 0.11	2.47 ± 0.13	2.36 ± 0.06

One could very easily argue that berberine outperformed metformin in most measures![8]

For our weight lifting athletes, this means that in a berberine-primed body, your post-workout carbohydrates get selected to go into the *muscle* tissue more than normal, driving nutrients and glycogen storage to new levels.

It also does so with a slimmer side effect profile that the drugs it's compared to, making berberine a tempting agent for those that would like to avoid the nasty side effects of either drug.

1.5g daily dose?!

If you're concerned about this product's price tag, then the dose of berberine is exactly why. Well-sourced, well-tested berberine is rare and does not come cheap... And this is *the* clinical daily dose that has been shown to outperform pharmaceuticals![8]

Matt Jansen Chimes in

Asked about the formula, Matt Janson excitedly replied,

Dom and I take a lot of pride in our Glucose product. We took over a month to formulate this, test, re-test and insure that it was backed by monitored blood glucose levels.

We felt it was important to put such a high dose of berberine HCL within the product due to the research shows on the benefits and how high of an impact it has on blood

glucose levels as a single ingredient. This is what you can call the cornerstone ingredient for glucose that everything else was built around!

– Matt Jansen, Revive MD co-founder

We have a deeper explanation on our main berberine article, but long story short, there are few supplement ingredients with this much efficacy, and *none* with the nutrient partitioning power that berberine has.

- **Citrus Bergamot Extract (500mg)**

Citrus Bergamot Extract is an interesting addition to a glucose disposal agent, as it pushes Glucose into the “overall health” category, but we’ll definitely take it. Citrus bergamot is a relative newcomer on the sports nutrition supplement block, as it’s mostly popular amongst the cardiovascular health crowd. It appears to reduce markers of cardiovascular disease through oral supplementation.



Interested in this one on its own? Check out Revive MD's solo Bergamot supplement!

One 12 week trial showed a reduction in cholesterol, **blood glucose levels**, and dyslipidemia markers in older adults.[9] However, the results were admittedly close to placebo. While the trial did show overall lower markers in the citrus bergamot treated group, some changes did not reach statistical significance. Meanwhile, other trials showed more significant benefit to supplementation.[10]

Boosts HDL? Something's going very *right*...

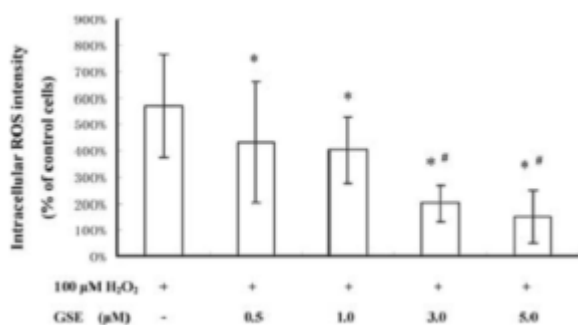
A take-home here is that citrus bergamot may also increase HDL, which is the "good" cholesterol that the body can rely on to vacuum up fatty acids-gone-array. This increase was to the tune of nearly 4mg/dl in three different trials! We see HDL as the "metabolic report card", and if it's going up, then things are trending in the right direction with your insulin sensitivity and glucose disposal.

It's important to note that HDL rarely goes up like this without substantial life changes.[10] So even if citrus bergamot doesn't crush at reducing the "bad stuff" as much as berberine (which improves triglycerides more than pharmaceuticals) – it may be a champion for increasing the "good stuff." Two bases covered!

Note: If you're interested in testing this one solo, Revive MD also sells a solo Bergamot supplement.

• Grape Seed Extract (300mg)

Grape Seed Extract (GSE) is a jack-of-all-trades ingredient.[11,12] It's another reason Revive MD Glucose is more than just an "antidiabetic" formula, and can be considered a longevity / anti-aging supplement. There is preliminary evidence that **grape seed extract may help reduce estrogen levels**. [13]



Not only is grape seed extract extremely effective for increasing nitric oxide, it's

also beneficial for combatting reactive oxygen species (ROS).

However, the sports nutrition industry mostly uses it as a blood-flow enhancing agent through vascular dilatation.[14] More blood flow to tissues in need of nutrients should encourage glucose to get to its destination faster, especially paired with the healthy dose of berberine above. We never complain about the reduction in blood pressure attached to vasodilator ingredients, especially knowing the intense lifestyles our readers lead.

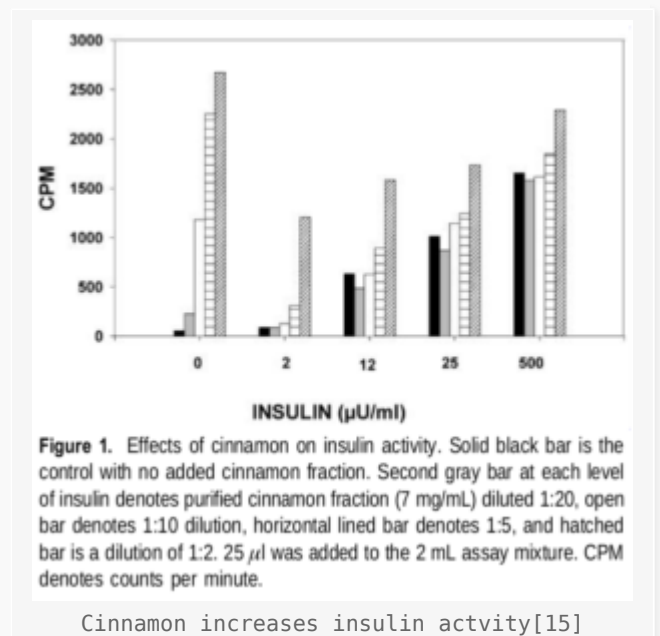
GSE as a GDA

In terms of *glucose disposal activity*, **grape seed extract may inhibit alpha amylase**. [13] Amylase is the enzyme responsible for carbohydrate absorption. Carbohydrates need to be broken down to their most basic constituents for absorption, so inhibition of alpha amylase may lead to a reduction in carbohydrate absorption. GSE even reduces the activity of the enzymes absorbing monosaccharides. [13]

The bioavailability of grape seed extract is quite poor, [14] so the minds at Revive MD went with a big dose here to help overcome that.

• Cinnamon Extract 4:1 (300mg)

If there's one ingredient you want to pair next to berberine, a strong form of **Cinnamon** could be it.



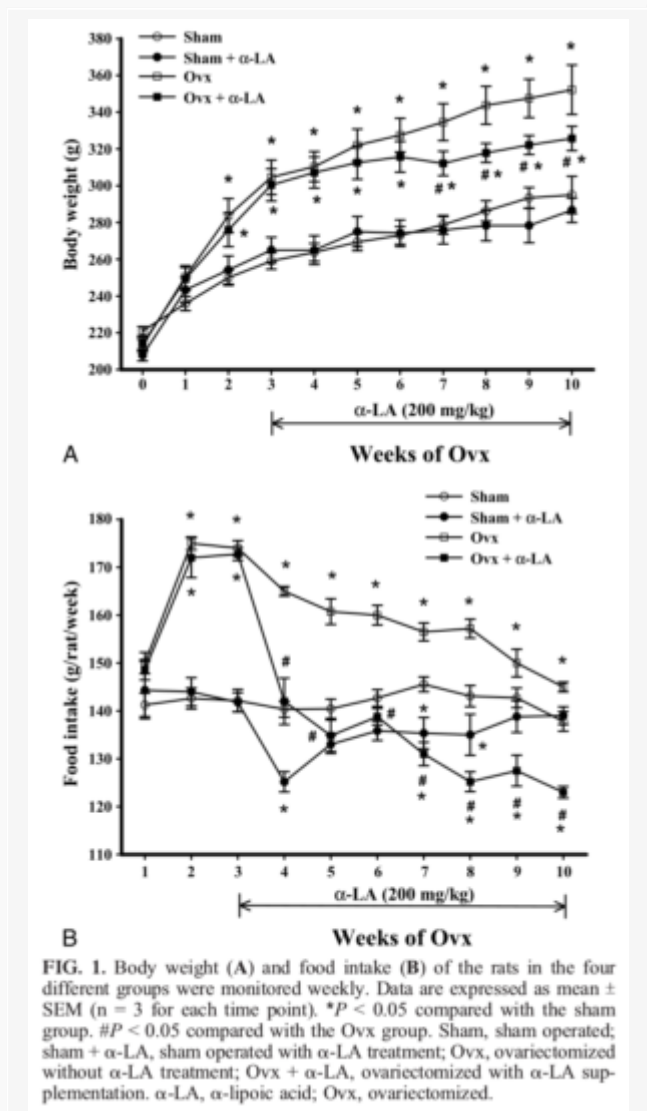
Cinnamon is a big deal in the glucose control world, and we consider it the second “heavy-hitter” in Revive MD Glucose (behind berberine). High doses of

cinnamon may reduce fasting blood sugar levels in addition to improving the mechanisms of glucose absorption at different tissue beds.[15,16] The effects of cinnamon on insulin sensitivity may be because of *methylhydroxychalcone* – which acts as an insulin mimetic.[15] Cinnamon use also appears to potentiate insulin’s effects by 20x![16] Long term use may lead to a reduction in cholesterol.[16]

For those that enjoy learning a touch of molecular biology on the PriceFlow blog (we see and love you guys and gals), cinnamon extracts aim to isolate *cinnamaldehyde* as the big gun active ingredient. Some extracts also focus on cinnamic acid and 2-methoxy cinnamic acid. Extracts are a good idea for cinnamon supplementation, as high doses of cinnamon contain coumarin which can cause liver toxicity in high doses (read: very high, but still, give us the targeted extracts like Revive MD did).

Long story short – more gains from the same amount of insulin in our bodies? We’re in – and now it’s time for our *next* heavy hitter:

• R-Lipoic Acid (165mg Active R(+) ALA)



Rats given albeit high doses of ALA tend to lose weight and eat less.

R-Alpha Lipoic Acid (referred to as R-ALA) is an ingredient that we believe flies under the radar. While ALA is a potent *antioxidant*, we will focus on its anti-diabetic effects in this post. In *some* countries, R-ALA is a prescription drug to treat diabetic neuropathy.[17] Beyond its neural effects, **R-ALA lowers blood glucose and hemoglobin-A1c** – two important markers of insulin sensitivity.[18]

Better insulin-sensitive for *high-fat* dieters?

ALA is especially interesting for those already on a low-carb diet, as it appears to improve insulin sensitivity in those consuming a *high-fat* diet. It does so by inducing *heat shock proteins* – which act as cellular linebackers to protect insulin's mechanism from cellular inference.[19]

Anecdotally speaking (from PricePlow founder Mike Roberto), this is an ingredient where 100-200mg per day simply seems to keep *all* blood glucose roughly 5-10 points lower – be it fasting or fed. It's really interesting how it works, and consider it underrated.

Also important to see that it's the one "GDA ingredient" that's also in Revive MD's Inflammation RX, so if you want a touch more than this dose, a stack of the two products will keep glucose-based inflammation end-products even lower!

- **Fenugreek Seed (200mg)**

While you may be more used to seeing **Fenugreek** in testosterone boosting products, it is also a potent antidiabetic compound. This is due to the amount of *4-hydroxyisoleucine* present in fenugreek.

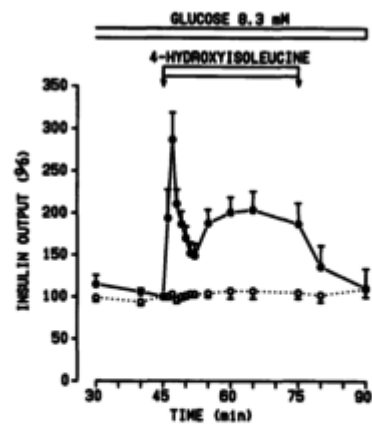


FIG. 3. Effect of 4-hydroxyisoleucine on insulin secretion in isolated perfused rat pancreas in the presence of 8.3 mmol/l glucose. 4-Hydroxyisoleucine was perfused at 200 μ mol/l during 30 min (\bullet), and \circ represents control experiments. The results are expressed as changes in percentage of the value at time 45 min, taken as reference (100%). Values are means \pm SE of seven to nine experiments. The insulin output rate (ng/min) at 45 min was 12.6 ± 1.8 and 15.0 ± 2.1 for each set of experiments, respectively.

The presence of 4-Hydroxyisoleucine causes a greater insulin release when glucose is detected compared to control.[20]

4-Hydroxyisoleucine is an up-and-coming GDA ingredient that appears to improve blood glucose control.[20,21] It also may enhance the amount of glycogen the body makes,[20] which will excite those of us looking to get the most out of our carbs. The compound also appears to be responsible for the libido-enhancing effects of fenugreek, an added bonus.

In other words, 4-hydroxyisoleucine is the compound in fenugreek we care about.[22,23]

The mechanism

4-hydroxyisoleucine improves blood sugar control by making insulin-secreting cells more sensitive to glucose.[20] Insulin-releasing cells act much like a vacuum and a sensor put together. These pancreatic cells suck up glucose from the blood supply to the pancreas and release insulin when a certain amount builds up inside of the cell. Fenugreek lowers the threshold that cells need to release insulin. This mechanism, if further supported, is very similar to how certain diabetic medications work. The bolstering of glycogen synthesis is also an enticing reason to supplement with fenugreek, especially in those that partake in exhaustive exercise.

- **Gymnema Extract (175mg)**

Gymnema is a more subtle GDA than most of this label. However, it also works a bit differently, so we're excited to see it included in Glucose for additional synergy. **Gymnema helps inhibit glucose absorption from the GI tract.**



Don't be fooled by the left hand – Glucose uses the *right* handed alpha lipoic acid isomer!

While this won't blunt the caloric spike from a carbohydrate-meal, it may help mitigate the increment in blood sugar. This means it may help with mitigating cheat meal damage! The dose is lower than other GDAs that feature gymnema,[24-26] but we can let that slide given the potent formula, especially berberine.

- **Astragin (25mg) and Bioperine (5mg)**

Astragin and **Bioperine** are here to help Revive Glucose absorb more effectively.[27,28] These ingredients show up in nearly every review we do – and for good reason.

Bioperine is most well-known for its ability to enhance the function and absorption of curcumin, but it's suggested that it will work with several others. Bioperine lowers hepatic and intestinal *glucuronidation*, which is the body's method of making something more soluble in order to eliminate it via the kidneys more easily. With the addition of piperine, we can achieve far better bioavailability of various ingredients.

Dosage

Revive MD's website states, "As a dietary supplement take 3 caps twice daily with a carbohydrate containing meal, preferably away from training. (Maximum dosage 6 caps daily)".

We agree that this is best taken with a *post*-workout carbohydrate based meal, not a pre-workout meal. When asked to clarify his reason, however, Matt Jansen

stated the following:

In theory, nutrient uptake SHOULD be best around training naturally in the body, so my reasoning is that we should need less additional support at those times and rather re-allocate the additional support at less active times when the bodies ability for nutrient uptake is not as high.

– Matt Jansen, Revive MD co-founder

Conclusion



The mic drop of GDAs.

Revive's Glucose is a mic-drop.

It is hard to imagine another GDA given so much time and attention. It'll come with a steep price tag, but literally everything about it excites us. Given our experiences in *using* it, which have been nothing short of phenomenal so far, the expectations line up to the label.

The only real downside to this heavy-hitting supplement is the cost. For those that are *serious* about controlling their diabetes or pre-diabetic condition, or driving some insane carbs into some sore muscles, the cost is well worth it.

With Glucose, Revive MD has done for GDAs what Inflammation RX did for joints. Get your glucose meter ready and prepare to be amazed by how many post workout carbs you can *really* throw in.

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This is an uncompromising, full-spectrum glucose disposal agent

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