

# Fungies Cordyceps Gummies: The Delicious Way Boost Endurance

written by Mike Roberto | March 16, 2023

Whether we're talking about culinary applications, adaptogens, or "consciousness expansion", we've all seen how *mushrooms* have generated a lot of hype in recent years.



While adaptogenic mushroom *blends* have downright *exploded*, **Fungies** has been quietly setting the trend from another angle: *single-ingredient* mushroom supplements. We recently covered their nerve-growing and brain-boosting *lion's mane* supplement, which you can read about in our article titled *Fungies Lion's Mane Gummies: Gelatinous Neurogenesis*.

Thanks largely to Fungies, previously-obscure edible fungi now line the shelves of Walgreens, a deal that has added some incredible possibilities to consumers' supplement arsenal.

## Introducing Fungies Cordyceps

Today we're talking about the **Fungies' Cordyceps Gummies**, a deliciously-edible supplement offering 50 milligrams of 10:1 *Cordyceps militaris* extract per 1-gummy serving, equivalent to 500 milligrams of raw cordyceps. These are generally the *athletically-minded* mushrooms, as discussed in greater detail in this article. With the **Mango and Pineapple** flavors, they're also some of the most delicious gummies we've ever tasted – despite there being cordyceps inside!

We get into those details below – first, check our coupon-powered deals and sign up for our Fungies news so that we hit you up with new deals, flavors, products,

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## Fungies Cordyceps Mushroom Gummies – Deals and Price Drop Alerts

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Fungus use *Cordyceps Militaris*, which boasts a better body of research and shouldn't be confused with cordyceps sinensis, but we still want to cover the general background of the mushroom family:

## Cordyceps – History and Background

What's interesting about *Cordyceps* is that, although it's undeniably a fungus, some have argued it's not technically a mushroom.



You can read our introductory article on [Fungies Mushroom Gummies](#)

This is because *Cordyceps* doesn't grow in the places or manner traditionally associated with edible fungi. Rather than feeding itself by means of a subterranean mycelium that absorbs nutrients from its surrounding environment, wild *Cordyceps* – especially the *sinensis* form – can survive and propagate by *parasitizing* and *controlling the behavior of insects*,[1] basically turning them into zombie bugs that symbiotically position themselves for ideal fungal spore dispersal.

Zombies might be trendy in today's pop culture (the show *Last of Us* made a scientifically-incorrect but entertaining leap from the above paragraph by applying it to humans), but make no mistake, the medicinal use of this medicinal fungus is no passing fad. *Cordyceps* has a history of use that was first formally documented in the 18th century by Qing Dynasty scholars, although it probably stretches back to about 2,000 years ago.[2]

In fact, of all the adaptogenic fungus and mushroom supplements currently on the market, *Cordyceps* is arguably the *most* powerful. As we will see, there is almost no dimension of human health that isn't touched by its therapeutic properties.

### ***Cordyceps sinensis* vs. *Cordyceps militaris***

At this point, we need to draw a distinction between *Cordyceps sinensis*, which is the traditional species, and *Cordyceps militaris*, the species used to produce Fungies' Cordyceps.

### **No Insects Were Harmed in the Production of Fungies' Cordyceps**



First of all, if the whole concept of ingesting a parasitic fungus sounds

creepy to you, there's nothing to worry about here. The *Cordyceps* used by Fungies didn't zombify any bugs. That's because the *militaris* species of *Cordyceps*, in contrast to *sinensis*, can be cultivated under sterile conditions at scale, which is the reason Fungies opted to use it.

And either way, however unpleasant *Cordyceps* may be for insects, it's great for humans. Hopefully this doesn't need to be said, but there is zero risk of human *Cordyceps* infection under any circumstances.

### Is *militaris* better than *sinensis*?

We'll go into the details of this, but the short answer is **yes**. In fact, one of *Cordyceps*' most beneficial bioactive constituents, cordycepin (3'-deoxyadenosine), is a whopping *90 times more abundant* in *militaris* than it is in *sinensis*.<sup>[3]</sup> So let's take a closer look at what's in Fungies Cordyceps Gummies:

## *Cordyceps militaris* Research

Again, although *Cordyceps sinensis* is the traditional cordyceps, the relative ease of producing and sourcing *militaris* means there's just as much research on it, if not more, than there is on *sinensis*.

Supplement Facts		
Serving Size 1 Gummy (4g)		
Servings Per Container 60		
Amount Per Serving		%DV
Calories		15
Total Carbohydrate	4 g	1%**
Total Sugars	3 g	††
Includes 3g Added Sugars		6%**
Sodium	10 mg	<1%
Cordyceps Mushroom Extract ( <i>Cordyceps militaris</i> ) (Whole Plant) (10:1)	50 mg	††
** Percent Daily Values (DV) are based on a 2,000 calorie diet.		
†† Daily Value (DV) not established.		
<b>Other Ingredients:</b> Glucose Syrup, Sucrose, Water, Pectin, Citric Acid, Natural Flavors, Sodium Citrate, Annatto Extract (for color), Vitamin E Acetate, Carnauba Wax, Vegetable Oil, Turmeric (for color).		
<sup>1</sup> 50mg of 10:1 Extract Equivalent to 500mg Dry Cordyceps Mushroom Per Gummy		
50 milligrams of 10:1 Cordyceps Militaris extract is the equivalent of 500 milligrams of dry cordyceps militaris		

This means you don't have to take anyone's word that *militaris* is just as good – there's plenty of *militaris-specific research* for us to discuss – and it doesn't suffer from many of the identification problems that plagued *sinensis* a few

decades back

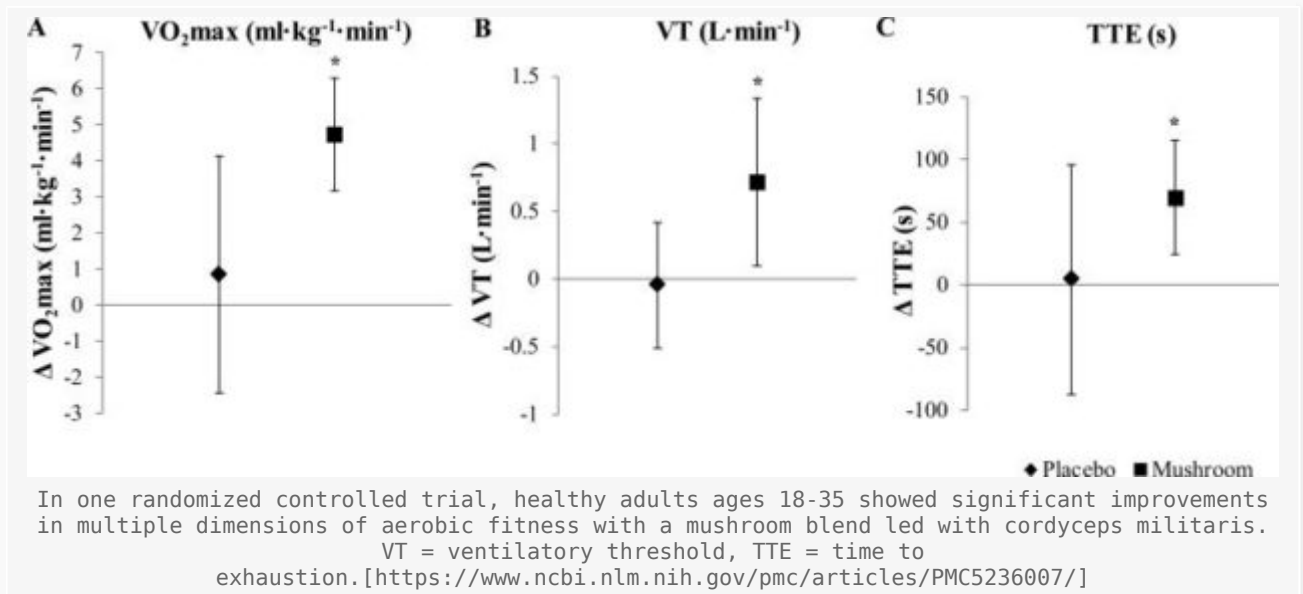
## • Improved Oxygen Uptake and Exercise Performance

We most commonly see *Cordyceps* used in blends designed to *improve oxygen uptake*, thereby enhancing *athletic performance*. There's a solid evidentiary basis for this application.

A 2016 study in mice found that when treated with *militaris* extracts, the mice performed much better on a forced swimming test. According to the authors of the study, the polysaccharides in *militaris* can significantly improve key metrics of antioxidant status and physical endurance. For example, *militaris*-treated mice had significantly more *superoxide dismutase*, glutathione, and other key endogenous antioxidants. They also had lower levels of malondialdehyde, which is a commonly used measure of *oxidative stress*. [4]

The research on this subject isn't limited to animals – human trials have borne out these effects as well.

For example, in a 2004 randomized, double-blind, placebo-controlled study conducted in a cohort of 37 adults aged 58 to 78, those who received a 3,000-milligram daily dose of *militaris* extract had a 7% higher  $VO_2\max$  than the placebo group at the end of the 12-week study period. [5]



A 2017 study with a similar design, except carried out in healthy *young* adults aged 18-35, yielded similar findings. Those who got the *Cordyceps militaris* extract saw significant improvements in  $VO_2\max$ , ventilatory threshold, and time to exhaustion by the end of the study period, compared to the placebo control group. [6]

## • Mitochondrial Health

This is a big one – except for maybe *metabolic health*, which we'll address below. There is probably *nothing* more fundamental or important for overall health, wellness, and longevity than *mitochondrial health*.



After all, as most of us know, mitochondria are the *powerhouses of cells*, responsible for generating all the energy your body needs to live. If something goes wrong with this energy-producing mechanism, the consequences can be dire.

*Lipid peroxidation* (LPO) is a process in which free radicals break down the carbon bonds within fatty acids, particularly polyunsaturated fatty acids (PUFAs). This process creates *lipid peroxides*, which are highly toxic and can damage mitochondria.[7] According to a 2010 mouse study, treatment with *militaris* extract significantly can significantly reduce LPO.[8]

The researchers found that cells taken from mice who received *militaris* exhibited significantly less *mitochondrial swelling*,[8] which is evidence that the mitochondria were subjected to significantly less oxidative stress. But the researchers also found that *militaris* can decrease the concentration of thiobarbituric acid reactive substances (TBARS), basically a direct measure of LPO.[8]

### **The connection between mitochondrial health and longevity**

A study in *healthy mice* found that treatment with the CS-4 *militaris* extract significantly extended their lifespan. While all the control (i.e., not treated with *militaris*) mice died before reaching 3 years of age, CS-4



extended lifespan by 10 to 66 days at 50% survival and 45 to 153 days at 10% survival.[9] In other words, once 50% of the *militaris*-treated mice had died, the remaining mice were anywhere from 10 to 66 days older than the average control mouse – and 45 to 153 days older when only 10% of the mice were still living.



The authors of this study observed that genes related to mitochondrial function were much better expressed in the *militaris*-treated mice as they aged. In fact, their mitochondrial gene expression looked a lot like that of mice one-fifth their age.[9]

A 2015 study in *fruit flies* showed similar results: Supplementation with *Cordyceps sinensis* significantly prolonged survival time of flies exposed to a mitochondria-damaging toxin.[10]

## • **Anti-Inflammatory**

*Chronic inflammation* is a serious and growing public health problem. It has been associated with cardiovascular disease, cancer, diabetes, kidney dysfunction, non-alcoholic fatty liver disease (NAFLD), immune dysregulation, and neurological degeneration.[11]

We've written many times before on the PricePlow Blog about how certain features of the modern environment – EMF exposure, xenoestrogen endocrine disruptors, sedentary lifestyle, and PUFA-rich seed oils, to name a few – encourages runaway inflammatory processes in the human body, spelling disaster for health and longevity.



Fungies Lion's Mane Mushroom Gummies: Powerful adaptogenic mushrooms in a delicious package.

Fortunately for us, *Cordyceps militaris* appears to be a powerful *anti-inflammatory* weapon in our supplement arsenal.

*In vitro* studies consistently show that *militaris* extracts can decrease human cells' production of inflammatory *interleukin cytokines*[12-14] and *tumor necrosis factor alpha* (TNF-alpha)[12] by downregulating the nuclear factor kappa B (NF- $\kappa$ B) pathway.[15] This effect has also been replicated *in vivo* with animals.[15]

It can also inhibit the expression of *inducible nitric oxide synthase* (iNOS),[14,16] which is responsible for generating immune-related inflammatory responses.

*Cordyceps militaris* has also been identified as a *cyclooxygenase-2* (COX2) inhibitor,[17] which is illustrative as COX2 is the same mechanism of action behind the anti-inflammatory effects of *aspirin* and *ibuprofen*.[18]

*Mouse studies* have found that *militaris* can reduce inflammation in airways[19] and skin tissue.[16]

## • Metabolic Health – Insulin-Sensitizing and Anti-Diabetic

As we've written many times on the PricePLOW Blog, *optimal metabolic health* is crucial for the achievement of pretty much any health-related goal.

*So many* aspects of health are downstream from the way the body handles glucose and fatty acids. *Insulin resistance* and the dreaded *metabolic syndrome*, which can culminate in type 2 diabetes, are associated with serious and potentially deadly diseases like atherosclerosis, hypertension, hyperglycemia, and chronic



inflammation.



Most of the traditional health tonics we cover turn out to have some kind of anti-diabetic effect, and *Cordyceps militaris* is no exception.

One caveat about the research on *Cordyceps* and diabetes: Although the *in vitro* and animal studies we've discussed are promising, we're not aware of any double-blind, randomized, placebo-controlled studies exploring the use of *Cordyceps* to treat diabetes in humans.

So, although it's clear that *Cordyceps* has some kind of anti-diabetic activity, its therapeutic value in human diabetes has yet to be established.

### ***In vitro*: improves pancreatic cell health**

One *in vitro* study found that *Cordyceps* not only protected cultured pancreatic cells from being damaged by peroxide, but actually *enhanced* their function.[20] In theory, this should translate to improved insulin secretion *in vivo*.

### **Reduces blood glucose in diabetic rats**

Animal studies have borne this out. For example, in one 2006 study where researchers gave *militaris* extracts to diabetic rats, the extracts dose-dependently reduced the rats' blood glucose levels.[21]

The same study included groups of rats that received extracts of *Cordyceps sinensis*, and the *militaris* extracts did much better on average. The authors of the study explicitly attribute this result to the *naturally higher potency* of the *militaris* fungi – i.e., its higher content of bioactive constituents

like cordycepin.[21]

Another point of interest in this study is that *all* the *militaris* extracts decreased the rats blood glucose, regardless of *which part* of the *Cordyceps* fungus they were taken from. So whether it was *fruiting body* extract, a *mycelium* extract, or just bioactive polysaccharides from *Cordyceps*, they *all* reduced blood glucose by anywhere from 60% to 80%, on average.[21]

This study also found that one of the *militaris* extracts, CM001, was capable of reducing blood glucose to levels *nearly equivalent* to those of a normal non-diabetic rat.[21]

### Why *militaris* is great – cordycepin



Remember the bioactive constituent we discussed earlier, *cordycepin*, which is much more abundant in *militaris* than in *sinensis*? As it turns out, some researchers believe cordycepin is primarily responsible for the anti-diabetic effect of *Cordyceps*. [20] This is one great example of the many advantages that *militaris* has over *sinensis*.

In fact, a study from 2015 found that *isolated cordycepin* can dose-dependently

reduce hyperglycemia in diabetic mice.[22]

Of course, that study used extremely high doses of cordycepin, but it does establish the principle that when it comes to benefiting from anti-diabetic effects of *Cordyceps*, more cordycepin is better.

### **Anti-diabetic dose**

So *how much* cordyceps do we need to get the anti-diabetic effect? Again, because there's no research in humans, the answer is unclear: We do not have enough information to draw an *exact* comparison between the extracts used in animal studies and the extract used in Fungies' Cordyceps.

Still, though, we can be reasonably certain that Fungies' Cordyceps is *in the ballpark* of the doses needed to improve glycemic control through *militaris* supplementation. According to Fungies, a 50-milligram dose of their 10:1 extract is equivalent to 500 milligrams of whole *Cordyceps*, and the human equivalent of the CM001 doses used in the 2006 rat study is in the 1-2 gram range.[21]

You can learn about the other Fungies offerings in our article titled *Fungies Lion's Mane Gummies: Gelatinous Neurogenesis*.



## Flavors Available

At the time of press, Fungus has one variation for their Cordyceps Gummies: **Mango and Pineapple**. An up-to-date list of flavors is available below:

## Conclusion: The Most Delicious Way to Take Cordyceps

Fungies' Cordyceps is a fun and creative way to add *Cordyceps militaris* to your diet. In our opinion, the biggest question about this supplement is simply, *how many gummies should I eat?* Again, it's hard to come up with a precise answer in light of the differing extraction techniques and extract potencies, but given the 10:1 strength ratio of the Fungies extract, we think 2 to 4 gummies per serving is in the same dosage ballpark as most animal and human studies.

Finally, we want to reiterate that if you're worried about the *militaris* species being somehow inferior to the more traditional *sinensis*, don't be. There's good evidence that *militaris* is actually *better*.

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