



THE
*MUSHROOMS*TM
GUIDE

MUSHROOMS
ROOMS™



*Grass
& Co.*

LIFE INSPIRED BY NATURE

196 CAMPDEN HILL ROAD, KENSINGTON, W8 7TH

CO.NO. 11618930

REGISTERED IN THE UK



INDEX

CHAPTER ONE - LET'S BEGIN _____	PAGES 3-4
CHAPTER TWO - WHAT ARE MUSHROOM SUPPLEMENTS? _____	PAGES 5-6
CHAPTER THREE - WHERE DO THEY COME FROM? _____	PAGES 7-9
CHAPTER FOUR - MORE THAN JUST MUSHROOMS! _____	PAGES 10-22
CHAPTER FIVE - TESTING & MORE TESTING _____	PAGES 23-25
CHAPTER SIX - DAILY DOSAGE _____	PAGES 26-27
CHAPTER SEVEN - PREMIUM QUALITY MUSHROOMS _____	PAGES 28-34
CHAPTER EIGHT - QUESTIONS _____	PAGES 35-37
CHAPTER NINE - WE WANT TO HEAR FROM YOU _____	PAGE 39
CHAPTER TEN - FIND OUT MORE _____	PAGE 40
NOTES - _____	PAGE 41

CHAPTER ONE

LET'S BEGIN



Grass & Co. are growing the UK's No. 1 natural wellness company. We offer a multi-award-winning range of the highest quality and best-tasting natural botanical and vitamin-packed CBD and mushroom supplements that offer specific health benefits.*

Our Mushrooms Capsules expertly blend pure mushroom extracts with adaptogenic herbs and vitamins. The FOCUS, RELAX, POWER, BIOME and DREAM formulations offer the most complete high-strength mushroom supplement range.

WE CAN'T WAIT FOR YOU TO TRY THEM!



MUSHROOM + ADAPTOGEN
x VITAMINS/MINERALS = ❤️



CHAPTER TWO

WHAT ARE MUSHROOM SUPPLEMENTS?

Mushrooms have been valued for their health-giving nutritional benefits since at least 3000 BCE. The 5,000 year old Ice Man - Ötzi - whose corpse was discovered in the Alps was found to have the remains of Chaga mushrooms in his bag. Studies of his corpse showed that he was living with pain and inflammation before his violent death, so it's tempting to conclude that he was using Chaga as a medicine.

From Ancient Greek physicians such as Hippocrates to Tao Hongjing the Chinese Alchemist, many cultures around the world have turned to the fungi kingdom as a source of medicine.

Mushroom supplements deliver naturally potent, nutritional benefits and are rich in beta-D-glucan-rich polysaccharides, triterpenoids, antioxidants, vitamins and amino acids. These powerful mushroom supplements are more concentrated and bioavailable than edible mushrooms.

Functional mushrooms have rapidly grown in popularity in recent years and for many good reasons. They are known to offer a variety of potential health benefits, including:

ENHANCING MENTAL CLARITY AND FOCUS.

INCREASING ENERGY AND STAMINA.

PROMOTING RELAXATION;
HELPING TO LOWER BLOOD
PRESSURE AND MANAGING STRESS.

AIDING DIGESTION AND BALANCING THE GUT
MICROBIOME.

IMPROVING SLEEP QUALITY.

BOOSTING THE IMMUNE SYSTEM.

REDUCING INFLAMMATION.

Mushrooms by Grass & Co. source the best-of-the-best, organically grown mushroom extracts, adaptogens and vitamins. Feel your best every day.



CHAPTER THREE

WHERE DO THEY COME FROM

At Grass & Co. we believe that cultivation and extraction are two of the most important factors in ensuring the highest quality mushroom extracts. We take great care in sourcing the best ingredients from around the world and providing products that are a joy to use every day.

SOURCING

Our Mushrooms are organically grown on wooden/wood substrate materials that are native to each particular type.

For optimal quality and results, we do not use sterile laboratories, growing environments or artificial lights. Instead, our crops are tended in greenhouses with natural lighting and fresh air flow.



Grass & Co. Mushrooms only use 100% fruiting bodies as this is where the beneficial active beta-glucan and alpha-glucan compounds in mushrooms are primarily found. The fruiting body is the part of the mushroom we most often see in comparison to the mycelium which is the other component of the fungus below or underneath the ground or tree. Our unique formulations contain no additives, mycelium, grains or any fillers.

EXTRACTION

We use bespoke, temperature-controlled extraction processes appropriate to each mushroom type to obtain the highest levels of active nutrients from the mushroom cells. For example, with Lion's Mane, we choose hot water extraction to capture the beta-glucans as these are the primary components in this mushroom.

The actual temperature and time vary for each mushroom species, and even each batch, to ensure maximum efficiency.



THE FRUITING BODY

CAP (PILEUS)

SCALES

GILLS (LAMELLAE)

RING (ANNULUS)

STEM (STAPE)

CUP (COLVA)

MYCELIAL THREADS



CHAPTER FOUR

MORE THAN JUST MUSHROOMS!

Grass & Co. Mushrooms deliver high-strength, pure mushroom extracts expertly blended with adaptogens and vitamins that are created to support our customers' specific needs. We believe that taking mushrooms every day should be a joy, not a chore.

We use the finest quality, organically-grown ingredients to help your mind and body. These ingredients are dependent on fully transparent sourcing and certified manufacturing processes. We invest in rigorous independent testing of our products, not only for mushroom content, but also the percentage of beta-D-glucans and triterpenoids, and openly share these results with customers.

Grass & Co. Mushrooms only source organically-grown 100% fruiting bodies. The vegan formulations contain no additives, mycelium, grains or any fillers. They are also non-GMO, gluten-free and cruelty-free.



The five targeted Mushrooms supplements include: **FOCUS** (brain function), **POWER** (energy), **RELAX** (stress-less), **BIOME** (digestive health) & **DREAM** (sleep).

FOCUS



FOR BRAIN FUNCTION

Lion's Mane + ginseng
x omega 3, Vitamins D B12

POWER



FOR ENERGY

SHIITAKE + HOLY BASIL x
IRON, VITAMINS B9, B12

BIOME



FOR DIGESTIVE HEALTH

CHAGA + TURMERIC
x BLACK PEPPER, VITAMIN D

DREAM



FOR SLEEP

REISHI + SAGE
x VITAMIN B5, B6, D

RELAX



FOR STRESS

MAITAKE + ASHWAGANDHA
x MAGNESIUM, VITAMINS B6

Taking mushroom extract supplements every day offers many advantages:



MOST EFFICIENT CONSUMPTION FORMAT AS THEY OFFER A HIGHER PURITY AND DOSE CONSISTENCY OF ALL THE BIOACTIVE INGREDIENTS.



CONVENIENT VEGAN CAPSULE FORMAT FOR EASY DAILY DOSING.



EASE OF DIGESTION AND ABSORPTION, AS WELL AS FEWER ALLERGENS.



FIVE RANGES, FIVE GOALS

FOCUS*

Struggling to concentrate? Step away from the coffee. Try our FOCUS 18,000mg Lion's Mane Mushrooms.

FOCUS blends the finest quality, pure organically-grown Lion's Mane mushroom extract with added adaptogens Ginseng + Omega-3 to promote mental focus, memory and concentration.

Each daily recommended dose of these vegan Mushrooms Capsules contains 600mg of the full spectrum of the mushrooms' fruiting bodies and is enhanced with Vitamin B12 to support your psychological function. Help focus your mind on the task at hand.*

*Contains Vitamin B12 which contributes to normal psychological and nervous system function.





Lion's Mane + Ginseng +
Omega3 x Vitamin D = 🧐

FIVE RANGES, FIVE GOALS

RELAX*

Looking for a natural solution to feeling frazzled? Introducing our RELAX 15,000mg Maitake Mushrooms.

When your mind and body need a break, RELAX blends the finest quality, pure organically-grown Maitake mushroom extract with added adaptogens Ashwagandha + Magnesium to help relax your mind and body. *

Each daily recommended dose of these vegan Mushrooms Capsules contains 500mg of the full spectrum of the mushrooms' fruiting bodies and is enhanced with Vitamin B6 to support your psychological function. Feel more calm.*

*Contains Vitamin B6 which contributes to normal psychological function.



15.

** Food supplements should not be used as a substitute for a varied diet and healthy lifestyle. Do not take if using other medication or if you have a health condition Not intended for use by persons under the age of 18 or if pregnant.*



Maitake + Ashwagandha x
Magnesium, Vitamins B6 = 🧘

FIVE RANGES, FIVE GOALS

BIOME*

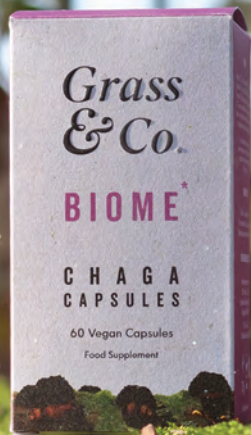
Good gut health starts here with NEW BIOME 16,740mg Chaga Mushrooms.

BIOME blends the finest quality, pure organic Chaga mushroom extract with added adaptogens Turmeric + Ginger. Support your daily digestive health and immune system.

Each daily recommended dose of these vegan Mushrooms Capsules contains over 550mg of the full spectrum of the mushrooms' fruiting bodies and is enhanced with Ginger and Vitamin D to support digestion and normal function of the gut. Promote a diverse microbiome.*

*Contains Ginger which helps to support digestion and contributes to the normal function of the intestinal tract.





Maitake + Ashwagandha x
Magnesium, Vitamins B6 = 🧘

FIVE RANGES, FIVE GOALS

POWER*

Low energy? Fight fatigue and support your active lifestyle with NEW POWER 18,000mg Shiitake Mushrooms.

POWER blends the finest quality, pure organic Shiitake mushroom extract with added adaptogen Holy Basil + Iron. Invigorate and energise your day. *

Each daily recommended dose of these vegan Mushrooms Capsules contains 600mg of the full spectrum of the mushrooms' fruiting bodies and also includes Iron and B12 to support energy metabolism and help reduce tiredness and fatigue. Perform at your best.*

*Contains Iron which contributes to normal energy-yielding metabolism and Folate which contributes to the reduction of tiredness and fatigue.





Shiitake + Holy Basil
+ Vitamins B9 = ⚡⚡⚡

FIVE RANGES, FIVE GOALS

DREAM*

Tired of not sleeping? Prepare for a great night's sleep with NEW DREAM 12,000mg Reishi Mushrooms.

DREAM blends the finest quality, pure organic Reishi mushroom extract with added adaptogens Magnesium + Sage to help you relax before bed and support better sleep. Enjoy a naturally restorative sleep. *

Each daily recommended dose of these vegan Mushrooms Capsules contains 400mg of the full spectrum of the mushrooms' fruiting bodies. This unique night-time botanical blend also includes Vitamins B5, B6 & D which help to reduce tiredness and fatigue. Feel rested and refreshed after a good night's sleep.*

*Contains Vitamin B5 which contributes to the regulation of tiredness and fatigue.





Reishi + Sage x
Vitamins B5 & B6 = 🛌zzz

CHAPTER FIVE

TESTING & MORE TESTING

Our gold-standard products are achieved through our stringent manufacturing practices and standards, as well as our investment in product sourcing and testing.

We searched the world for the best suppliers of premium mushroom extracts. When they deliver the mushrooms, they have already been lab tested and arrive with a Certificate of Analysis confirming the exact concentration and purity of each batch of mushrooms.

But, we don't stop there. We then independently lab test every batch of our Mushrooms to confirm that they contain the correct amount of mushroom extract. You can see the Certificates of Analysis from these independent lab tests by scanning this QR Code:



The team are extremely proud of the Grass & Co. brand that we have grown and the products that we have developed. We want you to have the confidence to know that when you buy CBD products from Grass & Co., you know you're getting exactly what you have paid for. We will always be transparent about our ingredients and strive to continually improve our ethical sourcing.

We are rigorous in ensuring that the Grass & Co. standards and values are always upheld. Customers can shop with complete confidence knowing that our range is:



ORGANICALLY-GROWN

VEGAN

LAB TESTED

100% FRUITING BODIES


GLUTEN-FREE

NON-GMO

MADE IN THE UK

NO ADDITIVES





*Grass
& Co.*

FOCUS

60 Vegan Capsules

Food Supplement

CHAPTER SIX

DAILY DOSAGE

A jar of Mushrooms contains 60 Vegan Capsules to help you feel your best all month. Take the capsule(s) with water at a time that works for you.

Everyone is built differently and this means that no one size fits all when it comes to supplementing your daily routine with Mushrooms. When first using Grass & Co. Mushrooms Powder, we advise that you start low and go slow. Starting with a lower dose and listening to your body allows you to assess the dose that is right for your body.

We recommend taking 1-2 of the convenient Capsules per day of each type e.g. FOCUS, RELAX, BIOME, POWER and DREAM.



TOTAL RECOMMENDED LIMIT 2,000MG

The total recommended limit is 2,000mg (or 2g) of mushroom extract powder per day so you can stack the Capsules. Although each Mushrooms Capsule offers its own distinctive nutritional profile, they can work to support your mind and body synergistically.

You don't need to choose just one type so here are the total mushroom contents per 2 capsules. Mix your Mushrooms according to your personal needs every day:

FOCUS 2 X CAPS = 600MG (LION'S MANE)

RELAX 2 X CAPS = 500MG (MAITAKE)

BIOME 2 X CAPS = 558MG (CHAGA)

POWER 2 X CAPS = 600MG (SHIITAKE)

DREAM 2 X CAPS = 400MG (REISHI)

You will see and feel the best results when you take supplements consistently and for at least one month to benefit from the nutrients.



**START LOW &
GO SLOW**



**NOTE HOW
YOU FEEL**



**DECIDE THE DOSE
THAT WORKS FOR YOU**

CHAPTER SEVEN

PREMIUM QUALITY MUSHROOM SUPPLEMENTS

We believe that Mushrooms are better with company.

Our premium product range has been blended using the highest strength, pure mushroom extracts that are rich in active compounds, including beta-glucan polysaccharides, triterpenoids and antioxidants.

The mushroom formulations are then combined with specially selected adaptogens and complementary vitamins that deliver specific health benefits.

The complete **Mushrooms + Adaptogens + Vitamins** range delivers exactly what you want and when you need it to support your health.

HERE COMES THE SCIENCE BIT

Each type of mushroom offers its own unique characteristics and there is an ever-increasing amount of scientific evidence to support the potential of mushrooms as medicines.

FOCUS - LION'S MANE

Lion's Mane contains erinacines and hericenones which help stimulate the synthesis of important proteins called nerve-growth factors (NGF) and brain-derived neurotrophic factors (BDNF). (1) (2) (3) (4) Lion's Mane has been shown in numerous studies to act as a protective mechanism against neurological diseases and provide a vital boost for memory and focus by aiding nerve cell functioning.

RELAX - MAITAKE

Known as the 'dancing mushroom' in Japanese as it is said that people danced in happiness when discovering Maitake's healing properties. (1) Maitake contains a range of beta-glucans, polyphenolics, flavonoids, and fatty acids such as linoleic acid. This essential organic compound has been shown in studies to promote relaxation (2) as well as potentially reduce blood pressure. Overall, this blend of Maitake, Ashwagandha, Magnesium and Vitamin B6 may increase relaxation by reducing stress and promote overall human longevity and well-being.

BIOME - CHAGA

Chaga mushrooms are known to be beneficial for the microbiome, gut and digestive health. Chaga is rich in polysaccharides such as chitin, hemicellulose, beta and alpha glucans, as well as galactans that act as prebiotics as they inhibit the proliferation of endogenous pathogens. (1)

The microbiome is essential to our health and longevity. Dysregulation of the microbiome leads to inflammation and numerous diseases. (2) Pre-biotics supplied by Chaga benefit our microbiome as they are non-digestible oligosaccharides and polysaccharides that provide fuel for beneficial bacteria in the gastrointestinal tract and reduce the growth of pathogenic bacteria. (3)

POWER - SHIITAKE

Shiitake mushrooms are enriched in minerals, antioxidants and bioactive polysaccharide compounds. These have been shown to offer anti-cholesterol and anti-inflammatory effects as well as improve stamina and support heart health and immune function. (1)

Beta-glucans are soluble polysaccharide fibres present in Shiitake. One of their benefits includes regulating blood sugar levels through its slow absorption in the digestive tract. This regulates blood sugar and cholesterol levels and, in turn, helps to regulate energy levels. (1)

This specially formulated blend of Shiitake Mushrooms, Holy Basil and Vitamins B9 and B12 will overall aid in reducing fatigue and aid many cellular functions throughout the body thus supporting the body's energy release.

DREAM - REISHI

The Reishi mushroom has been shown to help ease stress and contains a wide variety of bioactive molecules such as terpenoids, phenols, glycoproteins, and polysaccharides. In particular, the triterpenes ganoderic and lucidenic acids have been identified as having antioxidant properties (1)

One way Reishi can help promote sleep is through the serotonin or 5-HT pathway in the brain. 5-HT is a key neurotransmitter that regulates times of wakefulness/sleep thus promoting this chemical pathway prolongs sleep time and reduces sleep latency (2) (3) (4)

*Grass & Co. and its materials are not intended to treat, diagnose, cure or prevent any disease. The information and products presented on this site are not intended for medical use nor do they make any medical claims. Always seek the advice of your healthcare provider for any questions you have regarding a medical condition, and before undertaking any diet, exercise or other health-related programme.

BIBLIOGRAPHY

FOCUS

[1] Kawagishi, H., Ando, M., Sakamoto, H., Ojima, F., Ishiguro, Y., Nobuo, U., & Furukawa, S. [2001, March 5]. Hericenones C, D and E, stimulators of nerve growth factor (NGF)-synthesis, from the mushroom *Hericium erinaceum*. Elsevier. Retrieved December 27, 2022, from [https://doi.org/10.1016/0040-4039\(91\)80039-9](https://doi.org/10.1016/0040-4039(91)80039-9)

[2] Kawagishi, H., Ando, M., Sakamoto, H., Ojima, F., Ishiguro, Y., Nobuo, U., & Furukawa, S. [2001, March 12]. Chromans, Hericenones F, G and H from the mushroom *Hericium erinaceum*. Elsevier. Retrieved December 27, 2022, from [https://doi.org/10.1016/0031-9422\(92\)80127-Z](https://doi.org/10.1016/0031-9422(92)80127-Z)

Studies detail pharmacokinetics of specific benzaldehyde molecules, Hericenones, present in Lion's Mane (*Hericium erinaceum*) and how such compounds stimulate NGF synthesis (nerve growth factor)

[3] Ryu, S. H., Hong, S. M., Khan, Z., Lee, S. K., Lee, J. K., Vishwanath, M., & Turk, A. [2021, January]. Neurotrophic isoindolinones from the fruiting bodies of *Hericium erinaceum*. Bioorganic & medicinal chemistry letters. Retrieved December 27, 2022, from <https://doi.org/10.1016/j.bmcl.2020.127714>

Investigation of the neurotrophic effect of isolated compounds demonstrated that isohericerinol A strongly increased the nerve growth factor (NGF) production in C6 glioma cells followed by corallocin A and hericerin. Increased NGF production by these compounds promoted the neurite outgrowth in N2a neuronal cells. Western blot analysis also showed the increased protein expression of NGF, brain-derived neurotrophic factor (BDNF) and synaptophysin (SYP) in C6-N2a cells. Taken together, our present study characterized the neurotrophic constituents of *H. erinaceum*, which may support the potential use of memory improvement.

[4] Ma, B.-J., Shen, J.-W., Zhao, X., Wu, T.-T., Ruan, Y., & Yu, H.-Y. [2010, April 29]. Hericenones and erinacines: Stimulators of nerve growth factor (NGF) biosynthesis in *Hericium erinaceum*. Taylor & Francis. Retrieved December 27, 2022, from <https://doi.org/10.1080/21501201003735556>

Nerve growth factor (NGF) has potent biological activities, such as preventing neuronal death and promoting neurite outgrowth, and is essential to maintain and organize neurons functionally. It cannot cross the blood brain barrier, *Hericium erinaceum* is a mushroom belonging to the family Hericiaceae and has been known as Chinese medicine or food in China and Japan without harmful effects. *H. erinaceum* grows on old or dead broadleaf trees and has been used as a medicine for treatment of gastritis in traditional Chinese medicine for more than 1000 years. This report covers the isolation and structural elucidation of hericenones and erinacines from the fruiting body and mycelium, and their biological activity of stimulating NGF biosynthesis. In addition, this report examines the research on erinacines produced by *H. erinaceum* grown in mycelial culture and the cultural conditions for the fermentation of *H. erinaceum*.

Conclusion that Hericenones and erinacines exhibit the activity of promoting NGF synthesis. Hericenones and erinacines are low-molecular weight compounds that easily cross the blood-brain barrier. NGF cannot pass the blood brain barrier thus why hericenones and erinacines are seen as valuable natural fungi compounds for improving brain function.

RELAX

[1] Wilson, D. R., [2017] Everything you should know about Maitake mushroom. Healthline. <https://www.healthline.com/health/food-nutrition/maitake-mushroom>

Written by PhD student on benefits of maitake mushrooms and references recent studies.

[2] Wu, J. Y., Siu, K. C., & Geng, P. [2021]. Bioactive Ingredients and Medicinal Values of *Grifola frondosa* (Maitake). Foods [Basel, Switzerland], 10(11), 95. <https://doi.org/10.3390/foods10010095>

Scientific review of bioactive compounds present in Maitake mushrooms and their various mechanisms in which the mushroom exerts its therapeutic effects. Investigates sugar content, free amino acid content, polysaccharides, proteins and peptides and other bioactive molecules in relation to anti-tumour, immunomodulation, antiviral, antibacterial, antidiabetic, antihypertension, antioxidant and gut regulatory effects.

BIOME

[1] Jayachandran, M., Xiao, J., & Xu, B. [2017]. A Critical Review on Health Promoting Benefits of Edible Mushrooms through Gut Microbiota. International journal of molecular sciences, 18(9), 1934. <https://doi.org/10.3390/ijms18091934>

Scientific review of medicinal properties of various mushroom strains including Chaga and what recent studies have proven in terms of its benefits for human health.

[2] Ogunrinola, G. A., Oyewale, J. O., Oshamika, O. O., & Olasehinde, G. I. (2020). The Human Microbiome and Its Impacts on Health. *International journal of microbiology*, 2020, 8045646. <https://doi.org/10.1155/2020/8045646>

Scientific review of the role the microbiome plays on human health and the various mechanisms in which dysregulation of the microbiome leads to inflammatory bowel disease, cancer, cardiovascular diseases, allergic diseases and many more

[3] Bhakta, M., & Kumar, P. (2013). Mushroom polysaccharides as a potential prebiotics. *International Journal of Health Sciences and Research*, Vol 3 (Issue 8), Pg. 77-84

Scientific review of mechanisms of various mushroom polysaccharides that act as prebiotics and thus promote a healthy microbiome. Discusses various other benefits of prebiotics such as slowing absorption of glucose and reducing insulin resistance, improving lipid profile, lowering LDL (bad) cholesterol and triglycerides, and raising HDL (good) cholesterol, preventing inflammation of intestinal lining and provides nutrients to lining of gut, amongst many other benefits.

POWER

[1] Bashir, K. M. I., & Choi, J.-S. (2017, September 5). Clinical and physiological perspectives of β -glucans- The past, present, and future. *International journal of molecular sciences*. Retrieved January 6, 2023, from <https://doi.org/10.3390/ijms18091906>

Scientific review of clinical and physiological importance of Beta Glucans. Provides extensive data and compares their biological activities through the existing in vitro and animal in vivo studies. Demonstrates the anti-obesity, anti-osteoporosis, antitumor, immunomodulation, antiallergic properties of beta glucans from a variety of sources including Shiitake mushrooms.

DREAM

[1] Wachtel-Galor, S., Yuen, J., Buswell, J. A., & F. Benzie, I. F. (2011). A Medicinal Mushroom- *Ganoderma lucidum* (Lingzhi or reishi) . *Herbal Medicine: Biomolecular and Clinical Aspects*. 2nd edition. Chapter 9. Retrieved January 10, 2023. CRC Press/Taylor & Francis. Examines the validity of some of the ancient Chinese medicine claims on Reishi where it is considered 'the herb of spiritual potency'. Identifies taxonomy, bioactive compounds including polysaccharides, peptidoglycans, triterpenes, and other minerals. Then examines medicinal claims such as anti-cancer, immunomodulation, anti-viral, anti-bacterial, antioxidant, hypoglycaemic effects, hepatoprotective effects on liver through identifying both in vitro on animal and human cell cultures and in vivo, again in both animal and human trials. Overall concludes there is data supporting benefits, but more studies could be carried out in future in particular in human clinical trials. Points out that the full mechanism of action and identifying which components of the mushroom responsible for these benefits is also yet to be fully examined.

[2] Yao, C., Wang, Z., Jiang, H., Yan, R., Huang, Q., Wang, Y., Xie, H., Zou, Y., & Lv, L. (2011, July 1). *Ganoderma lucidum* promotes sleep through a gut microbiota-dependent and serotonin-involved pathway in mice. *Scientific reports*. Retrieved January 10, 2023, from <https://doi.org/10.1038/s41598-021-92913-6> Examines the mechanism of action for which Reishi helps promote sleep in a study carried out in mice. The acidic component of the alcohol extract of the mushroom [GLAA] was administered in varying mg/kg doses to the mice for a period of 28 days and found to promote sleep by shortening sleep latency and prolonging sleeping time. GLAA increased levels of 5-hydroxytryptamine neurotransmitter, also known as serotonin, and Tph2, Iptr3 and Gng13 transcripts in sleep-regulating serotonergic synapse pathway in the hypothalamus. 5-HT or serotonin, amongst other neurotransmitters, affect the brain nuclei to regulate times the body is awake/asleep. When deficient in 5-HT synthesis, studies have shown to animals stay awake longer and sleep less. Increasing 5-HT also increases sleep time according to studies. GLAA further helped gut bacteria and metabolites by changing the composition of gut microbiota through reducing lipopolysaccharide content in the cell wall of bacteria, which is one indicator of inflammation in the body. This study showed GLAA was dependent on the gut for helping promote sleep in mice. Thus, results show Reishi mushroom promoted sleep through gut microbiota and serotonin-associated pathway in mice.

[3] Chen, T., Zhang, F., Chen, J., Zhong, Q., Hu, Y., Wu, R., Xie, B., Jiang, Y., & Chen, B. (2022, January 5). Effects of alcohol extracts from *Ganoderma resinaecum* on sleep in mice using combined transcriptome and Metabolome Analysis. *Frontiers*.

Retrieved January 10, 2023, from <https://doi.org/10.3389/fnut.2022.745624>

Study in mice on sleep and reishi, improved sleep latency.

[4] Qiu, Y., Mao, Z.-J., Ruan, Y.-P., & Zhang, X. (2021, October 29). Exploration of the anti-insomnia mechanism of *Ganoderma* by central-peripheral multi-level interaction network analysis. *BMC microbiology*. Retrieved January 10, 2023, from <https://doi.org/10.1186/s12866-021-02361-5>

Study explored mechanism of anti-insomnia effect of *Ganoderma* using systems pharmacology from the perspective of central-peripheral multi-level interaction network analysis.

*Grass & Co. and its materials are not intended to treat, diagnose, cure or prevent any disease. The information and products presented on this site are not intended for medical use nor do they make any medical claims. Always seek the advice of your healthcare provider for any questions you have regarding a medical condition, and before undertaking any diet, exercise or other health-related programme.

LION'S MANE MUSHROOM IN THE WILD



CHAPTER EIGHT

QUICK FIRE QUESTIONS

ARE MUSHROOMS LEGAL?

Yes. Grass & Co. mushroom supplements are derived from 100% legal mushroom extracts sourced in North America and made in the UK.

ARE MUSHROOM SUPPLEMENTS THE SAME AS MAGIC MUSHROOMS?

No. Magic Mushrooms contain psychoactive compounds, such as psilocybin that can produce hallucinations or altered states of consciousness. In contrast, functional mushrooms are daily supplements that may provide many health benefits.

ARE GRASS & CO. MUSHROOMS ORGANIC?

Yes, all our ingredients are organically grown.

DO GRASS & CO. INDEPENDENTLY TEST MUSHROOMS?

Yes. And, just like our CBD, we openly share these Certificates of Analysis on our website product pages so that you can be sure of the quality of our supplements and the quantity of active components in each batch.

WHY ARE MUSHROOM EXTRACT SUPPLEMENTS BETTER THAN EATING MUSHROOMS?

You can eat some of the mushroom types used in our supplements range.

However, functional mushroom supplements deliver more of the naturally potent nutritional benefits and are richer in beta-D-glucan-rich polysaccharides, triterpenoids, antioxidants, vitamins and amino acids.

The process of extraction breaks down the chitin (a polysaccharide) in the cell walls which our bodies are not able to do. Therefore, these powerful mushroom supplements are more concentrated and bioavailable than edible mushrooms.

ARE FRUITING BODIES BETTER THAN MYCELIUM?

Grass & Co. are the leading mushroom supplement brand in the UK...and for good reason! Our Mushrooms only use 100% fruiting bodies grown on wood substrates as would happen in nature. They contain no additives, mycelium, grains or any fillers and are non-GMO, gluten-free and cruelty-free.

The beneficial compounds you're looking for are extracted from the whole fruiting body of the mushroom. Mushroom supplements that are only sourced from fruiting bodies offer significantly higher levels of quality and are richer in active nutrients than those extracted from mycelium.

Cultivation also plays a key role in the benefits offered by the mushroom. If mushrooms are grown on grain rather than wood, the mushrooms absorb the grain and this results in a starchy product that can often taste unnaturally sweet. Naturally grown mushrooms offer the full spectrum of bioactive compounds, including beta-glucans and triterpenes.

CAN I TAKE MUSHROOMS ALONGSIDE MY EXISTING MEDICATION?

We're not healthcare professionals so we would always recommend that you speak to your local doctor or HCP about your personal situation and any possible interactions with existing medications. Unfortunately, there is no definitive list of medications that are known to interact with mushroom supplements so you should always check with your GP first before introducing Mushrooms to your daily routine.

Mushrooms by Grass & Co. are classified as food supplements, which is why you won't see us making any unsupported medical claims as they are not licensed to treat any health conditions or diseases.

SHOULD I TAKE MUSHROOMS ON AN EMPTY STOMACH?

Our Mushrooms Capsules can be taken before food. An empty stomach optimises their absorption, as well as the added adaptogens and vitamins within the formulations. If you have sensitivities, the Capsules can be enjoyed with food, although the speed of absorption will be slightly slower.



CHAPTER NINE

WE WANT TO HEAR FROM YOU.

Exceptional customer care is at the heart of everything we do.

We always love to hear from you and are here to help with all your questions about the Grass & Co. Products and orders.

Please email Lucy at:

hello@grassandco.com

or message Sarah on Instagram

[@Grass_andco](https://www.instagram.com/Grass_andco)

Visit us at:

www.grassandco.com

For more interesting content and blog pieces.

CHAPTER TEN

FIND OUT MORE

If you're interested in learning more about mushrooms, here are just a few of our favourite resources:

FILM

FANTASTIC FUNGI

BOOK

MEDICINAL MUSHROOMS BY MARTIN POWELL

PODCAST

PAUL STAMETS ON THE JOE ROGAN
EXPERIENCE





Grass & Co.®

N A T U R A L
W E L L N E S S

WWW.GRASSANDCO.COM