



Unlocking Humanity's Potential™

Product Catalogue

October 2022







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Brand Story



Life Cykel™ wishes to respectfully acknowledge the First Peoples, Ancestral Elders of this Ancient Country of past, present and future who are the Traditional Custodians of all states and territories where we live and work. They acknowledge their spiritual and cultural heritage, the sacred connection to land, waters, community to country and all living things.

From their humble beginnings in 2015, Life Cykel™ has transformed into an evolutionary mushroom biotechnology company, harnessing the unique potential of mushrooms, while creating sustainable solutions. Founders Ryan and Mark, the brains behind the brand, are steering Life Cykel™ into new territory as they boldly lead the revolution to unlock humanity's potential. Incorporating the powerful compounds that exist in the fungi kingdom with those found in ancient Australian traditional superfoods, this forms the foundation for a novel and exciting journey – welcome to their magical world.

Life Cykel™ is a high ethos company that encompasses the principles of a circular economy. Eliminating waste by keeping products and materials in use for as long as possible underpins this model. Focusing on challenges such as biodiversity loss, pollution and waste by moving from a 'Take, Make, Waste' economy to a regenerative one. Embracing a circular economy reduces demand for new resources, allowing natural ecosystems to regenerate.

Life Cykel™ have created innovative solutions that incorporate nutrition, health, happiness and waste utilisation. Repurposing used coffee grounds to grow microgreens, and using mycelium (the mushroom's root structure) to replace plastic with their Shroompac packaging, are some of the ways Life Cykel™ are achieving this.

The team at Life Cykel™ puts great effort into bringing you the highest quality products available. Life Cykel™ sincerely hopes you enjoy them and that they will enrich your life in the best way possible!

Mush Love from the Life Cykel™ Team



What sets Life Cykel apart?



THIRD PARTY
LAB TESTED



FULL
SPECTRUM



8 LIFE CYKEL
SCIENTISTS



SUPERIOR
BIOAVAILABILITY



GROWN, MADE AND PACKED
IN AUS AND THE USA



Life Cykel™ pride themselves on making the highest quality products from farm to bottle. Their mushroom liquid extracts have many points of difference, as detailed below:

- Life Cykel™'s medicinal-grade liquid extracts are developed using a unique patented double-extraction method of water and alcohol. This ensures that both water-soluble compounds (mainly polysaccharides like beta-glucans) and alcohol-soluble compounds (mainly triterpenoids) are present and bioavailable.
- The liquid extracts provide a potent 1:2 strength ratio. This means 1kg of fresh mushroom material is used to produce 2 litres of liquid extract.
- Produced with 100% natural ingredients and purified using pharmaceutical grade equipment resulting in a clear liquid with no detectable mushroom taste.
- Professionally developed with more than 100 technical steps throughout the production process. Rigorously tested by a team of 8 in-house international scientists, then independently tested by a NATA accredited third party laboratory for 100% transparency. QR codes on bottles offer full disclosure of toxins, mycotoxins, pesticides and heavy metal testing.
- Vertical integration from spore to mushroom to bottled product. All mushroom fruiting bodies used in the extracts are grown and manufactured by Life Cykel™. Lion's Mane and Turkey Tail extracts are produced from strains growing natively in Australia. Cordyceps and Reishi are grown and processed in their USA facility. Most of Life Cykel™'s fruiting bodies are grown on chemical free native hardwood sawdust. Cordyceps is the exception with organic brown rice used as a substrate. Wildcrafted USA grown Chaga requires the nutrients from its birch tree host to convert betulin into betulinic acid, an important bioactive constituent involved in Chaga's health benefits.
- The fruiting bodies and mycelium are blended, ensuring the bioactivity of the entire mushroom life cycle is harnessed resulting in a full-spectrum extract.
- The primary health promoting compounds in mushrooms are beta-glucans, with only a small amount of alpha-glucans present. Alpha-glucans are comprised of starch and are known as 'polysaccharide fillers' as they offer little in the way of therapeutic benefit. An independent study has found that pure (fresh) mushroom samples contained less than 3% alpha-glucans on average. It also discovered that many functional mushroom products on the market contain as much as 83% alpha-glucans and low levels of beneficial beta-glucans. This is due to insufficient filtration of starch-laden grain residue on which the mycelium is grown. Life Cykel™'s liquid extracts utilise a proprietary extraction process that can separate up to 99% of all starch coming from the substrate the mycelium is cultivated on, resulting in less than 1.5% starch content in the final product.
- Life Cykel™'s innovative Shroompac environmental packaging replaces plastic. Agricultural waste is moulded into shape and then inoculated with mushroom spores. These spores grow into mycelium, which spreads through the waste, digesting and binding it together. Ultimately creating a compostable, durable, shock-resistant, foam-like packaging solution.



Mushroom Liquid Extracts

Medicinal-grade full-spectrum liquid extracts delivered in a dropper top bottle. Designed for a therapeutic dose with fast absorption! Formulated for the purists amongst us – single-species functional mushrooms, amplified by the antioxidant benefits of vitamin C rich Kakadu Plum extract.

Chaga Mushroom Liquid Extract



60ml - 120ml
(CHGEX60AU) - (CHGEX12AU)

Mushroom Gold! Known as “Diamond of the Forest”, ‘Nature’s Black Gold’ and ‘The Gift from the God’.

Chaga is thought to have the highest antioxidant capacity of any functional mushroom and contains the highest concentration of superoxide dismutase (SOD), a potent antioxidant that works by efficiently neutralising oxygen free radicals to prevent oxidative damage. It has demonstrated powerful activity within the immune system and helps to combat fatigue.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Wild Harvested Dried Chaga (*Inonotus obliquus*) Sclerotia, Kakadu Plum (*Terminalia ferdinandiana*) Natural Flavour.

Cordyceps Mushroom Liquid Extract



60ml - 120ml
(CRDEX60AU) - (CRDEX12AU)

Boost up with nature’s over-achiever! AM activation for energy and endurance.

Traditionally used for mitochondrial health to enhance energy levels, endurance and fatigue including low sex drive. Rich in the amino acid cordycepin, as well as polysaccharides and ergosterols that support healthy ageing and resistance against oxidative stress.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Cordyceps (*Cordyceps militaris*) Mycelia & Fruit Body, Kakadu Plum (*Terminalia ferdinandiana*) Natural Flavour.

Lion’s Mane Mushroom Liquid Extract



60ml - 120ml
(LNMEX60AU) - (LNMEX12AU)

Reach your state of flow! The mighty-ist mushroom for superhero brain status.

Well known as the “brain food” mushroom, Lion’s Mane contains an abundance of polysaccharides and secondary metabolites shown to support neural growth, anxiety, depression and enhanced REM sleep. It’s high antioxidant activity benefits the immune system and healthy cytokine levels.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Lion’s Mane (*Hericum coralloides*) Mycelia & Fruit Body, Kakadu Plum (*Terminalia ferdinandiana*) Natural Flavour.

Reishi Mushroom Liquid Extract

Reset with Reishi! The Zen mushroom.

The symbol of longevity! Reishi supports insomnia and overall sleeping time, and has a calming effect to promote emotional equilibrium and mood elevation. Reishi's main bioactive constituents are triterpenoids and polysaccharides such as beta-glucans. Functionally they provide immune, cardiovascular, antioxidant and anti-microbial capacities.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Reishi (*Ganoderma lucidum*) Mycelia & Fruit Body, Kakadu Plum (*Terminalia ferdinandiana*) Natural Flavour.



60ml - 120ml
(RSHEX60AU) - (RSHEX12AU)

Shiitake Mushroom Liquid Extract

Shine bright with Shiitake! Connect with your inner radiance to nail those beauty goals.

A revered mushroom that is a rich source of vitamin D and the polysaccharide lentinan for immune system activity, and beta-glucans and ergosterols for cardiovascular health. Also known as the beauty shroom, it contains large quantities of the amino acid L-ergothioneine, to protect against damage from UV light and the polysaccharides and triterpenes serve as antioxidants.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Shiitake (*Lentinula edodes*) Mycelia & Fruit Body, Kakadu Plum (*Terminalia ferdinandiana*) Natural Flavour.



60ml - 120ml
(SITEX60AU) - (SITEX121AU)

Turkey Tail Mushroom Liquid Extract

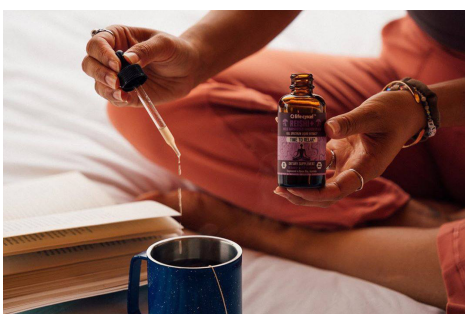
Happy gut, happy life! Honour your body from the core with a gut-friendly handshake.

Find balance for immune wellness! Turkey Tail is known to regulate cytokine production and activity during an immune response while some of the bioactive compounds act as prebiotics to nourish the microbiome. Traditionally it is used as an adjunct therapy for immune system disorders including auto immune. Turkey Tail works gently yet deeply to re-establish balance and harmony.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Turkey Tail (*Trametes versicolor*) Mycelia & Fruit Body, Kakadu Plum (*Terminalia ferdinandiana*) Natural Flavour.



60ml - 120ml
(TTLEX60AU) - (TTLEX12AU)



All the Mushroom Liquid Extracts contain:

- 1010mg of active mushroom compounds per 2ml serve.
- Formulated with antioxidant rich wild harvested Kakadu Plum extract, an Australian bush superfood with the highest recorded natural levels of vitamin C in the world. Kakadu Plum amplifies the mushroom's therapeutic benefits.
- Dropper top bottle for easy dispensing.



Mushroom Liquid Extract Mouth Mists

Medicinal-grade full-spectrum liquid extracts in a mouth mist spray for convenience, so you can spray-and-go! Engineered to deliver your functional mushroom of choice along with an antioxidant infusion of Lemon Myrtle extract for a delicious and refreshing lift!



60ml
(CHGMM60AU)

Chaga Lemon Myrtle Mouth Mist

Mushroom Gold! Known as ‘Diamond of the Forest’, ‘Nature’s Black Gold’ and ‘The Gift from the God’.

Chaga is thought to have the highest antioxidant capacity of any functional mushroom and contains the highest concentration of superoxide dismutase (SOD), a potent antioxidant that works by efficiently neutralising oxygen free radicals, to prevent oxidative damage. It has demonstrated powerful activity within the immune system and helps to combat fatigue.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Wild Harvested Dried Chaga (*Inonotus obliquus*) Sclerotia, Lemon Myrtle Flavour (*Backhousia citriodora*) Leaf.



60ml
(CRDMM60AU)

Cordyceps Lemon Myrtle Mouth Mist

Boost up with nature’s over-achiever! AM activation for energy and endurance.

Traditionally used for mitochondrial health to enhance energy levels, endurance and fatigue including low sex drive. Rich in the amino acid cordycepin, as well as polysaccharides and ergosterols that support healthy ageing and resistance against oxidative stress.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Cordyceps (*Cordyceps militaris*) Mycelia & Fruiting Body, Lemon Myrtle Flavour (*Backhousia citriodora*) Leaf.





60ml
(LNMMM60AU)

Lion's Mane Lemon Myrtle Mouth Mist

Reach your state of flow! The mighty-ist mushroom for superhero brain status.

Well known as the 'brain food' mushroom, Lion's Mane contains an abundance of polysaccharides and secondary metabolites shown to support neural growth, anxiety, depression and enhanced REM sleep. Its high antioxidant activity benefits the immune system and healthy cytokine levels.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Lion's Mane (*Hericium coralloides*) Mycelia & Fruiting Body, Lemon Myrtle Flavour (*Backhousia citriodora*) Leaf.



60ml
(RSHMM60AU)

Reishi Lemon Myrtle Mouth Mist

Reset with Reishi! The Zen mushroom.

A revered mushroom that is a rich source of vitamin D and the polysaccharide lentinan for immune system activity, and beta-glucans and ergosterols for cardiovascular health. Also known as the beauty shroom, it contains large quantities of the amino acid L-ergothioneine to protect against damage from UV light and the polysaccharides and triterpenes serve as antioxidants.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Reishi (*Ganoderma lucidum*) Mycelia & Fruiting Body, Lemon Myrtle Flavour (*Backhousia citriodora*) Leaf.



60ml
(TTLMM60AU)

Turkey Tail Lemon Myrtle Mouth Mist

Happy gut, happy life! Honour your body from the core with a gut-friendly handshake.

Find balance for immune wellness! Turkey Tail is known to regulate cytokine production and activity during an immune response while some of the bioactive compounds act as prebiotics to nourish the microbiome. Traditionally it is used as an adjunct therapy for immune system disorders including auto immune. Turkey Tail works gently yet deeply to re-establish balance and harmony.

Ingredients: Filtered Water, Alcohol (20-24% v/v), Mushroom Flavour: Turkey Tail (*Trametes versicolor*) Mycelia, Lemon Myrtle Flavour (*Backhousia citriodora*) Leaf.



All the Mushroom Liquid Extract Mouth Mists contain:

- 240mg of active mushroom compounds per 3 sprays.
- Formulated with Lemon Myrtle extract, an Australian bush superfood known for its distinctive lemon zesty flavour that provides a delicious and refreshing lift! Also packed with anti-inflammatory, antiviral and antibacterial potential.
- Spray dispenser bottle for added convenience.



Mushroom & Bush Superfood Liquid Extracts

A unique fusion of functional mushroom extracts and a variety of ancient Australian bush food extracts to provide a nutritious boost! Feel a bit special, invite positive vibrations into your daily routine! Add to foods and drinks or drop straight on the tongue for inspirational delight! Alcohol free and glycerin based.



60ml
(CHDAA60AU)

Calm Happy Dreamer

Float in the clouds and indulge in a good night's sleep.

This calming formula contains Lion's Mane, Davidson Plum and Lavender. Lion's Mane is neuroprotective, anxiolytic, and enhances the REM phase of the sleep cycle. Davidson Plum is high in antioxidant rich polyphenols, zinc, potassium, calcium, and vitamin E. Functionally, it may reduce visceral fat accumulation and support healthy lipid levels. Well known for its soothing actions, Lavender reduces feelings of anxiety and promotes restful sleep.

Ingredients: Glycerin, Water, Mushroom Flavour: Lion's Mane (*Hericium coralloides*) Fruit Body & Mycelia, Davidson Plum (*Davidsonia jerseyana*), Lavender (*Lavandula angustifolia*) Natural Flavour, Preservative 221, 201, Citric Acid.



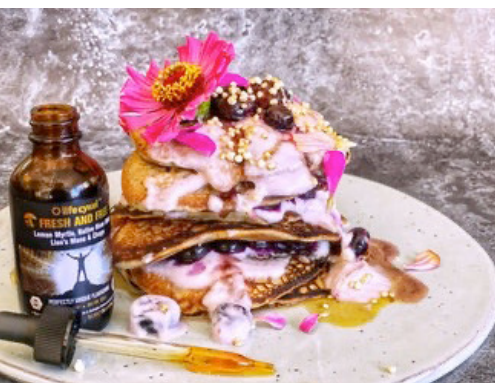
60ml
(ESWAA60AU)

Essence of Wisdom

Tap into the ancient power of this brain-boosting blend.

A nutritional wonderland! Essence of Wisdom combines the antioxidant-rich and well-rounded properties of Chaga, the cognition enhancing and neuroprotective activity of Lion's Mane, with Finger Lime, Lemon Myrtle, Kakadu Plum, Davidson Plum – a combination of thoughtfully selected Australian bush food extracts working in harmony.

Ingredients: Glycerin, Water, Mushroom Flavour: Lion's Mane (*Hericium coralloides*) Fruit Body & Mycelia, Wild Harvested Chaga (*Inonotus obliquus*) Sclerotia, Lemon Myrtle (*Backhousia citriodora*), Finger Lime (*Citrus australasica*), Davidson Plum (*Davidsonia jerseyana*), Kakadu Plum (*Terminalia ferdinandiana*) Natural Flavour, Preservative 221, 201, Citric Acid





60ml
(FAFAA60AU)

Fresh and Free

Taste the freshness and feel the freedom to tackle life's challenges.

Combining the medicinal mushroom power of Lion's Mane and Chaga, with Lemon Myrtle and the addition of Native River Mint. Native River Mint is a native Australian mint variety that has been used to effectively treat coughs, colds, fevers, and headaches. Providing immune and nervous system support when faced with the challenges of life.

Ingredients: Glycerin, Water, Mushroom Flavour: Lion's Mane (*Hericium coralloides*) Fruit Body & Mycelia, Wild Harvested Chaga (*Inonotus obliquus*) Sclerotia, Lemon Myrtle (*Backhousia citriodora*), Native River Mint (*Mentha australis*) Natural Flavour, Preservative 221, 201, Citric Acid.



60ml
(BMTAA60AU)

My Body is My Temple

Feel at one with your body with a rich antioxidant hit.

An antioxidant powerhouse! Incorporating a synergistic blend of Chaga, Echinacea, Finger Lime and Kakadu Plum. Chaga attenuates oxidative stress, and Echinacea modulates the immune system. Finger Lime is fibre rich and is an abundant source of nutrients helping to build the body's reserves. Kakadu Plum is a traditional bush food with the highest recorded vitamin C levels in the world.

Ingredients: Glycerin, Water, Mushroom Flavour: Wild Harvested Chaga (*Inonotus obliquus*) Sclerotia, Finger Lime (*Citrus australasica*), Echinacea (*Echinacea purpurea*), Kakadu Plum (*Terminalia ferdinandiana*) Natural Flavour, Preservative 221, 201, Citric Acid.



60ml
(ZSPA60AU)

Zesty Perfection

A zesty pick-me up to guide you through your day with ease.

Lion's Mane, Chaga, Finger Lime, Ginger – the perfect blend for uplifting the mind and body. Chaga is regarded as an adaptogen, improving physical endurance to combat fatigue. Owing to its high levels of vitamin C, Finger Lime improves absorption of iron, and defense against infection and age-related diseases. Ginger is a circulatory stimulant and effectively delivers nutrients to where they are needed.

Ingredients: Glycerin, Water, Mushroom Flavour: Lion's Mane (*Hericium coralloides*) Fruit Body & Mycelia, Wild Harvested Chaga (*Inonotus obliquus*) Sclerotia, Finger Lime (*Citrus australasica*), Ginger (*Zingiber officinale*) Natural Flavour, Preservative 221, 201, Citric Acid.



All the Mushroom & Bush Superfood Liquid Extracts contain:

- 800mg of active mushroom compounds per 2ml serve.
- Each bottle has a unique fusion of functional mushrooms and ancient Australian bush foods that will bring a delicious sweet flavour to any dish or drink you decide to add them to, combined with the health benefits of the mushrooms and bush extracts.
- Alcohol free and glycerin based.
- **Please Note** – Those with sulphite allergies should avoid the Mushroom & Bush Superfood Liquid Extracts



Chaga (*Inonotus obliquus*)



'Diamond of the Forest', 'Nature's Black Gold' and 'The Gift from the God' are just a few of the names this highly regarded mushroom goes by. Chaga (*Inonotus obliquus*) grows on trees in colder regions across Northern Europe, particularly birch. They form a dark charcoal-black coloured mass on trees, often referred to as a 'conk'. It is thought to have the highest antioxidant capacity of any functional mushroom, helping neutralise free radicals to reduce oxidative damage in the body. Chaga contains many other bioactive compounds such as inotodiol, betulin and beta glucans, a type of polysaccharide. These compounds have been well studied for their antimicrobial activity, optimising cytokine balance, and protecting the body against stressors such as UV radiation, heavy metals and oxidised fatty acids. Chaga may also play a role in healthy liver function and cholesterol levels.

SCIENTIFIC RESEARCH

Antioxidant Effects

- In vitro studies indicate Chaga mushrooms protect against oxidation and mutation of cells¹.
- May protect against oxidation with regards to a number of stressors including heavy metals, UV radiation, free radicals, bacteria, viruses, and oxidised LDL².
- Chaga has shown to reduce oxidative stress in patients with inflammatory bowel disease³.
- The melanin complex isolated from Chaga has been found to have strong antioxidant and genoprotective effects⁴.

Anticancer Activity

- During in vivo and in vitro studies, Chaga demonstrated suppression of colon cancer cell growth⁵.

Metabolic Functions

- Improved liver function markers, reduced oxidation, and increased glutathione levels have been observed in an animal study⁶⁻⁷.
- Chaga has been shown to reduce LDL cholesterol, triglycerides, significantly increase HDL levels, while helping to increase insulin levels and repair damaged pancreatic tissue⁸.

Antiviral Effects

- Chaga has successfully treated cells infected with Herpes Simplex virus without damage to healthy cells⁹.

Antiallergy Activity

- Strong anti-allergic potential with reduced risk of anaphylaxis and an inhibitory effect on IgE antibody production demonstrated¹⁰.

¹ Ham S-S, Kim S-H, Moon S-Y, Chung MJ, Cui C-B, Han E-K, et al. Antimutagenic effects of subfractions of Chaga mushroom (*Inonotus obliquus*) extract. *Mutation Research/Genetic Toxicology and Environmental Mutagenesis*. 2009;672(1):55-9.

² Song H-S, Lee Y-J, Kim S-K, Moon K, Moon W, Kim D, et al. Downregulatory Effect of AGI-1120 (Nβ-Glucosidase Inhibitor) and Chaga Mushroom (*Inonotus obliquus*) on Cellular NF-κB Activation and Their Antioxidant Activity. *Korean Journal of Pharmacognosy*. 2004.

³ Najafzadeh M, Reynolds PD, Baumgartner A, Jerwood D, Anderson D. Chaga mushroom extract inhibits oxidative DNA damage in lymphocytes of patients with inflammatory bowel disease. *BioFactors*. 2008;31(3):191-200.

⁴ Babitskaia VG, Shcherba VV, Ikonnikova NV. Melaninovyj kompleks griba *Inonotus obliquus* [Melanin complex of the fungus *Inonotus obliquus*]. *Prikl Biokhim Mikrobiol*. 2000 Jul-Aug;36(4):439-44. Russian. PMID: 10994193

⁵ Chung MJ, Chung C-K, Jeong Y, Ham S-S. Anticancer activity of subfractions containing pure compounds of Chaga mushroom (*Inonotus obliquus*) extract in human cancer cells and in Balb/c mice bearing Sarcoma-180 cells. *Nutr Res Pract*. 2010;4(3):177-82.

⁶ Hong KB, Noh DO, Park Y, Suh HJ. Hepatoprotective Activity of Water Extracts from Chaga Medicinal Mushroom, *Inonotus obliquus* (Higher Basidiomycetes) Against Tert-Butyl Hydroperoxide-Induced Oxidative Liver Injury in Primary Cultured Rat Hepatocytes. 2015;17(11):1069-76.

⁷ Cha J-Y, Jun B-S, Lee C-H, Yoo K-S, Moon J-C, Cho Y-S. Hypoglycemic and antioxidative effects of fermented Chaga mushroom (*Inonotus obliquus*) on streptozotocin-induced diabetic rats. *Journal of Life Science*. 2005;15(5):809-18.

⁸ Xu X, Pang C, Yang C, Zheng Y, Xu H, Lu Z, et al. Antihyperglycemic and Antilipidperoxidative Effects of Polysaccharides Extracted from Medicinal Mushroom Chaga, *Inonotus obliquus* (Pers.: Fr.) Pilát (Aphyllophoromycetidae) on Alloxan-Diabetes Mice. 2010;12(3):235-44.

⁹ Polkovnikova MV, Nosik NN, Garaev TM, Kondrashina NG, Finogenova MP, Shibnev VA. [A study of the antihypertherpic activity of the chaga mushroom (*Inonotus obliquus*) extracts in the Vero cells infected with the herpes simplex virus]. *Vopr Virusol*. 2014;59(2):45-8.

¹⁰ Yoon TJ, Lee SJ, Kim EY, Cho EH, Kang TB, Yu K-W, et al. Inhibitory effect of chaga mushroom extract on compound 48/80- induced anaphylactic shock and IgE production in mice. *International Immunopharmacology*. 2013;15(4):666-70.



Cordyceps (*Cordyceps militaris*)



CORDYCEPS

Pure, clean energy



Cordyceps (*Cordyceps militaris*) originates in the mountainous regions of the Tibetan plateau of the Himalayas, and has been extensively used in Asian culture for centuries due to its abundant health benefits, namely to enhance physical performance. Traditionally an endo-parasitic fungus that feeds on the body of its host, Cordyceps is now more commonly cultivated allowing for ethical access to this wonderful mushroom. Cordyceps and one of its main bioactive compounds, cordycepin, has powerful performance tonic properties, making it popular with anyone seeking greater endurance, stamina and energy levels. Popular with performance athletes, it also makes its mark supporting fatigue resistance in the elderly. Cordyceps will power you through your day, whether it's a busy day in the office, a big training session in the gym, or anything that life throws in your way.

SCIENTIFIC RESEARCH

Effects on ATP Production and Cellular Energy

- Cordyceps is known to reduce physical fatigue by increasing Adenosine Triphosphate (ATP) production in the mitochondria^{1,2}.
- Studies show that Cordyceps slows the aging process³.
- Extracts from Cordyceps also improve the utilisation of oxygen in cellular respiration⁴. This suggests that Cordyceps is useful in promoting energy, endurance and strength as well as recovery from physical stress.

Cordycepin: A Key Bioactive Compound

- Cordycepin is a novel bio-metabolite which shows very potent antioxidant and anti-inflammatory activities⁵.
- Cordycepin show apoptotic effects, meaning that it modulates cellular division and prevents uncontrolled cellular growth⁶.

¹ Manabe N, Azuma Y, Sugimoto M, et al., editors. Effects of the mycelial extract of cultured *Cordyceps sinensis* on in vivo hepatic energy metabolism and blood flow in dietary hypoferric anaemic mice. *Br J Nutr.* 2000;83:197–204.

² Song, J., Wang, Y., Teng, M., Cai, G., Xu, H., Guo, H., ... Teng, L. (2015). Studies on the Antifatigue Activities of *Cordyceps militaris* Fruit Body Extract in Mouse Model. *Evidence-Based Complementary and Alternative Medicine*, 2015, 1–15. doi:10.1155/2015/174616

³ Ko and Leung. Enhancement of ATP generation capacity, antioxidant activity and immunomodulatory activities by Chinese Yang and Yin tonifying herbs. *Chin Med.* 2007. Department of Biochemistry, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong, China

⁴ Bucci L. R. Selected herbals and human exercise performance. *Am J Clin Nutr.* 2000;72:624S–36S.

⁵ Tuli, H. S., Sandhu, S. S., & Sharma, A. K. (2013). Pharmacological and therapeutic potential of *Cordyceps* with special reference to Cordycepin. *3 Biotech*, 4(1), 1–12. doi:10.1007/s13205-013-0121-9

⁶ Wu, W.-C., Hsiao, J.-R., Lian, Y.-Y., Lin, C.-Y., & Huang, B.-M. (2006). The apoptotic effect of cordycepin on human OEC-M1 oral cancer cell line. *Cancer Chemotherapy and Pharmacology*, 60(1), 103–111. doi:10.1007/s00280-006-0354-y



Lion's Mane (*Hericium coralloides*)



LION'S MANE

Reach your state of flow



Lion's Mane (*Hericium coralloides*) is one of the most powerful in the fungi kingdom. Easily recognisable with its beautiful coral-like appearance, it's increasingly sought after for its cognitive health benefits. It has been shown to support the brain's production of nerve growth factor, a special protein that assists growth and repair of nerves and neurons, and plays an important role in learning and memory. Its high polysaccharide content benefits immune function, and studies support its use in depression, anxiety and enhancing physical performance. Like many functional mushrooms, its antioxidant capacity reduces free radical damage, and supports the metabolic aspects of a 'high living' lifestyle by maintaining healthy lipid levels and liver function. Life Cykel's Lion's Mane extracts are made from strains growing natively in Australia.

SCIENTIFIC RESEARCH

Nervous System Support

- Lion's Mane improves cognitive function by reducing inflammation, encouraging neural growth and improving overall brain health. A study found that erinacines isolated from Lion's Mane mycelium showed an increase in nerve growth factor (NGF) production, suggesting that extracts from Lion's Mane mycelium are better suited for improving cognition¹. Mycelium is the root structure of mushrooms, different from the fruit body or mushroom itself.
- Lion's Mane contains active compounds that stimulate NGF synthesis via activation of the JNK pathway². NGF is a signalling protein which is involved with nerve maintenance and the protection of the nervous system.
- A study found that wild-type mice that received oral supplementation with Lion's Mane showed a significant improvement memory recognition and recall³.
- The hericenones and erinacines isolated from Lion's Mane were shown to promote the growth of neurons. This study also found that aqueous extracts of Lion's Mane were non-cytotoxic to human lung cells⁴.
- Lion's Mane has been explored for its prevention of neurological symptoms in conditions such as Parkinson's and Alzheimer's Disease. Research concluded that extracts from Lion's Mane have neuroprotective properties and could be useful in the prevention of these diseases⁵.

Antianxiety and Antidepressant Effects

- NGF was explored in this study and it was found that after four weeks of supplementation, depressive symptoms were reduced⁶.
- Depression and anxiety have been associated with the shrinking of areas in the brain, particularly the hippocampus. Lion's Mane was shown to exert anxiolytic and antidepressant-like effects, possibly by hippocampal neurogenesis - causing the hippocampus to grow⁷.
- Reduced brain-derived neurotrophic factor is associated with depression and anxiety. Lion's Mane mycelium could be useful for the treatment of depressive disorders through the modulation and support of neurotransmitters as well as the regulation of brain-derived neurotrophic factor (BDNF)⁸.

Other Potential Health Benefits

- Lion's Mane shows high antioxidant activity and has been used for the management of diabetes and metabolic disorders⁹.
- Lion's Mane extract showed gastroprotective properties by protecting the lining of the stomach and intestines¹⁰. This research suggests that Lion's Mane may be useful in treating stomach ulcers.

¹ Ma, B.-J., Shen, J.-W., Yu, H.-Y., Ruan, Y., Wu, T.-T., & Zhao, X. (2010). Hericenones and erinacines: stimulators of nerve growth factor (NGF) biosynthesis in *Hericium erinaceus*. *Mycology*, 1(2), 92–98. doi:10.1080/21501201003735556

² Mori et al., Nerve growth factor-inducing activity of hericium erinaceus in 1321N1 human astrocytoma cells. *Biological and Pharmaceutical Bulletin*, 2008. Department of Cellular Signaling, Graduate School of Pharmaceutical Sciences, Tohoku University.

³ Brandalise et al., Dietary supplementation of *H. erinaceus* increases mossy fiber-CA3 Hippocampal Neurotransmission and Recognition Memory in Wild-Type Mice. *Evidence-Based Complementary and Alternative Medicine*, 2017. Brain Research Institute, University of Zurich, Switzerland.

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Reishi (*Ganoderma lucidum*)



Reishi (*Ganoderma lucidum*), commonly referred to as the 'Queen of Mushrooms', is considered one of the most supportive of all the nourishing and tonifying medicines used in TCM. Reishi has been used in Asian cultures for millennia and is regarded as a symbol of health, longevity, success and divine power. This may be why many experts consider Reishi to be the 'general purpose' mushroom for supporting all round good-health. Reishi's main bioactive constituents are triterpenoids and polysaccharides. It has a great affinity for the immune system, and indicated for chronic inflammatory conditions. Animal studies support Reishi's antioxidant potential to help keep the oxidative stress that ages our cells in healthy check. Human studies have also demonstrated this action, and provide evidence of cardiovascular, metabolic and liver supportive properties.

SCIENTIFIC RESEARCH

Immune System Support

- Polysaccharides from Reishi mushrooms have immunomodulatory effects, meaning that they can support the immune system by stimulating it or dampening it down when overactive¹. Reishi acts directly on immune cells such as lymphocytes, macrophages and natural killer cells.
- A study showed that Reishi can enhance immunity and reduce cellular stress due to its high concentration of antioxidants².

Blood Pressure and Cholesterol

- A seven-week trial demonstrated that supplementation with Reishi extract reduced blood pressure³.
- Reishi has potential to reduce LDL cholesterol in vivo through various mechanisms⁴.

Liver Protection and Support

- Reishi could represent a promising approach for the management of various chronic liver diseases. Data has indicated that Reishi extract protects the liver against injury⁵.
- Triterpenoids from Reishi extracts have been shown to have positive effects on liver health⁶.

Anti-aging Effects

- A review of Reishi's anti-aging potential found that a variety of Reishi's constituents have definite anti-aging properties⁷.
- Research suggest that anti-aging effects occur through anti-oxidation, immunomodulation and anti-neurodegeneration⁸.

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Shiitake (*Lentinula edodes*)



SHIITAKE

Shine with Shiitake



Shiitake (*Lentinula edodes*) is ranked number two in the global mushroom market for its delicious taste and array of health and beauty benefits. As well as being a rich source of minerals and vitamins such as vitamin D, the bioactive compounds include triterpenes, which serve as potent antioxidants. Shiitake contains high levels of the amino acid L-ergothioneine, which has been shown to protect against UV radiation damage. The polysaccharides lentinan and beta glucans support immune system health, and ergosterols for cardiovascular health. This revered mushroom has a wide range of applications, helping you to connect with your inner radiance.

SCIENTIFIC RESEARCH

Skin, Hair & Nail Health

- Shiitake extract protects skin against photoaging (sun damage) and improves skin elasticity¹.
- Shiitake derivatives also display potent antimicrobial and antioxidant activity playing a key role in anti-aging².
- Shiitake mushrooms not only produce vitamin D2 but also produce vitamin D3 and vitamin D4³. Vitamin D is important for skin, hair and nail health.

Cardiovascular Health

- Shiitake has been found to prevent sclerosis (hardening) of the arteries and support cardiovascular health⁴.
- Studies have found that Shiitake contains high levels of vitamin B12. Research suggests that Shiitake fruiting bodies may be a plant-based source of vitamin B12 to reduce B12 deficiencies in vegetarians and vegans⁵.

¹ Cosmetic Benefits of Natural Ingredients: Mushrooms, Feverfew, Tea, and Wheat Complex. Whitney P. Bowe MD. Journal Of Drugs in Dermatology 2013. SUNY Downstate College of Medicine, Brooklyn, NY.

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Turkey Tail (*Trametes versicolor*)



TURKEY TAIL

Honor your body



Turkey Tail (*Trametes versicolor*) is an extremely abundant mushroom usually found in temperate forests, and as the name suggests, resembles the ruffled feathers of a turkey's tail. The strain used in Life Cykel™'s products is sourced from the Blue Mountains in Australia. Turkey Tail is known to regulate cytokine production during an immune response, and its polysaccharide constituent demonstrates prebiotic activity with positive benefits on the gut microbiome. Much of the research focus has been on PSP, a protein polysaccharide that has been approved as a cancer treatment adjunct in Japan.

SCIENTIFIC RESEARCH

Immune Support

- Turkey Tail contains two key bioactive compounds: Polysaccharide Peptin (PSP) and Polysaccharide Krestin (PSK). These have been extensively studied and have been found to provide immune system support¹. This observation provides additional evidence supporting PSP as a strongly prebiotic compound.
- Polysaccharides found in Turkey Tail stimulate the production of cytokines, which help to modulate the immune system's response to pathogens².
- PSK has been shown to have an antioxidant effect, which can allow it to play a supportive role when used in conjunction with chemotherapy and/or radiotherapy in the treatment of cancer³. It may also reduce oxidative stress.

Gut Health

- PSP acts as a prebiotic by supporting the intestinal microbiome including beneficial bacteria and yeast⁴.
- Turkey Tail can support gut health when consumed as part of a healthy diet⁵.

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Australian Bush Superfood Traditional Uses



KAKADU PLUM



Kakadu Plum is considered 'A Gift of the Dreamtime' by the Aboriginal people. It has been an important bush food for millennia for people in Northern Australia, traditionally used to treat skin conditions or consumed as a tea for colds and flu. The fruit contains the highest recorded vitamin C content, 100 times that of oranges, and has exceptional antioxidant composition exhibiting 5 times more potency than blueberries. It has shown inhibitory activity against some of the bacterial triggers of autoimmune conditions. Kakadu plum has a tart berry taste, and owing to its high vitamin C content, may have a synergistic effect and enhance the medicinal properties of the mushrooms.

LEMON MYRTLE



The Aboriginal people have used Lemon Myrtle for centuries. It is endemic to subtropical rainforests of central and south-eastern Queensland, Australia. The leaves appear to exhibit high-antimicrobial and antioxidant properties and it is commonly used for its essential oil. Lemon Myrtle was traditionally used to treat mild illnesses such as coughs, colds and stomach sickness. The flavour profile of Lemon Myrtle is distinctively lemony and zesty and leaves a pleasant lingering aftertaste that cleanses the palette. Some people say it is more lemon than lemon!

DAVIDSON PLUM



This beautiful crimson coloured fruit is native to the tropical rainforests of Northern NSW and Queensland, and has long been a traditional "bush tucker" for the Aboriginal people. Nutritionally powerful, the flesh is tart and acidic due to its low sugar content. A good source of potassium, vitamin E, zinc and calcium, Davidson Plums are also high in antioxidant polyphenols, which provide anti-inflammatory and anti-adipogenic benefits. Emerging research indicates its therapeutic potential in metabolic syndrome, reducing visceral fat accumulation, plasma triglycerides and blood pressure.

FINGER LIME



Finger Lime is a native Australian citrus found in southeast Queensland and Northern NSW. It has been regarded as a valuable food source by the Aboriginal people for centuries due to its anti-inflammatory and antiviral activities. The pearls were used for medicinal purposes to ward off sickness and were applied topically as an antiseptic to infected sores. Finger Lime's 'caviar-like pearls' burst with fresh and zesty flavours, and are rich in calcium, magnesium, potassium, phosphorus, fibre and vitamin E, an antioxidant.

NATIVE RIVER MINT



Native River Mint (aka. Wild Mint) is a smaller, more delicate relative of more well-known mints like peppermint and spearmint. It is found in most regions of Australia and has long been used by the Aboriginal people as a flavoursome bushfood and insect repellent. Its medicinal indications include coughs, colds, fevers, headaches and digestive complaints. The essential oil in the leaves have antiseptic qualities and are commonly used for pimples and boils.



CAUTIONARY ADVICE

- These products contain naturally occurring sulphur.
- Do not use if you are allergic to mushrooms.
- Do not exceed recommended serving size.
- Pregnant or nursing mothers, children under the age of 18, and individuals with a known medical condition should consult a physician before use.
- If taking medications, especially blood thinning medication, please consult a healthcare practitioner.
- If an excessive amount is accidentally swallowed or in the event of an adverse reaction, stop use and seek medical attention immediately.



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