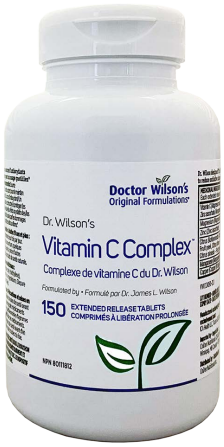
THE PHARMACIST FORMULA

BY CINDEN

CATALOGUE CANADA

DOCTOR WILSON'S VITAMIN C COMPLEX®

Expertly formulated by a physician, Dr. Wilson's Vitamin C Complex contains only high quality ingredients and is manufactured in accordance with Good Manufacturing Practices (GMP) to assure purity, potency and quality.



Primary Benefits
-Antioxidant for good health
-Supports overall health and wellness
-Provides a source of electrolytes for the maintenance of good health
-Helps the body metabolize nutrients efficiently

Immune Support
-Helps maintain and support immune function
-Contributes to immune system health
-Source of antioxidants that help fight free radicals and reduce oxidative damage

Bone, Teeth & Connective Tissue
-Helps in collagen formation to maintain healthy bones, cartilage, teeth, and gums
-Supports connective tissue formation
-Aids in the development and maintenance of bones, cartilage, teeth, and gums
-Promotes healthy tissue formation and wound healing

Energy & Metabolism
-Supports energy metabolism and tissue formation
-Contributes to bone development and energy production

Muscle & Heart Function
-Helps maintain proper muscle function
-Supports heart muscle function
-Contributes to normal electrolyte balance

Skin, Hair & Nails
-Helps maintain healthy skin, hair, and nails
-Supports healthy skin and connective tissues

MEDICINAL INGREDIENTS: Each extended release tablet contains:	
Vitamin C (Magnesium ascorbate, Zinc ascorbate, Manganese (II ascorbate)	580 mg
Magnesium (Magnesium ascorbate)	42 mg
Zinc (Zinc ascorbate)	7.5 mg
Citrus Bioflavonoids (Citrus paradisi - Fruit peel, Citrus limon - Fruit peel, Citrus sinesis - Fruit peel)	300 mg
Manganese (Manganese (II) ascorbate)	3.75 mg
Copper (Copper (II) bisglycinate)	0.5 mg

THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
Winnipeg, MB, Canada
(204) 488-1819

DOCTOR WILSON'S NUTRIENTS®

Expertly formulated by a physician, Dr. Wilson's Nutrients contains only high quality ingredients and is manufactured in accordance with Good Manufacturing Practices (GMP) to assure purity, potency and quality.

A factor in the maintenance of good health and normal growth and development. Healthy skin and/or mucous membranes support.



Key Benefits
-Helps maintain and support immune function
-Provides a source of electrolytes for the maintenance of good health
-Supports energy production and healthy glucose metabolism
-Source of antioxidants that help protect cells against oxidative damage

Bone, Muscle & Metabolism
-Helps in the development and maintenance of bones and teeth
-Supports proper muscle function and electrolyte balance
-Helps the body metabolize nutrients and maintain normal blood glucose levels

Structural & Tissue Support
-Helps in collagen formation to maintain healthy bones, cartilage, teeth, and gums
-Supports connective tissue formation and tissue repair
-Aids in wound healing and overall tissue maintenance

Skin, Hair, Eyes & General Health
-Helps maintain healthy skin, hair, nails, and mucous membranes
-Supports eyesight and immune system health
-Promotes overall well-being and vitality

MEDICINAL INGREDIENTS / INGRÉDIENTS MÉDICINAUX :

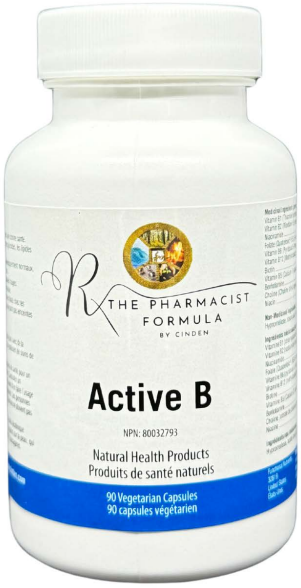
Each extended release tablet contains / Chaque comprimé à libération prolongée contient :

Vitamin A (Vitamin A palmitate) / Vitamine A (Palmitate de vitamine A)	480 mcg RAE / 480 mcg EAR
Thiamine (Vitamin B1, Thiamine hydrochloride) / Thiamine (Vitamine B1, Chlorhydrate de thiamine)	5 mg
Riboflavin (Vitamin B2, Riboflavin 5'-phosphate, Riboflavin) / Riboflavine (Vitamine B2, Riboflavine-5' -phosphate, Riboflavine)	5 mg
Pantothenic acid (Vitamin B5, Calcium D-pantothenate) / Acide pantothénique (Vitamine B5, D-Pantothénate de calcium)	200 mg
Vitamin B6 (Pyridoxal hydrochloride, Pyridoxine 5'-phosphate) / Vitamine B6 Chlorhydrate de pyridoxal, Pyridoxine 5'-phosphate)	30 mg
Folate (L-5-Methyltetrahydrofolate) / Folate (L-5-Méthyltétrahydrofolate)	200 mcg
Magnesium (Magnesium ascorbate, Magnesium citrate) / Magnésium (Ascorbate de magnésium, Citrate de magnésium)	40 mg
Manganese (Manganese (II) ascorbate) / Manganèse (Ascorbate de manganèse (II))	2 mg
Zinc (Zinc ascorbate) / Zinc (Ascorbate de zinc)	3 mg
Vitamin C (Magnesium ascorbate, Manganese (II) ascorbate, Zinc ascorbate, Ascorbic acid) / Vitamine C (Ascorbate de magnésium, Ascorbate de manganèse (II), Ascorbate de zinc, Acide ascorbique)	308 mg
Chromium (Chromium (III) picolinate) / Chrome (Picolinate de chrome (III))	200 mcg
Copper (Copper (II) bisglycinate) / Cuivre (Diglycinate de cuivre (II))	0.2 mg
Selenium (Selenomethionine) / Sélénium (Sélénométhionine)	50 mcg
Choline (Choline bitartrate) / Choline (Bitartrate de choline)	3.9 mg
para-Aminobenzoic acid (PABA) / Acide para-aminobenzoïque (PABA)	10 mg
Citrus Bioflavonoids (Citrus limon - Fruit peel, Citrus paradisi - Fruit peel, Citrus sinensis - Fruit peel) / Bioflavonoïdes d'agrumes (Citrus limon - Pelure du fruit, Citrus paradisi - Pelure du fruit, Citrus sinensis - Pelure du fruit)	150 mg
L-5-Hydroxytryptophan (L-5-HTP, Griffonia simplicifolia - Seed) / L-5-Hydroxytryptophane (L-5-HTP, Griffonia simplicifolia - Graine)	10 mg
Laminaria digitata (Horsetail kelp - Whole) / Laminaria digitata (Fouet de sorcier - Entier)	10 mg
Niacin (Vitamin B3, Inositol hexanicotinate) / Niacine (Vitamine B3, Hexanicotinate d'inositol)	26 mg
Mixed Tocopherols concentrate (Glycine max - Seed) / Mélange de concentré de tocophérols (Glycine max - Graine)	45.71 mg
Biotin / Biotine	200 mcg

THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
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(204) 488-1819

Active B



- Vitamin supplement
- A factor in the maintenance of good health
- Helps the body to metabolize carbohydrates, fats, and proteins
- Helps normal growth and development
- Helps in tissue formation
- Helps to form red blood cells
- Helps to support liver function
- Helps to prevent folate deficiency in men and non-pregnant and non-breastfeeding women

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Discussion

The water-soluble B vitamins have to be absorbed in the small intestine and then go to the liver where they are biotransformed into their active coenzyme forms. Active B contains vitamins B1 (thiamine), B2 (riboflavin), B6 (pyridoxine), and B12 (methylcobalamin) in their physiologically-active form making them easier to absorb and "ready-for-use." For example, in patients receiving pyridoxine HCl, only 33 percent responded with an increase in plasma pyridoxal-5'-phosphate (P5P); however, the level increased in all of the patients receiving P5P.*[1]

Folate is provided as 5-methyltetrahydrofolate (5-MTHF), which bypasses metabolic steps to folate bioactivity. Despite research showing that folic acid and 5-MTHF have equivalent bioavailability and that supplementation with large doses of folic acid can "force" its conversion to the more active form, 5-MTHF may be the preferred form to replenish folate. This may be especially applicable to those with digestive challenges or genetic variations in folate metabolism.[2-4] In this formula, 5-MTHF is provided as Quatrefolic—the glucosamine salt of 5-MTHF. In vitro and in vivo studies have proven that Quatrefolic has greater stability, solubility, and bioavailability over calcium salt forms of 5-MTHF. Folate is stored in small amounts in red blood cells (RBC), and RBC folate has been shown to be higher after supplementation with 5-MTHF compared to folic acid and placebo. Likewise, patients given 5 mg of 5-MTHF experienced plasma levels of 5-MTHF 700% greater than patients given folic acid.*[5]

Another unique ingredient in this formula is benfotiamine (S-benzoylthiamine O-monophosphate), a safe, fat-soluble analog of thiamine. One study showed that it not only raised blood and tissue levels of thiamine at least five times higher than the water-soluble salt, but it also remained bioavailable after oral administration up to 3.6 times longer than thiamine salt.[6] Benfotiamine is the most potent of a class of thiamine-derived compounds present in small quantities in members of the *Allium* genus. The superiority of its biological activity compared to thiamine rests in its structure—a thiazole ring opens to allow easy diffusion through a membrane and then closes to become structurally active.*

Benfotiamine increases transketolase activity, thereby diverting from three natural, yet destructive metabolic pathways: 1) it decreases the glucose metabolites that lead to the buildup of certain types of detrimental advanced glycation end products (AGEs); 2) it normalizes protein kinase C activity; 3) it protects the retina by preventing the activation of NF-kappaB therein.[7] Research suggests it may also protect the kidneys and endothelial cells.[8] Benfotiamine is useful for replenishing thiamine, this may be especially true in individuals that use the vitamin at a higher rate or in those with lifestyle habits that deplete it.*[9-11]

The Pharmacist Formula by CinDen
123 A Scurfield Blvd
Winnipeg, MB, Canada

Active B

Medicinal Ingredients (per vegetarian capsule)

Vitamin B1 (Thiamine hydrochloride) ..... 20 mg
Vitamin B2 (Riboflavin 5'-phosphate sodium) ..... 20 mg
Niacinamide ..... 130 mg
Folate (Quatrefolic® (6S)-5-methyltetrahydrofolic acid, glucosamine salt) ..... 400 mcg
Vitamin B6 (Pyridoxal 5-Phosphate) ..... 20 mg
Vitamin B12 (Methylcobalamin) ..... 400 mcg
Biotin ..... 400 mcg
Vitamin B5 (Calcium D-pantothenate) ..... 150 mg
Benfotiamine ..... 20 mg
Choline (Choline dihydrogen citrate) ..... 30 mg
Niacin ..... 10 mg

Non-Medicinal Ingredients

Hypromellose, stearic acid, magnesium stearate, silica.

Recommended Dose

Adults: Take 1 capsule daily with food, or as directed by a healthcare practitioner.

Consult a healthcare practitioner for use beyond 12 weeks. Do not use if pregnant or breastfeeding. Persons with thiamine hypersensitivity should not take product.

People sensitive to nicotinic acid may experience flushing of the skin that is generally mild and transient.

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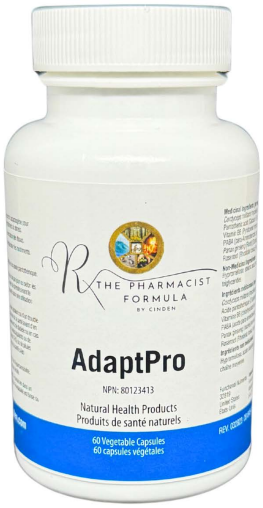
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THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
Winnipeg, MB, Canada
(204) 488-1819

AdaptPro



Roseroot is used in Herbal Medicine as an adaptogen to temporarily help relieve symptoms of stress.

- Helps in energy metabolism and in tissue formation.
- Helps to maintain the body's ability to metabolize nutrients.
- Helps to form red blood cells.
- Helps to prevent vitamin B6 and pantothenic acid deficiencies

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

The Pharmacist Formula by CinDen
123 A Scurfield Blvd
Winnipeg, MB, Canada

Discussion

Cordyceps sinensis (cordyceps) As a highly regarded cornerstone of Chinese medicine, cordyceps has been used for centuries for its far-reaching restorative effects. It is a safe, highly valued herb with activities that support nearly every physiological system impacted
by the body's response to normal everyday stressors, including the immune and cardiovascular systems.[1-4] Cordyceps has been used to support good balance, strength, and a healthy body weight. It is also widely and traditionally used to increase energy and enhance stamina.[1,2] It has a positive effect on blood sugar and fat metabolism, which is important because fats and sugars are actively mobilized during activation of the stress response to supply the body with extra energy.[1,4] Traditional Chinese Medicine (TCM) practitioners also recommend the regular use of cordyceps to strengthen the body.[1] Furthermore, the cell-protective and antioxidant activities of cordyceps have been documented.*[1,4-7]

Rhodiola rosea (rhodiola) This adaptogenic herb has been used traditionally in Eastern Europe and Asia for centuries to increase stamina, maintain a healthy mood, support the nervous and immune systems, and maintain healthy male sexual function.[8,9] According to Panossian et al, experimental studies performed on isolated organs, tissues, cells, and enzymes demonstrate that rhodiola preparations exhibit adaptogenic effects that support nerve, brain, and heart health and are calming, longevity-enhancing, and central nervous system-stimulating.[9] In addition, experimental animal models suggest that the root extract may be able to support normal heart rhythm.[10] Rhodiola may also have a positive effect on brain neurotransmitters, such as dopamine and serotonin, and may influence endogenous opioid levels.[8] According to a review of the literature on rhodiola, supplementation
supports healthy work performance, quality of sleep, appetite, and energy levels subsequent to intense physical or intellectual strain. Salidrosides and rosavin have been identified as primary actives. The rhodiola extract in this formula is standardized to provide no less than 1%-3% salidrosides and 3% rosavin.*

Panax ginseng (ginseng) As an important herbal remedy in
TCM, ginseng has been used for thousands of years, primarily for energy production. The main active agents have been identified as ginsenosides, and they are the focus of much published research.[11] Experimental models show that ginseng and ginsenosides have beneficial effects in supporting the adrenal glands; protecting the gastric mucosa; and supporting healthy body weight, blood hormones, and the gene expression of catecholamine-synthesizing enzymes.[11-15] Ginsenosides also have immune-supporting and cytokine-modulating activities.*[12,16]

Vitamin B6, Pantothenic Acid, and Para-Aminobenzoic Acid (PABA)
Pantothenic acid is essential to the adrenal glands for production of the glucocorticoids. It forms pantethine in the body, which then converts to coenzyme-A—the most active metabolic enzyme in the human body needed to produce cellular energy.[17]
D-calcium pantothenate contains 91.96% pantothenic acid and is the usual supplemental form. Vitamin B6, acting as a coenzyme, has a role in the conversion of muscle glycogen to glucose, which is needed for a proper response to stressors; the synthesis of serotonin; and the support of the immune function.[18] PABA has a role in amino acid metabolism and is needed to manufacture folic acid.*

AdaptPro

The Thyroid Connection The interplay between healthy adrenal function and healthy thyroid function has long been recognized by functional medicine practitioners. In fact, cortisol acts in concert with thyroid hormone at the receptor-gene level, and a normal physiologic amount of cortisol is important for normal thyroid function.*[19]

Medicinal Ingredients (per vegetable capsule)

Ophiocordyceps sinensis (0.2% Adenosine, 7% D-Mannitol) ..... 400 mg
Pantothenic acid (D-pantothenic acid, calcium D-pantothenate, synthetic) .....50 mg
Vitamin B6 (Pyridoxine hydrochloride) .....25 mg
PABA (4-aminobenzoic acid, para-Aminobenzoic acid, synthetic) 25mg
Panax ginseng (Root, 16 mg / 80% Total Ginsenosides) 20mg
Roseroot (Rhodiola rosea, Root, 2% Salidroside, 3% Rosavin).....100 mg

Non-Medicinal Ingredients

Hypromellose, stearic acid, magnesium stearate, silicon dioxide, and medium-chain triglycerides

Directions for Use

Adults: Take 1 capsule twice a day. Not to be taken immediately before bedtime. Consult a healthcare practitioner for use beyond 3 months.

Consult a healthcare practitioner prior to use if you are pregnant or breastfeeding, if you are taking sulphonamides, antidepressant medications, blood thinners or digoxin; if you are taking hormone replace-ment therapy (HRT), birth control pills, or immunosuppressive drugs. Consult a health care practitioner prior to use if you have diabetes, bleeding disorders, hormonal disorders or lung disorders. Do not use if you have bipolar disorder, bipolar spectrum disorder or myelogenous-type cancers.

Hypersensitivity (e.g. allergy) has been known to occur; in which case, discontinue use. Discontinue use if you experience gastrointestinal upset, insomnia, anxiety, headaches, nausea or drowsiness.

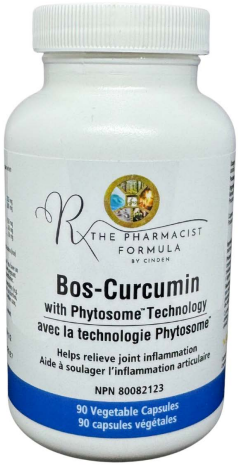
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THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
Winnipeg, MB, Canada
(204) 488-1819

Bos-Curcumin



- Helps relieve joint inflammation and associated symptoms such as joint pain when used in conjunction with conventional treatment

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Bos Curcumin
Powered by Casperome® Boswellia & Meriva® Curcumin

Why Choose Bos Curcumin?
- Bos Curcumin is formulated with clinically studied ingredients to support joint health and mobility.
- Casperome® – A bioavailable Boswellia extract using Phytosome® technology for enhanced absorption.
- Meriva® – A highly absorbable curcumin with 29x greater bioavailability than standard curcumin extracts.
- Clinically researched ingredients to support joint health.

Key Ingredients

Casperome® Boswellia

Boswellia serrata is a traditional herbal extract used for centuries. Casperome® utilizes Phytosome® technology, combining Boswellia extract with sunflower lecithin to improve absorption and bioavailability.
- Clinically studied for joint health support (7).
- Improved absorption compared to standard Boswellia extracts(7).
- Convenient dosing for better compliance(7).

Meriva® Curcumin

Curcumin, derived from turmeric, is a well-known ingredient in traditional health practices. Meriva® Phytosome® enhances curcumin absorption by 29x, making it a highly bioavailable option(8).
- Used in clinical research for joint health(8).
- Phytosome® technology improves curcumin delivery(8).
- Provides antioxidant support(8).

Discussion

The Science Behind Casperome® & Meriva®

Proving greater bioavailability for a curcumin material is good. Proving what a curcumin material will actually do for a patient's health is even more important. Meriva® has been validated by 24 positive human clinical trials, making it one of the most research-backed curcumin formulations available. These trials have made Meriva® the curcumin of choice for organizations such as the Cleveland Clinic, Thorne Research Labs, and respected researchers like Dr. Parris Kidd(9).

Meriva® and Joint Health

Two major studies on Meriva® Curcumin focused on osteoarthritis, a condition where joint cartilage deteriorates, leading to stiffness and pain. The first study followed 50 osteoarthritic patients over three months, showing:
- 58% reduction in pain scores during treadmill tests.
- 4x increase in walking distance.
- 16x decrease in C-reactive protein (CRP), a key marker of inflammation(9).
- No adverse side effects reported.
- Reduced reliance on NSAIDs and pain medications.
- Lower overall healthcare costs due to fewer required treatments(9).

A second eight-month study reinforced these findings, proving that Meriva® provides long-term support for joint health(9). Interestingly, researchers found that many patients experienced pain relief within days, suggesting Meriva® may function beyond just reducing inflammation(9).

The Pharmacist Formula by CinDen
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Bos-Curcumin

Meriva® and Pain Blocking

A study comparing 2,000 mg of Meriva® per day to extra-strength acetaminophen (Tylenol) found that Meriva® provided equivalent pain relief without the associated risks of liver toxicity(9). Patients using Meriva® experienced improvements for migraines, dental pain, and general discomfort, reinforcing its analgesic (pain-blocking) benefits(9).

Casperome® and Superior Boswellia Absorption

Boswellia serrata has been used in Ayurvedic and Chinese medicine for thousands of years to support joint health, lung function, and digestion. However, traditional Boswellia extracts suffer from poor bioavailability, requiring high doses (3-5 grams per day) to achieve clinical effects(9).

Casperome® solves this problem with Phytosome® technology, enhancing absorption by 300-400% and allowing for once-per-day dosing(9). Additionally, Casperome® provides the full spectrum of Boswellic acids, ensuring comprehensive joint support(9).

Why Bos Curcumin?

- ✓ **Clinically Studied Ingredients**
- ✓ **Superior Absorption with Phytosome® technology**
- ✓ **Pain Relief Backed by Clinical Research**
- ✓ **Health Canada Approved Claim**

Recommended use or purpose:
Helps relieve joint inflammation and associated symptoms such as joint pain when used in conjunction with conventional treatment.

Recommended dose: Adults: 1 capsule 3 times daily.

Medicinal ingredients:

Meriva® Curcumin Phytosome™	333 mg
Providing: (Curcuminoids-phosphatidylcholine complex– rhizome) (33% curcuminoids)	200 mg
Casperome® Boswellia Phytosome™ (5:1, QCE 300 mg)	150 mg
Providing: Boswellia (Boswellia serrata - Stem bark oleosresin)	60 mg
Lecithin (Glycine max – Seed)	50 mg

Non-medicinal ingredients:
Hydroxypropyl methylcellulose (capsule), microcrystalline cellulose, Oryza sativa (rice) powder, silicon dioxide. **Contains: Soy.**

Cautions and Warnings: Consult a health care practitioner prior to use if you have an existing medical condition, if you are taking other medications or if you are pregnant or breastfeeding. If symptoms persist or worsen, consult a health care practitioner.

Known adverse reactions: With Boswellia containing products, hypersensitivity (e.g. allergy) has been known to occur. Mild gastrointestinal disturbances such as diarrhea, abdominal pain, heartburn, nausea and vomiting has also been noted. In either case, discontinue use.

Free from animal derivatives, artificial colours, artificial flavours, gluten, wheat, lactose, dairy, preservatives, added sugar, yeast and GMO materials.

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Casperome® Studies

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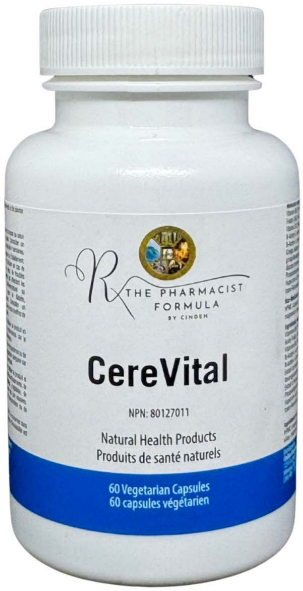
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-Di Pierro, Francesco et al. Journal of Pain Research (2013) – Compared to conventional options 8.
-Additional studies from CINDEN PRIVATE LABEL Bos-Curcumin Jan 2025 for Meriva® and Casperome® 9.

THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
Winnipeg, MB, Canada
(204) 488-1819

CereVital



- CereVital is a unique combination of nutrients and botanicals that supports cognitive function and memory.

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Discussion

Vitamins B6 (as pyridoxal 5'-phosphate), B12 (as methylcobalamin), and folate (as 5-MTHF) are essential homocysteine remethylation cofactors; as such, they support the maintenance of healthy homocysteine levels. Normal blood levels of homocysteine are associated with healthy cognition in the elderly and healthy cerebrovascular function.[1] The brain may be protected by improving methylation by providing the nutritional cofactors needed for proper functioning of the methionine cycle.*[2]

5-MTHF (5-methyltetrahydrofolate) may better support folate nutrition in those with digestive issues and those with genetic variations in folic acid metabolism. The form of 5-MTHF in CereVital is Quatrefolic, which is proven to have greater stability, solubility, and bioavailability over calcium salt forms of 5-MTHF.*

N-Acetyl-Cysteine is capable of crossing the blood-brain barrier and is known to combat oxidative stress, and reduced oxidative stress may support healthier nerve tissue.[3] L-carnitine is a vital cofactor for mitochondrial oxidation of fatty acids providing the brain with

an energy substrate. Acetyl-L-carnitine, an ester of L-carnitine, possesses properties that may be effective in supporting healthy cognition with age.[4,5] The phospholipid phosphatidylserine (PS) plays an important functional role in membrane-related processes in the brain and regulates the release of acetylcholine, dopamine, and noradrenaline. PS appears to support neuronal health and healthy brain function, possibly through its effect on cytokine production and their influence on microglia.*[6]

Ginkgo biloba leaf extract contains two main bioactive constituents—ginkgoflavonglycosides (24%) and terpene lactones (6%)—and is used in the formula because of its reported stress-alleviating and memory-supportive effects as well as its ability to support the health and integrity of neurons. The mechanisms of action may be mediated through its antioxidant, antihypoxic, and microcirculatory actions.

[7] The Ayurvedic herb Bacopa monniera has reported cognition-facilitating, cytokine-modulating, and anti-stress effects. These effects are thought to be mediated through its remarkable free-radical–scavenging capacity and its protective effect on DNA cleavage.*[8]

Vinpocetine is derived from vincamine, an alkaloid extracted from the periwinkle plant (Vinca minor). It has been used extensively in Eastern Europe, and more recently in the United States, to support cerebrovascular health and healthy mental function. Vinpocetine's roles in supporting brain function are multi-modal and include its influence on cerebral circulation, its antioxidant activity in the brain, and its role in affecting ion channels and cytokine production.[9-11] Together, these varied actions support overall brain tissue health and function. The efficacy and safety of vinpocetine have been tested and validated by in vitro, animal, and human studies. Many human studies demonstrate positive results in neurologic functioning—primarily related to capillary blood flow and cellular metabolism.*[12-15]

Huperzine A (HupA), like vinpocetine, affects ion channels. Such activity has been found to support healthy learning and memory. HupA may have a positive effect on levels of acetylcholine through its action on acetylcholinesterase (AChE). Acetylcholine is one of the chemicals that our nerves use to communicate in the brain, muscles, and other areas. HupA has been found to support healthy cognition in a broad range of animal models, and phase IV clinical trials in China demonstrated that HupA was valuable in promoting healthy recall and cognition in elderly subjects.*[16]

The Pharmacist Formula by CinDen
123 A Scurfield Blvd
Winnipeg, MB, Canada

CereVital

CereVital

Medicinal Ingredients (per vegetarian capsule)

Vitamin B6 (Pyridoxal-5-phosphate) .....5 mg
Folate ((6S)-5-Methyltetrahydrofolic acid, Glucosamine Salt) .....100 mcg
Vitamin B12 (Methylcobalamin) .....100 mcg
N-Acetyl-L-carnitine (N-Acetyl L-carnitine HCl) ..... 250 mg
N-Acetyl-L-cysteine ..... 100 mg
Ginkgo biiloba Leaf Extract (standardized to (24% ginkgoflavonglycosides and 6% terpene lactones) ..... 60 mg
Bacopa monneri Leaf Extract (8% bacosides) ..... 50 mg
Phosphatidylserine ..... 15 mg
Huperzine A (from Huperzia serrata, root) .....100 mcg
trans-Resveratrol (from Polygonum cuspidata, root) ..... 1 mg

Non-Medicinal Ingredients

HPMC (capsule), stearic acid, calcium silicate, tricalcium phosphate, silica, magnesium stearate, and microcrystalline cellulose.

Directions for Use:

Adults: Take 2 capsules once per day with meals or as directed by your health care practitioner. Consult a health care practitioner for use beyond 4 weeks.

CAUTION: Do not use if you are pregnant or breastfeeding. Consult a health care practitioner prior to use if you have kidney stones, have liver or kidney disease, seizure disorder, or if you are taking medications which affect acetylcholine levels (cholinergic or anticholinergic drugs) or medications for diabetes, high blood pressure, or seizures. Consult a health care practitioner prior to use if you have a cardiovascular or blood pressure condition. If you are taking prescription medication, consult a healthcare practitioner prior to use as resveratrol may alter the effectiveness of these medications. Do not use if you are taking antibiotics, nitroglycerin or health products that affect blood coagulation as this may increase the risk of spontaneous bleeding. May cause digestive problems. If you experience dizziness, weakness, unusual muscle cramping, agitation, blurry vision, gastrointestinal symptoms such as nausea, vomiting, diarrhea or excessive salivation, sweating or lacrimation, discontinue use and consult a health care practitioner.

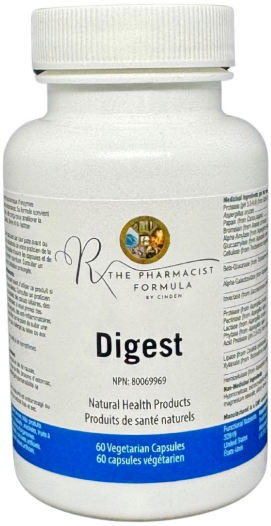
Storage: Keep out of reach of children. Store in a cool dry place. Do not use if tamper seal is broken or missing.

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THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
Winnipeg, MB, Canada
(204) 488-1819

Digest



Digest is a cost-effective, non-prescription, broad-spectrum digestive enzyme formula suitable for vegans and designed to support the digestion of fats, carbohydrates, fiber and lactose

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Discussion

Digestion Food must be broken down into its component parts in order to be absorbed into the bloodstream. Though salivary secretions, chewing, gastric acid, and pepsin begin the process of digestion, the majority of digestion takes place farther down the gastrointestinal tract in the small intestine. Once food leaves the stomach and enters the small intestine, digestive enzymes begin the monumental task of turning it into the building blocks and fuel that the body needs for structural support and metabolic processes. Digestive enzymes are produced primarily in the pancreas and brush border of the small intestine, and the health and function of these organs is vital to effective digestion and absorption. Proteolytic enzymes, amylases, and lipases are responsible for the digestion of proteins, carbohydrates, and fats. The complete digestion of these macronutrients produces small peptides, amino acids, monosaccharides and disaccharides, and free fatty acids that can easily pass through the intestinal microvilli and enter the bloodstream. Healthy digestion assures that incompletely digested molecules and proteins don't enter the bloodstream where they may be recognized as "foreign" by a vigilant immune system.*[1,2]

Pancreatic and Intestinal Enzymes Pancreatic production of proteases, amylases, and lipases is complemented by intestinal production of lactase, maltase, sucrase, enterokinase, and various peptidases, highlighting the importance of the pancreas and the intestines in the digestive process. The enzyme lactase is required to break down lactose into glucose and galactose before the intact lactose can draw excess water into the bowel, and before colonic bacteria can break it down into volatile gases and acids. Though lactose (a disaccharide found only in mammals' milk) is readily digested by most infants, normal production decreases as a child is weaned onto whole foods and may eventually cease in adulthood. Exogenous administration of lactase can support lactose digestion effectively and allow for continued consumption of milk-based products.[3,4] Maintaining a healthy gastrointestinal flora helps support brush border function and digestive capacity as well.*[5]

Digestion of Plant-Based Compounds - Digest contains several principle digestive enzymes as well as a complement of enzymes designed to break down plant compounds and fibers that humans would otherwise be unable to digest. Raffinose and melibiose, carbohydrates commonly found in legumes, can be broken down by the intestinal enzyme alpha-galactosidase. In the absence of this enzyme, these carbohydrates pass into the large intestine, where microbes can ferment them and produce volatile gases. Exogenous administration of alpha-galactosidase, present in **Digest**, supports the digestion of these plant-based compounds and has been used safely and effectively.[6,7] Beta-glucanase, hemicellulase, pectinase, xylanase, and dipeptidyl peptidase (DPPIV) are also present and improve the digestibility of plant-based foods by breaking down plant cell walls, fibers, and proteins. Phytase is present to facilitate the breakdown of indigestible phytates from grains and seeds, and release phosphorus, calcium, inositol, and other nutrients for absorption. Bromelain and papain offer additional support for protein digestion. The enzyme invertase catalyzes sugar to glucose and fructose.*

Digest incorporates amylase, lipase, proteases, hemicellulase, bromelain, papain, lactase, DPPIV, and other key digestive enzymes to provide a comprehensive formulation that functions in a wide pH range to support and facilitate healthy digestion. It has been formulated to allow flexible dosing that can be adjusted for individual needs.*

The Pharmacist Formula by CinDen
123 A Scurfield Blvd
Winnipeg, MB, Canada

Medicinal Ingredients (per two vegetarian capsules)

Protease (pH 3.0-9.0) (from *Bacillus subtilis* and *Aspergillus oryzae*) .....120,000 FCC HUT
Papain (from *Carica papaya*)..... 3,000,000 FCC PU
Bromelain (from *Ananas comosus*) .....1,320,000 FCC PU
Alpha-Amylase (from *Aspergillus oryzae*) .... 4,000 FCC DU
Glucoamylase (from *Aspergillus niger*) ..... 30 FCC AGU
Cellulase (from *Trichoderma longibrachiatum*) ..... 4,000 FCC CU
Beta-Glucanase (from *Trichoderma longibrachiatum*) ..... 50 FCC BGU
Alpha-Galactosidase (from *Aspergillus niger*) .....400 FCC GALU
Invertase (from *Saccharomyces cerevisiae*) .....2,000 FCC SU
Protease (from *Aspergillus oryzae*) .....2,400 FCC HUT
Pectinase (from *Aspergillus niger*) .....70 FCC Endo PGU
Lactase (from *Aspergillus oryzae*) .....700 FCC ALU
Phytase (from *Aspergillus niger*) .....20 FCC FTU
Acid Protease (pH 2.0-3.5) (from *Aspergillus niger*) .....400 FCC HUT
Lipase (from *Candida cylindracea*) ..... 3000 FCC LU
Xylanase (from *Trichoderma longibrachiatum*) .....300 FCC XU
Hemicellulase (from *Aspergillus niger*) .....200 FCC HCU

Non-Medicinal Ingredients

Hypromellose, microcrystalline cellulose, stearic acid magnesium stearate, silicon dioxide.

Recommended Dose

Adults: Take one to two capsules daily immediately before or with a meal or use as directed by your healthcare practitioner. If necessary, capsules may be opened and sprinkled over food. For prolonged use, consult a healthcare practitioner.

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Does Not Contain

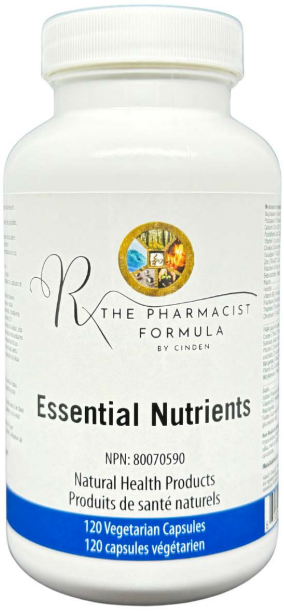
Wheat, gluten, yeast, soy, animal or dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, or artificial sweeteners.

Maltodextrin (derived from corn) is used to standardize enzyme activity.

THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
Winnipeg, MB, Canada R3Y1L6
(204) 488 - 1819

Essential Nutrients



- Vitamin/mineral supplement.
- Helps the body to metabolize carbohydrates, fats and proteins.
- Helps to maintain proper muscle function.
- Helps in connective tissue formation.
- Provides support for healthy glucose metabolism.
- Helps in wound healing.
- Helps to form red blood cells.
- Helps in the absorption and use of calcium and phosphorus.
- Helps in the function of the thyroid gland.
- Helps to prevent pantothenic acid, vitamin E, vitamin B6, riboflavin, thiamine, chromium, biotin and vitamin B12 deficiencies.
- Provitamin A to help maintain eyesight, skin membranes and immune function.
- Provitamin A to help in the development and maintenance of night vision, bones and teeth.
- Helps to produce and repair connective tissue.

The Pharmacist formula Meet or Exceed cGMP Quality Standards

Discussion

Good nutrition is a basis for wellness, and good nutrition usually translates into a stronger immune system and better health. An important aspect of good nutrition is micronutrition (vitamins and minerals).[1-4] Micronutrients participate in converting food to energy; building and repairing tissues and DNA; manufacturing neurotransmitters, hormones, and other modulators in the body; breaking down and detoxifying xenobiotics and medications; and maintaining growth, reproduction, and health. According to research by the USDA and other organizations, the American diet is lacking micronutrients.[5-8] In fact, nine out of 10 Americans are missing key micronutrients.[7] Mass food production, storage techniques, poor food choices, and nutrient-depleting preparation methods may contribute to inadequacies. The bottom line is that children and adults are not consuming enough nutrient-rich foods to meet all their most basic vitamin and mineral needs.[6] What's more, some scientists feel that the recommended intakes (e.g., %DV, DRIs, EARs, RDAs) may not meet the requirements of all individuals, especially the chronically ill.*

There are numerous reasons to select Essential Nutrients:

Balanced Profile Vitamins and minerals work synergistically and cooperatively when present in proper amounts. However, imbalances between micronutrients can disrupt this synergistic relationship, possibly leading to instances of competitive intestinal absorption or displacement at the metabolic/cellular level, which can produce relative excesses and insufficiencies. For this reason, Essential Nutrients feature a balanced nutrient profile that includes calcium and magnesium, zinc and copper, vitamins C and E, bioactive folate, vitamin B12, B vitamin complex, beta-carotene, and trace elements.*

Bioavailability The micronutrients are provided in bioavailable forms so that they can be better absorbed and utilized. Essential Nutrients contain a full complement of Albion® patented mineral chelates and complexes. Albion is a recognized world leader in mineral amino acid chelate nutrition and manufactures highly bioavailable nutritional mineral forms that are validated by third-party research and clinical studies. Not only do these formulas contain natural vitamin E, which has been proven to be up to 100% more bioavailable than synthetic dl-alpha-tocopherol, but it is also provides mixed tocopherols to more closely approximate how one might consume vitamin E in healthful foods.[9,10] Folate is provided as 5-methyltetrahydrofolate (5-MTHF)—the most bioactive form of folate.[11] Essential Nutrients feature 5-MTHF as Quatrefolic®, which is proven to have greater stability, solubility, and bioavailability over calcium salt forms of 5-MTHF. Vitamin B12 is provided as MecobalActive™. This patented form of methylcobalamin has very high purity; no harmful solvents are used in its production.[12] Vitamins B2 and B6 are also provided in activated forms.*

Energy Production Essential Nutrients provide generous levels of B vitamins, which serve as prime coenzymes in glycolysis and oxidative phosphorylation and as cofactors in amino acid and lipid metabolism. The balanced presence of B vitamins is essential to their cooperative functioning and excellent for those with stressful lifestyles.*

Antioxidant Protection Vitamins E and C, selenium, zinc, beta carotene, and trace elements provide broad-spectrum antioxidant activity. Their combined presence supports their ability to regenerate each other and maintain consistent levels of antioxidant activity both intra- and extracellularly.*

Detoxification Support Xenobiotics, including environmental pollutants and medications, must undergo biotransformation into molecules that can be easily excreted from the body. There are significant levels of bioavailable riboflavin, niacin, folate, and B12 present in these formulas to support phase I detoxification. Beta carotene, vitamin C, tocopherols, selenium, copper, zinc, and manganese are present to protect tissues from reactive intermediates formed between phase I and phase II detoxification.*

The Pharmacist Formula by CinDen
123 A Scurfield Blvd
Winnipeg, MB, Canada

Essential Nutrients

Medicinal Ingredients (per vegetarian capsule)

Magnesium (Albion® Magnesium malate)	25 mg
Potassium (Potassium glycinate)	24.75 mg
Calcium (Calcium malate, Calcium ascorbate)	25mg
Pantothenic acid (Calcium D-pantothenate)	50 mg
Vitamin E (d-alpha Tocopheryl acid succinate)	33.5 mg AT
Choline (Choline dihydrogen citrate)	9 mg
Vanadium (TRAACS® Vanadium amino acid chelate)	187.5 mcg
Zinc (TRAACS® Zinc bisglycinate)	3.25 mg
Vitamin A (Vitamin A palmitate)	142 mcg RAE
Beta Carotene	2530 mcg
Niacin	6 mg
Inositol	9 mg
Vitamin B6 (pyridoxal 5-phosphate)	5 mg
Riboflavin (Riboflavin 5'-phosphate sodium)	5 mg
Thiamine (Thiamine mononitrate)	5 mg
Chromium (TRAACS® Chromium Nicotinate Glycinate Chelate)	125 mcg
PABA (para-amino benzoic acid)	3 mg
Copper (TRAACS® Copper bisglycinate)	250 mcg
Selenium (Albion® selenium glycinate)	25 mcg
Vitamin C (Sodium Ascorbate, Calcium ascorbate, Potassium ascorbate, Zinc ascorbate)	62.5 mg
Manganese (TRAACS® Manganese bisglycinate)	125 mcg
Vitamin D (Cholecalciferol)	1.25 mcg
Molybdenum (TRAACS® Molybdenum bisglycinate)	12.5 mcg
Biotin	250 mcg
Iodine (Potassium iodide)	25 mcg
Vitamin B12 (Methylcobalamin)	125 mcg
Niacinamide	10 mg
Folate (Quatrefolic® (6S)-5-Methyltetrahydrofolic acid, glucosamine salt)	100 mcg

Non-Medicinal Ingredients

Hypromellose, Medium chain triglycerides, Microcrystalline cellulose, Ascorbyl palmitate, Silica.

Directions for Use:

Adults: Take 1 capsule daily or as directed by your healthcare professional. Take a few hours
before or after taking other medications or natural health products.

CAUTION: Keep out of children's reach.

Consult a health care professional prior to use if you are pregnant or breastfeeding or taking
sulfonamides. Stop use if hypersensitivity occurs.

Storage: Keep closed in a cool, dry place.

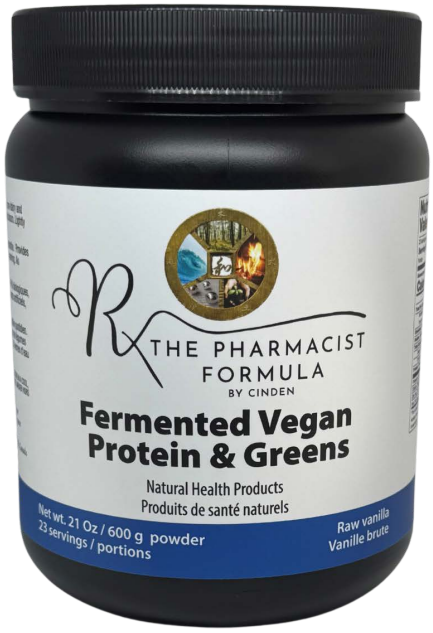
Quatrefolic® is a registered trademark of Gnosis S.p.A. Produced under US Patent 7,947,662.
MecobalActive™ is a trademark of Ferrer Health Tech.
Albion, DimaCal, TRAACS and the Albion Medallion design are registered trademarks of Albion Laboratories, Inc. Malates covered by U.S. Patent 6,706,904 and patents pending.

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Fermented Vegan Protein & Greens

Fermented Vegan Protein and Greens is Vegan-friendly, 98% organic, non-GMO, non-dairy and free of soy, sugar, corn, gluten, MSG, artificial sweeteners, artificial flavours and colours

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Ingredients: Organic Fermented Pea Protein, Flax Protein, Hemp Protein, Organic Fermented Fruit and Veggie Blend (Apple, Blueberry, Carrot, Cranberry, Broccoli, Kale, Parsley, Spinach, Turmeric) Organic Fermented Grass Blend (Barley Grass, Oat Grass, Wheatgrass, Alfalfa Grass), Spirulina, Vanilla Flavour, Stevia Rebaudioside A, Organic fermented Mushroom blend (King Trumpet (Pleurotus eryngii), Turkey Tail (Trametes versicolor), Cordyceps militaris, Reishi (Ganoderma lucidum), Agaricus blazei, Lion's Mane (Hericium erinaceus), Maitake (Grifola frondosa) and Antrodia camphorata), Sea Salt, Inulin, Maltodextrin, tapioca detxrin.

Nutrition Facts
Valeur nutritive

23 servings per container / 23 portions par contenant

Serving Size	**1 Scoop (26 g)**
Portion	1 cuillère (26 g)
Amount per serving	
Calories	**98**
	% valeur quotidienne (VQ) / % Daily Value*
Total Fat / Lipides 1.7 g	3%
Saturated / saturés 0.3 g	1%
Trans / trans 0 g	
Cholesterol / Cholestérol 0 mg	
Sodium / Sodium 251 mg	10%
Total Carbohydrates / Glucides 4.5 g	2%
Dietary Fiber / Fibres 2.5 g	10%
Total Sugars / Sucres 0.19 g	
Protein / Protéines 17.6 g	
Potassium 21mg <1% • Magnesium / magnésium 14mg 3%	
Calcium 75mg 6% • Phosphorus / phosphore 186mg 15%	
Zinc 1mg 11% • Copper / cuivre 307mcg 33%	
Iron / Fer 7mg 39% • Selenium / sélénium 26mcg 47%	

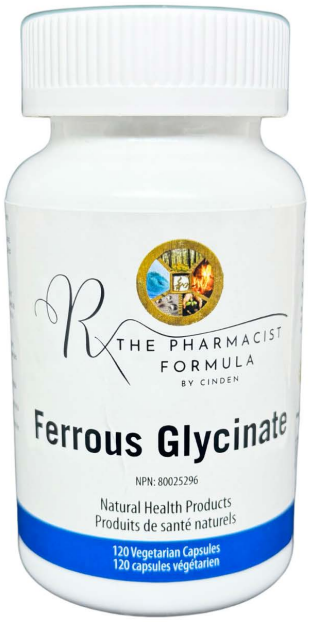
*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

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Fermented Vegan Protein & Greens



Ferrous Glycinate

- **Helps to prevent iron deficiency and iron deficiency anaemia**
- **A factor in the maintenance of good health**
- **Helps to form red blood cells and helps in their proper function**

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The Pharmacist Formula Meet or Exceed cGMP Quality Standards

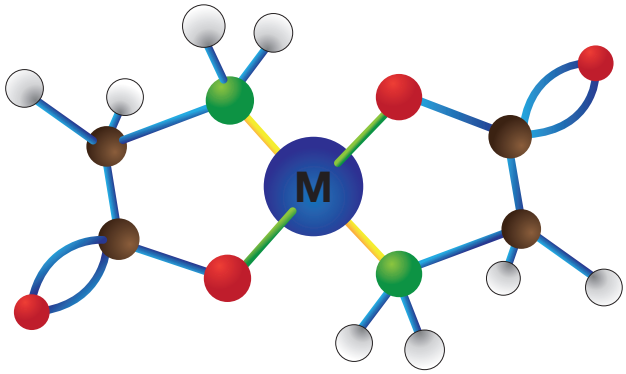
Discussion

Ferrous iron is reacted with glycine to form bis-glycinate chelate, a non-electrically charged compound that is totally nutritionally functional. The absence of electrical charge, uncommon for an iron supplement, makes it less likely that Ferrous Glycinate can interfere with absorption of other minerals such as calcium, vitamin E or vitamin C. Iron solubility from iron bis-glycine chelate is not affected by pH changes from 2-6. This means it travels unchanged through the stomach, into the intestine, where it is absorbed and released for transport throughout the body.*

Patient compliance with iron bis-glycinate appears to be better than that seen with inorganic forms of iron supplements for two reasons. First, the taste: In a study with 145 pregnant women (that concluded daily supplementation with iron bis-glycinate chelate was significantly more effective even at a lower dose than ferrous sulfate) the percentage of taste complaints among the women given ferrous sulfate was 29.8%, while 0% of the women on the bis-glycinate chelate complained about taste. Second, iron bis-glycinate is less likely to have any of the gastrointestinal side-effects associated with standard iron supplementation.*

A published absorption study showed there was a significant correlation between iron absorption of iron bis-glycinate chelate to serum ferritin ($r = -0.60$, $p < 0.03$) (The higher the ferritin the lower the absorption and vice versa.) The amount of iron stored in the body regulates iron bis-glycinate chelate absorption. This translates into less chance of toxicity. Another benefit of the bis-glycinate chelate form of iron over other iron supplements is that it doesn't act as a pro-oxidant.*

Iron is an important component of hemoglobin, myoglobin, and ferritin. These proteins are involved in the transport, storage, and release of oxygen to the tissues.*



Iron bis-glycinate Courtesy of Albion Laboratories, Inc.®

Ferrous Glycinate

Ferrous Glycinate
Medicinal Ingredients (per vegetarian capsule)
Ferrochel® Iron (Iron (II) bisglycinate) .....29 mg

Non-Medicinal Ingredients
Hypromellose, Microcrystalline cellulose, Stearic acid, Magnesium stearate, and Silicon dioxide

Recommended Dose
Adults, adolescents, and children 6 years and older: Take one capsule once a day. Take with food, a few hours before or after taking other medications.
Keep out of reach of children.There is enough drug in this package to seriously harm a child.
For pregnant women: Taking a daily prenatal multi-vitamin mineral supplement along with this product may result in constipation, diarrhea, and/or vomiting due to the high intake of iron.

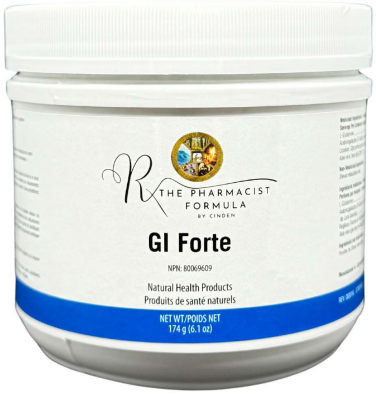
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(204) 488-1819

GI Forte



- Aloe vera is used in herbal medicine as a demulcent to help soothe inflammation of the gastrointestinal tract
- Used in herbal medicine for gastrointestinal support

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Discussion

L-Glutamine, the most abundant free form amino acid in the body, is very important for maintaining gastrointestinal and stimulated immune cell functioning. It is an important transporter of nitrogen (and carbon) in the body and therefore, is vital in wound healing. Although glutamine can be synthesized by the intestinal mucosa, during periods of physiological stress when needs can not likely be met by the body alone, gut epithelial atrophy, ulceration and even necrosis are possible.[1] L-glutamine is metabolized to ammonia and glutamate.*

Arabinogalactan, a polysaccharide derived from the Larch tree, contributes fermentable fiber to this formula in addition to having immuno-stimulatory properties. It minimizes ammonia synthesis and absorption, enhances production of short chain fatty acids and increases the gut microflora population.*[2]

Licorice Root Extract 10:1(deglycyrrhized) is a concentrated extract that has been processed to remove glycyrrhizin, thus eliminating any risk of licorice-associated side effects. It is anti-inflammatory, antispasmotic and has laxative and soothing effects. Aspirin-induced mucosal damage has been shown to be reduced by administration of deglycyrrhized licorice.*[3]

Aloe Leaf Extract (standardized to 50% polysaccharides), used for thousands of years, is perhaps most well-known for healing of damaged epithelial tissue, including the bowel lining. Despite the lack of scientific published studies there is anecdotal evidence to suggest that aloe vera helps inflammatory conditions of the gastrointestinal tract. In some individuals it may increase G.I. transit time, improve protein digestion and absorption, increase stool bulk and normalize stool bacteria where high levels of yeasts previously existed.[4] The aloe extract used in GI Forte does not have a laxative effect because the bitter principles have been removed.*

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Winnipeg, MB, Canada

GI Forte

Supplement Facts

Serving Size: 1 Scoop (about 5.8 g)
Servings Per Container: About 30

	Amount Per Serving	%Daily Value
L-Glutamine	3 g	**
Arabinogalactan (from *Larix laricina*)(heartwood)	2 g	**
Deglycyrrhizinated Licorice 10:1 Aqueous Extract (*Glycyrrhiza glabra*)(root)	500 mg	**
Aloe Vera 200:1 Aqueous Extract (*Aloe barbadensis*)(leaf gel)	100 mg	**

** Daily Value not established.

Other Ingredients: Stevia leaf extract.

Directions

Mix one scoop in 2-4 oz water once daily, or as directed by your healthcare practitioner.

Recommended Dose
Adults: Mix one scoop with 60-120 mL of water and consume once daily or as directed by your healthcare practitioner. Consult a healthcare practitioner for use beyond four to six weeks.

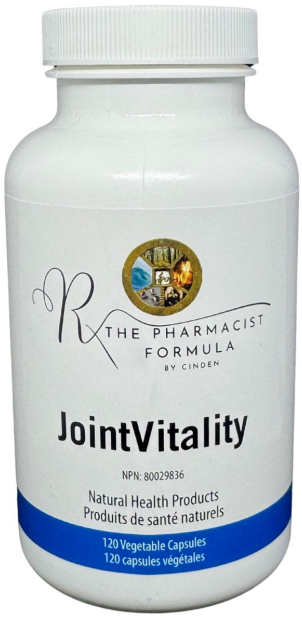
Does Not Contain: Wheat, gluten, yeast, soy, animal or dairy products, fish, shellfish, peanuts, tree
nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, or artificial
sweeteners.

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Winnipeg, MB, Canada
(204) 488-1819



JointVitality

- Helps in the development and maintenance of bones, cartilage, teeth, and gums
- An antioxidant for the maintenance of good health
- Helps the body to metabolize carbohydrates, fats, and proteins

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

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Discussion

Years of joint tissue stress, underlying cytokine imbalance, and other factors can upset the equilibrium between anabolic and catabolic processes in the joints. The cooperative ingredients in JointVitality nourish joint tissues and help support balanced metabolic activity within them.*

Green-Lipped Mussel (GLM) (Perna canaliculus) GLMs are sourced from unpolluted waters off New Zealand and are guaranteed to be pure. They contain glycosaminoglycans (GAGs)—the principal components of cartilage and synovial fluid—as well as eicosatetraenoic acid, which promotes a healthy joint environment.[1,2] GLMs have been shown to inhibit cyclooxygenase and lipoxygenase enzymes.[2,3] Results of a systematic review of human randomized or placebo-controlled trials show that GLM supplementation (900-1200 mg/d) helps maintain healthy joint tissue and function.*[1]

Hyal-Joint® Hyaluronic acid (HA) is responsible for the viscoelastic and lubricating properties of synovial fluid as well as for performing biophysical, biochemical, and cell-regulatory roles in joint synovial tissues. Given these critical tasks, HA has become a focus of proactive joint care. Hyal-Joint is a proprietary rooster comb extract rich in high-molecular–weight HA; it also contains collagen and other GAGs. Research suggests that Hyal-Joint supports the quality of synovial fluid by positively influencing synovial HA concentration and by reducing the expression of degradative factors in synovial fluid.[4-8] Furthermore, scientific evidence shows that Hyal-Joint is two to four times more active than regular HA in nourishing and supporting the health of synovial fluid.[7] This higher degree of activity comes from the unique composition of Hyal-Joint, which naturally contains key ingredients that benefit synovial fluid.*

CS BiO-ACTIVE® Chondroitin sulfate (CS) is a GAG required for the formation of proteoglycans found in joint cartilage. CS is thought to enhance joint health by supporting endogenous synthesis and preventing degradation of other joint GAGs. Oral administration of CS (800-1200 mg/d) has proven to positively influence joint space width, joint comfort, and fluid accumulation.[9-12] The pharmaceutical grade, low-molecular–weight CS in CS BiO-ACTIVE has demonstrated higher bioavailability[13] and greater biological activity[14] than other CS sources. CS BiO-ACTIVE is the reference CS for the European Union Pharmacopoeia, and it was selected by the US National Institutes of Health for their glucosamine/chondroitin trial.[15] In fact, most of the clinical research performed using CS has employed CS BiO-ACTIVE; and in all clinical trials and over 10 years of pharmacovigilance, CS BiO-ACTIVE has shown an excellent safety profile.*

Glucosamine Sulfate Glucosamine is an amino saccharide that research suggests stimulates chondrocytes, supports GAG synthesis, incorporates sulfur into cartilage, induces HA production, and modulates prostaglandin (e.g., PGE2) synthesis.[16-18] Most of the scientific research done on glucosamine has been performed using glucosamine sulfate. Oral doses of 1,500 mg/d show clinical benefits in joint mobility and comfort.[16,19] It is postulated that lower doses may nourish the joint tissues, especially in combination with chondroitin sulfate. Several studies confirm that the benefits of combining glucosamine sulfate and chondroitin sulfate outweigh taking them alone.*[20-22]

Methylsulfonylmethane (MSM) As an organosulfur compound, MSM is thought to primarily benefit joint tissues by delivering sulfur. Sulfur helps maintain the strength and structure of connective tissue by forming cross-linkages through disulfide bonds—such as those found in GAGs.[23] Research suggests that MSM may reduce joint tissue damage triggered by free radicals.[24] One joint study shows that glucosamine and MSM achieve better results when combined than when administered individually.*[25]

Vitamin C and Manganese Vitamin C is essential to the synthesis of collagen and to the maintenance of collagen integrity. Furthermore, an animal study suggests that serum ascorbate levels influence fluid accumulation in the joint.[26] Manganese assists the growth and development of normal bone and the synthesis of cartilage. Pairing manganese with chondroitin and glucosamine in high doses has yielded positive effects on joints,[27,28] and one combination study demonstrated a synergistic protective effect on joints.*[21]

JointVitality

Medicinal Ingredients (per vegetable capsule)

Green-lipped mussel (*Perna canaliculus* (whole))	250 mg
MSM (Dimethyl sulfone)	250 mg
Glucosamine hydrochloride (2-amino-2-deoxy-beta-D-glucopyranose hydrochloride, crab and shrimp exoskeleton (KCl))	150 mg
Chondroitin sulfate (*Bos taurus* - Cartilage)	150 mg
Ascorbic acid (Vitamin C)	19 mg
Manganese (TRAACS®† Manganese bisglycinate)	2.5 mg
Sodium Hyaluronate (Hyaluronic acid, sodium salt, *Streptococcus Equi* Bacterial Extracellular Capsule)	7.5 mg

Non-Medicinal Ingredients
Hypromellose, ascorbyl palmitate, silicon dioxide, and medium-chain triglycerides.

Recommended Dose

Adults: Take 1 capsule 3 times per day. Take with food and avoid taking at bedtime. Consult

a health care practitioner for use beyond 8 weeks.

Consult a healthcare practitioner prior to use if you have a liver disorder or if you are pregnant or breastfeeding. Consult a healthcare practitioner if symptoms worsen. Some people may experience mild gastrointestinal bloating, constipation, nausea, or indigestion. Do not use if you are allergic to shellfish.

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TRAACS® is a registered trademark of Albion Laboratories, Inc.

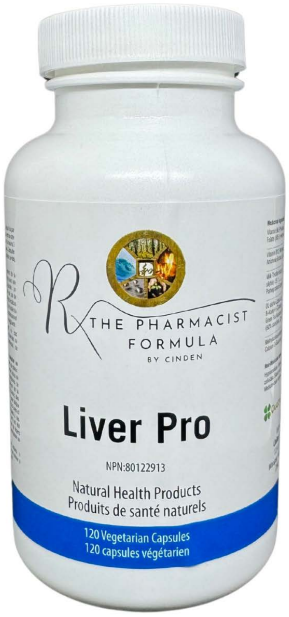
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THE PHARMACIST FORMULA BY CINDEN

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Winnipeg, MB, Canada
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REV. 05/07/25



Liver Pro

- Helps to support liver function.
- Provides a source of antioxidants

The Pharmacist Formula by CinDen Meet or Exceed cGMP Quality Standards

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Winnipeg, MB, Canada

Discussion

The term “Dual-Phase Optimizers” refers to those substances with the ability to simultaneously influence and “optimize” the activity of certain phase I and phase II detoxification enzyme systems. Optimizers generally upregulate or induce phase II enzymes; however, optimizing phase I enzymes may mean downregulating them, without totally inhibiting them, when they are too high. Dual-phase optimizers may further balance the phases of detoxification by supporting antioxidant defense systems and binding free radicals formed between the two phases.*

Examples of dual-phase optimizers in Liver Pro include ellagic acid from pomegranate, catechins from green tea extract, and glucosinolates from watercress powder. Ellagic acid induces phase II enzymes at the gene level and ensures these are not over-induced by modulation of CYP1A (cytochrome P450 1A) activities.[1,2] In addition, ellagic acid can bind directly to DNA to protect it and can also bind directly to some toxic substances to promote their excretion. The catechins in green tea support antioxidant activity and may bind directly to toxic substances as well, performing dual functions during detoxification. When toxic substances are encountered, catechins modulate detoxification by limiting phase I enzyme production.[3] Glucosinolates are precursors to isothiocyanates. Watercress, in particular, is metabolized by gut flora into phenylethyl isothiocyanate (PEITC), which, like the other ingredients above, can selectively inhibit phase I enzymes and induce the activities of phase II enzymes.*[4]

Liver detoxification is further supported with the inclusion of silymarin (milk thistle seed extract), artichoke leaf extract, and alpha-lipoic acid, all of which are selected for their hepatoprotective properties. These key players also promote glutathione production and assist with antioxidant protection.*[5-7]

Additional ingredients in this formula are present to support vital phase II detoxification pathways. Key ingredients that support methylation include methylsulfonylmethane (MSM), methylcobalamin (B12),and 5-methyltetrahydrofolate (folate).[9] 5-methyltetrahydrofolate (5-MTHF) is present as Quatrefolic® (a stable, bioavailable form of folate) to support methylation, energy generation, and phase I and phase II activity. Calcium D-glucarate has been added to support glucuronidation. Sulfate donors sodium sulfate and N-acetyl-cysteine (NAC) are especially important in cases of heavy-metal burden because they support glutathione production and the sulfation pathway.*[9-13]

Liver Pro is designed to be part of a comprehensive detoxification protocol that includes adequate high-quality protein, carbohydrates, fats, and fiber. The resulting combination provides micronutrients to support the active phases of detoxification and macronutrients to support energy production, amino acid conjugation, and elimination.*

Liver Pro

Medicinal Ingredients (per vegetable capsule)

Vitamin B6 (Pyridoxal-5-phosphate, synthetic) ..... 12.5 mg
Folate (6s)-5-Methyltetrahydrofolic acid, glucosamine salt) (synthetic) ..... 100 mcg
Vitamin B12 (Methylcobalamin, synthetic) ..... 50 mcg
Artichoke Aqueous Extract (*Cynara scolymus*)(leaf)(15:1 2250 mg) ..... 150 mg
Watercress (*Nasturtium officinale*)(leaf) ..... 125 mg
Milk Thistle Extract (*Silybum marianum*) (seed)(80% silymarin) ..... 62.625 mg
Pomegranate Extract (*Punica granatum*)(fruit)(40% ellagic acid) ..... 62.5 mg
DL-alpha-Lipoic acid (synthetic) ..... 50 mg
N-Acetyl-L-Cysteine (L-alpha-Acetamidobeta-mercaptopropionic acid, synthetic) ..... 50 mg
Green Tea Aqueous Extract (*Camellia sinensis*)(leaf) (80% polyphenols, 60% catechins, 30% EGCG, 6% caffeine) ..... 46.875 mg
Methylsulfonylmethane (MSM, synthetic) ..... 25 mg
Calcium D-Glucarate (D-Glucaric Acid calcium salt (1:1), synthetic) ..... 25 mg

Non-Medicinal Ingredients

HPMC (capsule), sodium sulfate, stearic acid, magnesium stearate, silica, microcrystalline cellulose, and medium-chain triglycerides.

Directions for Use

Adults: Take two capsules twice daily with food or as directed by your healthcare practitioner. Use for at least 3 weeks to see beneficial effects. Consult a health care practitioner for use beyond 12 weeks.

CAUTION: Do not use if you are taking nitroglycerin or antibiotics or have a bile duct obstruction. Consult a health care practitioner prior to use if you are pregnant or breastfeeding or have kidney stones, gall stones, diabetes, a liver disorder or an iron deficiency. Consult a health care practitioner if symptoms persist or worsen. Stop use if hypersensitivity/allergy occurs or if diarrhea, abdominal pain, heartburn, nausea or vomiting occur. Keep out of reach of children. Store in a cool dry place.

Stop use and consult a healthcare practitioner: if you experience sweating, paleness, chills, headache, dizziness and/or confusion; if you develop symptoms of liver trouble such as yellowing of the skin/eyes (jaundice), stomach pain, dark urine, sweating, nausea, unusual tiredness and/or loss of appetite. Rare, unpredictable cases of liver injury associated with green tea extract containing products have been reported. Some people may experience mild gastrointestinal bloating, constipation or indigestion. Do not use if tamper seal is broken or missing.

Storage: Keep out of reach of children. Store in a cool dry place. Do not use if tamper seal is broken or missing.

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THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
Winnipeg, MB, Canada
(204) 488-1819

Melatonin



- Helps increase the total sleep time (aspect of sleep quality) in people suffering from sleep restriction or altered sleep schedule, e.g. shift-work and jet lag
- Helps relieve the daytime fatigue associated with jet lag
- Helps reset the body's sleep-wake cycle (aspect of the circadian rhythm)
- Helps to reduce the time it takes to fall asleep (sleep onset latency aspect of sleep quality) in people with delayed sleep phase syndrome

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Discussion

Melatonin, a naturally occurring indolamine, is produced primarily in the pineal gland but also in mammalian bone marrow, platelets, gastrointestinal tract, eyes, skin, and lymphocytes.[1] It plays a vitally important role in regulating the body's daily and annual biological rhythms and thus the sleep/wake cycle. Research suggests that melatonin supports antioxidant activity, cardiovascular health, and immune function as well.*[2-4]

Normal melatonin secretion is suppressed by light and stimulated by periods of darkness. Nocturnal secretion of melatonin is at its highest during childhood, and then decreases with age. Studies, including meta-analyses, suggest that supplemental melatonin supports desirable sleep patterns in certain individuals, including the elderly and those who have unusual work hours, such as night shift workers or people traveling across time zones.[5-10] A review of 10 trials suggests that melatonin supplementation helped support sleep patterns in individuals crossing time zones; subjects included airline passengers, airline staff, and military personnel.[11] Daily doses between 0.5 mg to 5 mg taken at bedtime were used and found to be similarly supportive; however, the effects were greater at the higher dose. According to this review, doses higher than 5 mg do not appear to demonstrate any increased benefit.*

Human research studies suggest that melatonin supports the quality of healthy sleep as it relates to falling asleep, sleep efficiency (percent of time asleep to total time in bed), and awakening. In one study employing five experimental periods, melatonin appeared to positively support normal sleep initiation, maintenance, efficiency, and activity within one week of supplementation versus placebo.[5] Another randomized, double-blind, placebo-controlled study of 33 individuals over a 16-day period suggested that the onset, quality, depth, and duration of sleep can be supported by melatonin supplementation without the occurrence of daytime drowsiness or adverse effects.*[12]

Melatonin has been closely studied for its role in supporting antioxidant activity, especially since intracellular melatonin is concentrated in the mitochondria, a major site of oxidative metabolism. Melatonin has been found to support extracellular antioxidant activity, support glutathione production, and stimulate production of intracellular antioxidant enzymes—including superoxide dismutases and glutathione peroxidase.[3] Research suggests that melatonin works on a number of levels. It is able to scavenge oxygen-based and nitrogen-based free radicals, and support the natural response to inflammation by promoting cytokine balance.[2] As a lipophilic molecule, melatonin is able to permeate the lipid portion of low-density lipoprotein (LDL) and support antioxidant activity in cells. Research suggests that melatonin supports blood pressure already in the normal range and overall cardiovascular health.*[3]

Finally, research suggests that melatonin aids immune system activity by supporting T-helper cell function, immune-specific progenitor cell production, cytokine balance, and production of mediators, such as gamma-interferon and immune-supportive interleukins.*[1,2,4,13] The Pharmacist Formula offers melatonin in a convenient form that provides 3 mg per lozenge, sweetened with xylitol, mannitol, and natural peppermint flavor, to support healthy sleep patterns, antioxidant activity, cardiovascular health, and immune function.*

The Pharmacist Formula by CinDen
123 A Scurfield Blvd
Winnipeg, MB, Canada

Melatonin

Melatonin™

Medicinal Ingredients (per lozenge)

Melatonin (Synthetic) ..... 3 mg

Non-Medicinal Ingredients

Xylitol, D-Mannitol,Stearic acid, Magnesium stearate, Natural Peppermint flavour, Silica

For use beyond 4 weeks, consult a healthcare practitioner

Recommended Dose

Adults: Take 1 - 2 lozenges once a day at or before bedtime

If symptoms persist continuously for more than 4 weeks (chronic insomnia), consult your healthcare practitioner

Consult a healthcare practitioner prior to use if you have a hormonal disorder, diabetes, liver or kidney disease, cerebral palsy, seizure disorders, migraine, depression and/or hypertension or if you are taking blood pressure or sedative/hypnotic medications

Do not use if you are pregnant or breastfeeding, or if you are taking immunosupressive drugs.

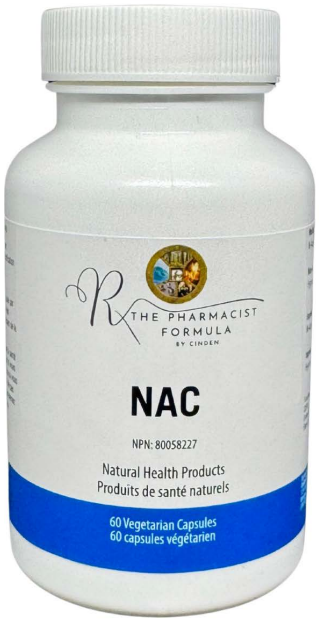
Do not drive or use machinery for 5 hours after taking melatonin.

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THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
Winnipeg, MB, Canada R3Y1L6
(204) 488 - 1819



NAC

- Provides antioxidants
- Supports antioxidant and detoxification activity in the body

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Discussion

NAC (N-acetyl-cysteine) NAC, a sulfur-containing derivative of
the amino acid L-cysteine, supports antioxidant and detoxification mechanisms in the body. NAC supports antioxidant activity by neutralizing hydrogen peroxide, hypochlorous acid, and the highly reactive hydroxyl radical and also serves as a source of sulfhydryl groups. In addition, NAC enhances production of the tripeptide glutathione—a key component of both antioxidant and detoxification enzymes.*[1]

NAC is recognized for its support of normal mucous production and may positively support respiratory function and eye health, especially when consumed over a prolonged period.[1-3] Research suggests that NAC may protect cell and tissue health by supporting normal metal status in the body.*[1,4,5]

Glutathione While the absorption of oral glutathione may be limited,[6] supplementation with NAC may significantly increase circulating levels of glutathione in the body.[7,8] Once NAC promotes production of glutathione, glutathione is incorporated into crucial antioxidant enzymes (e.g., glutathione peroxidase and glutathione reductase) and detoxification enzymes (glutathione S-transferases). Through the activity of these enzymes, glutathione directly supports antioxidant activity, phase II detoxification, and the normal breakdown of metabolites, toxins, and other compounds in the body. Glutathione also participates in fatty acid synthesis and amino acid transport across the cell membrane.*[1]

A variety of factors may determine glutathione requirements, including level of exposure to toxins, increased phase I detoxification activity, and overall need for antioxidant support. Maintaining glutathione levels may be important to maintaining the health of the respiratory, hepatic, and immune systems, as well as supporting antioxidant protection of lipids and proteins and supporting the normal response to inflammation.[7-13] Levels of endogenous antioxidants, including glutathione, may decrease with age.[14] It is important to maintain adequate levels of glutathione in the body to support overall health and well-being throughout the lifespan.*

The Pharmacist Formula by CinDen
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NAC

NAC

Medicinal Ingredients (per vegetable capsule)

N-Acetyl-L-Cysteine..... 600 mg

Non-Medicinal Ingredients

Hypromellose, stearic acid, magnesium stearate, silica.

Recommended Dose

Adults: Take 1 capsule daily with meals or as directed by your health care practitioner.

Consult a health care practitioner prior to use if you are pregnant or breastfeeding or if you have kidney stones. Do not use this product if you are taking antibiotics or nitroglycerin.

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THE PHARMACIST FORMULA
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123 A Scurfield Blvd
Winnipeg, MB, Canada
(204) 488-1819



Omega Optima

- Helps Support Cardiovascular Health*
- Helps to reduce serum triglycerides/triacylglycerols (at two gelcaps per day*
- Source of omega-3 fatty acids for the maintenance of good health
- Helps support cognitive health and brain function*

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

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Winnipeg, MB, Canada

Discussion

MaxSimil® Patented Lipid Absorption Enhancement Technology (PLATform)
The MaxSimil PLATform is a novel monoglyceride delivery system that enhances absorption of lipid-based and lipid-soluble nutraceutical and food ingredients. This technology has been applied to The Pharmacist Formula Omega Optima formula in order to create a unique vehicle by which to deliver EPA and DHA. Due to the fact that monoglyceride oils are intrinsically emulsifiers and are, by nature, in a readily absorbable form, they can bypass the body's normal fat digestion process. These qualities make Omega Optima an excellent method for delivering omega-3 fatty acids, especially to individuals with digestive, pancreatic, or gall bladder challenges. Studies show that MaxSimil fish oils (FO) have three times (300%) greater absorption of EPA and DHA compared to other leading fish oils.*[1-3]

Figure 1. Monoglyceride Chemical Representation in MaxSimil Fish Oils (R1 = fatty acid)



Unique structure: One fatty acid attached to a glycerol backbone provides two polar ends that attract water and a non-polar tail end (R1) that attracts fat, thus enabling self-emulsification of the Omega Optima formula.

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Quality

Omega Optima is made using proprietary MaxSimil compositions containing monoglyceride FO with no additional ingredients, carriers, or excipients. Each fish-gelatin softgel is enteric-coated, and every batch of fish oil ensure the world's highest standards for purity, potency, and freshness. The fish oil is non-GMO, certified sustainable from Scandinavia, and antibiotic-free. Additionally, it is eco-friendly because the greater absorption of EPA and DHA ultimately means that fewer grams of fish oil need to be harvested for the same benefit.*

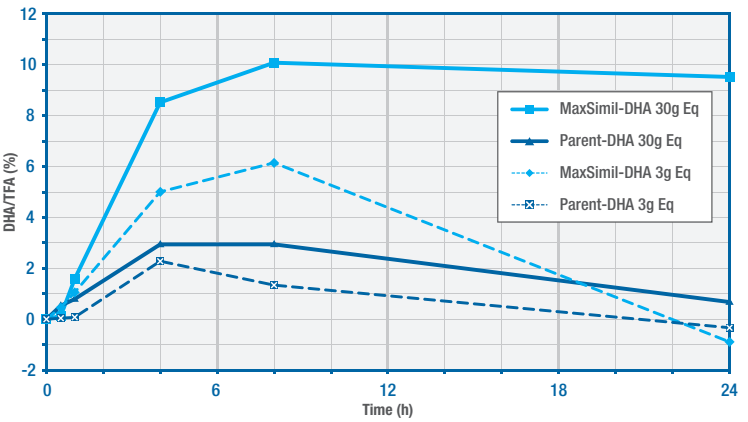
In Vitro and In Vivo Animal Studies

The ability of MaxSimil-enhanced EPA and DHA to positively influence growth inhibition and apoptosis in colorectal, breast, lung, and prostate diseased cell lines was first demonstrated in a series of in vitro studies.[4-6] Researchers subsequently set out to demonstrate efficacy in animal models after oral administration. In three separate animal models, MaxSimil EPA and DHA forms showed superior activity on diseased cell-line growth inhibition and cytokine production when compared to control, corn oil, krill oil, or the parent forms ethyl ester (EE) EPA and ethyl ester (EE) DHA.[4,7,8] These in vivo animal studies proved that orally supplemented MaxSimil EPA and DHA were well-absorbed and bioactive. Researchers postulated that the observed superior effects of MaxSimil EPA and DHA forms were the result of enhanced absorption, and they set out to prove this hypothesis.*

Preclinical Bioavailability Studies

The in vivo pharmacokinetic studies in rodents involved a comparison between MaxSimil DHA FO and its parent EE DHA FO and an analysis of blood concentrations of DHA over time. The doses used were equivalent to human doses of 3 g/day and 30 g/day; the latter was included primarily to investigate toxicity at high doses. Researchers found that MaxSimil DHA FO had a three times (3x) higher peak concentration, a 3x higher saturation potential at the high dose, and a 3x higher absorption rate (at a 3 g/day equivalent human dose) than its parent DHA FO. No toxicity was observed at either dose level.[1,2] This research demonstrated superior bioavailability and presumably better exposure of cells to DHA.*

Figure 2. Preclinical Bioavailability Study in Rodents Demonstrates Superior Peak Concentration, Saturation, and Absorption of MaxSimil DHA FO Versus Its Parent DHA FO



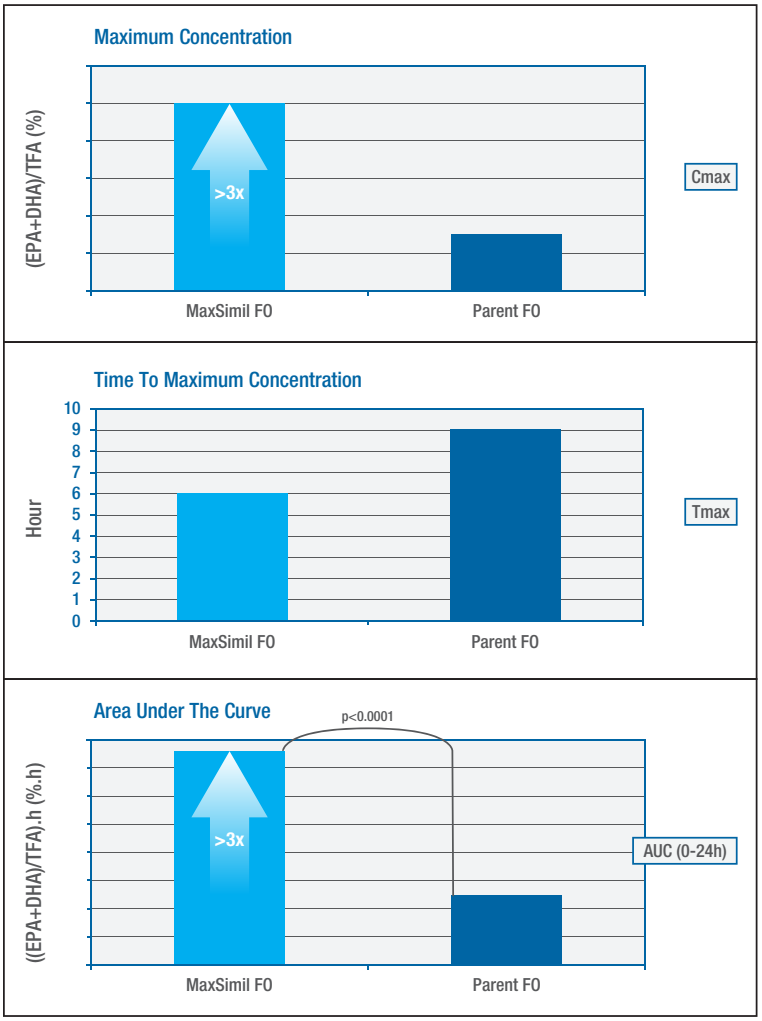
Data were derived from Ingenutra, Inc.[1,2]

Clinical Bioavailability Study

A phase 1, double-blind, randomized, crossover, pharmacokinetic study was performed in 20 healthy adults aged between 19 and 71 years who were administered 6 g (containing 1800 mg EPA and 1200 mg DHA) per day of EE FO or MaxSimil FO.[3] Parameters studied were plasma EPA and DHA concentration (as percent of total fatty acids), Cmax, and AUC. Compared to EE EPA+DHA, the results indicated that at peak concentration, MaxSimil EPA and DHA forms were 3x higher, they reached maximum concentration faster, and maintained their plasma levels longer. The finding in the animal study was validated: the MaxSimil FO instantaneous absorption was 3x greater than the EE form. Likewise, the AUC over 24 hours was also more than 3x higher ($P<.0001$) for MaxSimil EPA and DHA (MaxSimil FO).*

Not only did this study confirm the bioavailability findings in the animal study, but it also demonstrated that after 24 hours, the MaxSimil FO maintained 2-3x higher blood levels of EPA and DHA than the EE FO. This means that, given a daily dose, circulating EPA and DHA levels can be expected to ramp up over time and remain high with steadily increasing exposure of cells to EPA, DHA, and their metabolites. Based on the results of the bioavailability studies, an individual would get more EPA and DHA from MaxSimil FO than from EE FO gram for gram. Furthermore, as shown in the animal studies, one could anticipate enhanced effects. It is noteworthy that all 20 adults who completed the study saw their omega-3 absorption enhanced when taking the MaxSimil enhanced FO.*

Figure 3. Human Clinical Study Findings Demonstrate Superior Absorption of and Exposure to EPA and DHA as Indicated by Cmax, Tmax, and AUC



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Expanding Research

In vitro and animal studies have demonstrated the positive effects of MaxSimil FO on airway immune response (e.g., IgE, leukocytes); the expression of COX-2, NF-kB, cytokines (e.g., IL-6, IL-8), MUC5AC, and mucin; and Ca(2+) hypersensitivity in lung tissues.[8-11] In other research, rats subjected to eight weeks of a high-fat, high-carbohydrate diet were either not supplemented or provided 3 g/day of MaxSimil DHA. Compared to the data from the non-supplemented group, the data from the MaxSimil DHA supplemented group clearly showed a positive impact on cardiovascular health parameters. Measures included blood pressure, heart rate, serum lipid levels, cytokine production, aortic wall thickness, and a DHA:AA ratio in aortic tissue, which correlated with the production of resolvin D2 and D3 metabolites.*[12]

A Note About Resolvins and Other EPA and DHA Metabolites

Specialized proresolving lipid mediators, such as resolvins, protectins, and maresins, are EPA and DHA metabolites naturally produced in vivo through enzymatic conversion of EPA and DHA. These mediators aid the body's "clean-up" response to the arachidonic acid cascade.[13] Rather than supplying a single molecule or metabolite, which would mirror the pharmaceutical model, Omega Optima fish oils provide all the benefits of EPA and DHA as well as the expected and desirable benefits of their metabolites.*

Recommended use: Helps support/maintain normal cardiovascular health. Helps to reduce serum triglycerides/triacylglycerols (at two gelcaps per day). Helps support cognitive health and brain function. Source of omega-3 fatty acids for the maintenance of good health.

Recommended dose:

Adults and adolescents (12-17 years): Take one to three gelcaps daily.

Adults: Take two to three gelcaps daily to reduce serum triglycerides/triacylglycerols.

Children (6-11 years): Take one to two gelcaps daily.

Medicinal ingredients: Each gelcap contains:

Fish oil (from non-farmed anchovy (Engraulidae – whole), sardine (Clupeidae – whole) and mackerel (Scombridae – whole) body oils)	800 mg
Total omega-3 fatty acids	525 mg
EPA (eicosapentaenoic acid)	320 mg
DHA (docosahexaenoic acid)	185 mg

Non-medicinal ingredients: Vitamin E (mixed tocopherols) from sunflower and non-GMO soybean, natural lemon oil flavour, bovine gelatin, vegetable glycerin, purified water.

Storage: Keep out of the reach of children. Keep in dry, cool place, protected from light.

Do not use if under cap safety seal is broken.

Free from artificial flavours, artificial colours, corn, gluten, wheat, lactose, dairy, artificial preservatives, added sugar, yeast and GMO materials.

MaxSimil® Patented Lipid Absorption Technology

MaxSimil is a registered trademark of Ingenutra Inc. US Patent Nos.: 8119690, 8198324; Canadian Patent Nos.: 2672513, 2677670.
MaxSimil est une marque déposée d'Ingenutra Inc. Nos des brevets américains : 8119690, 8198324. Nos des brevets canadiens : 2672513, 2677670.

IFOS™

Quality verified by IFOS (International Fish Oil Standards). Visit www.ifosprogram.com for more information and testing results.
Qualité vérifiée par le programme IFOS (International Fish Oil Standards). Pour obtenir plus d'information et les résultats des essais, visitez le site www.ifosprogram.com

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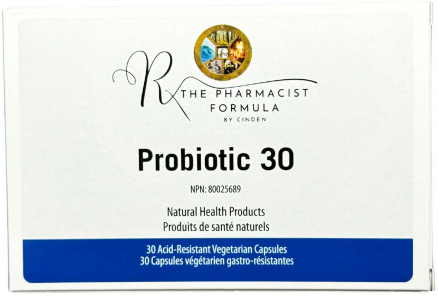
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℞ THE PHARMACIST FORMULA BY CINDEN

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REV. 10/02/2025

Probiotic 30



- Probiotic that provides live microorganisms to contribute to a natural healthy gut flora

The Pharmacist Formula by CinDen
123 A Scurfield Blvd
Winnipeg, MB, Canada

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Discussion

Supplementation with probiotics has many mechanisms of action that benefit health, including but not limited to: (1) supporting metabolic activity, such as the production of short-chain fatty acids and vitamins, nutrient absorption, and digestion of lactose; (2) adhering to intestinal epithelial cells to help maintain a healthy balance of organisms in the intestinal tract; (3) helping to establish populations of good bacteria after disruption in balance; (4) supporting immune function; (5) promoting intestinal epithelial cell survival; (6) supporting healthy bowel function; and (7) degrading oxalates.*[1-8]

Common challenges associated with probiotic supplementation are maintaining stability of the organisms during distribution and shelf life and, once taken by a consumer, survival of the organisms as they travel through the digestive tract so that they reach the target tissue (intestines) alive. To help ensure stability, The Pharmacist Formula packages the Probiotic 30 capsules in sealed, nitrogen-purged aluminum blister packs to serve as protection from factors proven to compromise the stability of probiotics, such as heat, moisture, and oxygen. Careful selection of organisms is another way The Pharmacist Formula helps ensure stability. Careful organism selection, as performed for Probiotic 30, is also a critical aspect of supporting digestive survival. To further support resistance to low pH and the delivery of microorganisms to the small intestines, The Pharmacist Formula employs DRcaps™ gastro-resistant capsules. These specially designed, innovative capsules help slow exposure of actives to stomach acid to promote a more targeted release.*

HOWARU™ (*Bifidobacterium lactis* HN019) Discovered in 1899, *B lactis* play a key role in the human microflora throughout a person's life. Researchers have identified strain HN019 as having excellent probiotic potential based upon its ability to survive the transit through the human gastrointestinal tract, adhere to epithelial cells, and proliferate.[6] *B lactis* HN019 has been extensively studied, and its safety and effectiveness is well accepted.[7,8] To assess the impact of *Bifidobacterium lactis* HN019 supplementation on whole-gut transit time in adults, 100 subjects were given daily doses for 14 days of 17.2 billion colony-forming units (CFU), 1.8 billion CFU, or placebo. Decreases in mean whole-gut transit time over the 14-day study period were statistically significant in the high-dose group and the low-dose group, but not in the placebo group.[8] This level of dosing also supported other parameters of healthy GI function, as were self-reported by patient survey.[8] In another study of preschool-age children, supplementing milk for one year with 1.9 x 10 CFU per day *B lactis* HN019 and 2.4 g/day of prebiotic oligosaccharides supported both healthy iron status and weight gain.[9] In a randomized, double-blind, placebo-controlled human dietary intervention study in elderly subjects (>60 yrs.), supplementary *B lactis* HN019 resulted in statistically significant increases in the beneficial organisms *bifidobacteria* and *lactobacilli*.*[10]

Lactobacillus acidophilus (Lactobacillus acidophilus La-14) This common inhabitant of the human mouth, intestinal tract, and vagina, is also found in some traditional fermented milks (e.g., kefir) and is widely used in probiotic foods and supplements. It has a history of safe human consumption. The *L acidophilus* La-14 strain is of human origin and has been identified as a type A1 *L acidophilus*. *L acidophilus* shows excellent adhesion to human epithelial cell-lines.*[11,12]

Lactobacillus plantarum (Lactobacillus plantarum Lp-115) This bacteria was isolated from plant material and is abundantly present in lactic acid-fermented foods, such as olives and sauerkraut. In vitro studies have shown that *L plantarum* strain Lp-115 has excellent adhesion to epithelial cell lines.[13] In addition, *L plantarum* is resistant to low pH conditions and survives the presence of bile at duodenal concentrations.*[13,14]

Bifidobacterium longum (Bifidobacterium longum BI-05) The *B longum* BI-05 strain is well accepted as safe for human consumption. *B longum* is resistant to low pH and bile salts and is well suited to the intestinal environment.*[14]

Probiotic 30

Probiotic 30B
Medicinal Ingredients (per acid-resistant vegetarian capsule)

HOWARU® Lactobacillus acidophilus .....14.4 Billion cfu (Whole cell, strain: La-14)
HN019™ Bifidobacterium animalis subsp. lactis .....15 Billion cfu (Whole cell, strain: HN019)
HOWARU® Lactiplantibacillus plantarum .....0.3 Billion cfu (Whole cell, strain: Lp-115)
HOWARU® Bifidobacterium longum subsp. longum .....0.3 Billion cfu (Whole cell, strain: Bl-05)

Non-Medicinal Ingredients
Microcrystalline cellulose, Hypromellose, Stearic acid, Magnesium stearate, Silicon dioxide.

Recommended Dose
Children age 1 and up to Adults: Take 1 capsule once daily

Discontinue use and consult a healthcare practitioner if symptomsof digestive upset (e.g. diarrhoea) occur, worsen, or persist beyond 3 days.

Do not use if you are experiencing nausea, fever, vomiting, bloody diarrhoea, or severe abdominal pain. Do not use if you have an immune-compromised condition (e.g. AIDS, lymphoma, patients undergoing long-term corticosteroid treatment).

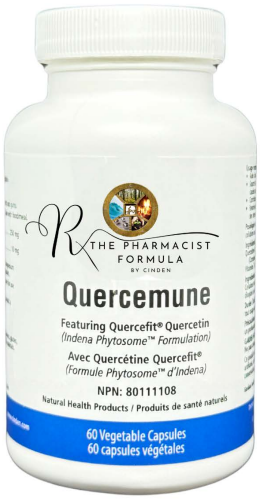
Storage: Store in a cool dry place. Keep out of reach of children.

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THE PHARMACIST FORMULA
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Quercemune

...for immune and cellular protection

- Helps maintain immune system
- Source of antioxidants that helps (cell) against the oxidative damage caused by cell damage caused by free radicals
- Helps in wound healing and connective tissue formation
- Helps in collagen formation to maintain healthy bones, cartilage, teeth and gums

The Pharmacist Formula Meet or Exceed cGMP Quality Standards

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Discussion

What is Quercetin?

Flavonoids are organic compounds found in plants. They act as antioxidants and antimicrobial agents that help plants grow and defend themselves. Quercetin is a specific flavonoid from the flavonol sub-group. Quercetin is abundant in nature and can be found in many of the plant-based foods that humans consume. Onions, tomatoes, apples, berries, grapes, peppers, tea, seeds, nuts, flower buds and capers all contain quercetin. Most of us do get some quercetin daily, but the amount is not high enough to fully capitalize on its many health benefits. On average, humans intake less than 14 mg of quercetin in the daily diet(1).

Quercetin – Numerous health benefits

Quercetin offers the potential for improving physical performance while reducing infection risk. It has been noted for its antiviral, anti-inflammatory, antioxidant, antihistamine, vasodilation and antiaging properties in humans.

The major challenge in unlocking the benefits of quercetin is its poor absorption. Like medicinal plant compounds such as boswellia and curcumin, quercetin has poor solubility in water and is inefficient in crossing cellular membranes into the bloodstream. Studies indicate that only 1-2% of quercetin consumed orally by humans is absorbed by the body(2). Researchers have sought to improve the absorbability of quercetin using several methods. One technology has recently moved to the forefront.

QUERCEFIT® the most absorbable form of quercetin

Indena, an Italian nutritional research company, has become recognized for improving the absorption of numerous medicinal plant compounds. Using its Phytosome® formulation technology to mimic the body's natural digestive processes, Indena has dramatically increased the absorption of curcumin (Meriva®) and boswellia (Casperome®), two natural anti-inflammatories. Now, Phytosome® technology has been put to the task of solving quercetin's absorption issues.
Using Phytosome® technology to complex quercetin extracted from the flower buds of the Japanese Pagoda plant with sunflower sourced lecithin, significantly improved absorption levels have been achieved. This phospholipid complex, known as Quercefit®, is the source of quercetin selected for The Pharmacist Formula Bioavailable Quercemune formulation.

The Quercefit® Phytosome® Solution:

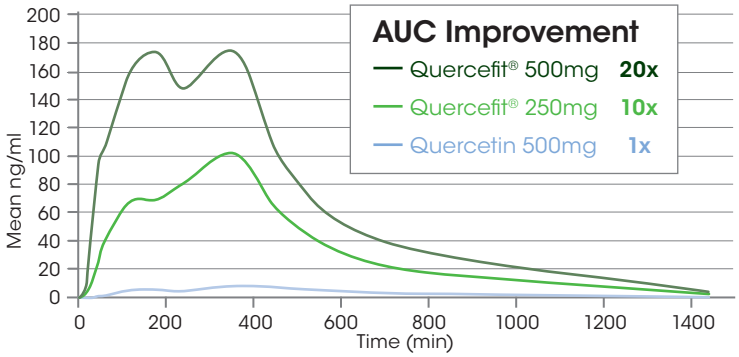
Quercefit® uses Phytosome® technology to complex (envelope) the Quercetin in plant-source phosphatidylcholine which does two things:

1.Protects Quercetin from water damage.
2.Allows Quercetin to pass more efficiently through the cell membranes of the intestinal tract and into the bloodstream.

Quercemune

20X superior absorption

The lecithin phospholipid utilized in Phytosome® technology protects quercetin from degradation by water and shuttles it through the membrane of intestinal tract more efficiently. This mimics how taking quercetin with a fatty meal could improve absorption. By using the Phytosome® delivery method, quercetin levels in the blood tested 20 times higher in blood measurements when patients take Quercefit® vs. standard quercetin at comparable doses.3 Quercefit® delivers levels of quercetin that one would get from a very quercetin-rich diet – something few of us attain.



In a recent published study, the Quercefit® Phytosome® formulation was shown to be 20X more absorbable when taken at a 500 mg dose vs. an equivalent dosage of quercetin alone. This greater absorption is key to getting the best effectiveness from quercetin supplementation.

Quercefit® Quercetin Phytosome Clinical Evidence



Quercefit®'s superior absorption makes it the quercetin of choice for anyone seeking the many benefits of this powerful flavonol.

Quercefit® has been the subject of several clinical studies to validate its clinical effectiveness.

Study	Results
Viral infection prevention and recovery	Quercefit®'s anti-inflammatory properties may play a role in assisting with viral illness recovery based on several recent studies. • Quercefit®, when added to patients' standard care for a viral respiratory infection, reduced the need for hospitalization, length of hospitalization and the need intensive therapeutic interventions such as oxygen therapy.[4] • Quercefit® given to patients receiving standard care experienced better relief of symptoms such as dry cough, sore throat and were able to clear viral infections earlier.[5] • In a study of health care workers over a 5-month period, there was a 14% protection factor against viral infection occurrence and reduced infection duration for those workers taking Quercefit®.[6]
Managing mild-to-moderate respiratory conditions	Quercetin is known to have anti-inflammatory and antihistamine properties. • Patients supplementing Quercefit® in conjunction with standard asthma care showed improved symptoms over standard care alone. Quercefit® reduced day and night symptoms, decreased the need for nasal drops and rescue medications and improved rhinitis symptoms.[7]
Athletic performance	Triathletes require the highest levels of endurance to deal with fatigue and physical stress. The ability to recover quickly to resume further training and performance is also key. • Athletes using Quercefit® were put through 8 athletic trials (swim/bike/run) over a 14-day period. The Quercefit® group was able to improve its performance time by 11.3%, almost 3 times the improvement of the control group. Additionally, the Quercefit® athletes had lower post-run muscle pain, cramps and strain, reduced oxidative stress, along with quicker post-exercise recovery times. The improvements were believed to be due to Quercefit®'s anti-inflammatory and antioxidant properties.[8]
Safety for use with blood thinners and diabetic medications	Quercetin holds many potential benefits for the elderly and for metabolic conditions such as diabetes, but safety is always a concern for those on medications. • A safety study determined that Quercefit® did not alter the effectiveness of antiplatelet (aspirin) or anticoagulant medications (Warfarin or dabigatran). It was also demonstrated that it had no adverse interference with metformin - one of the primary diabetic medications.[9]

Quercemune Capsules

Recommended use: Helps maintain immune system. Source of antioxidants that helps protect (cell) against the oxidative damage caused by cell damage caused by free radicals. Helps in wound healing and connective tissue formation. Helps in collagen formation to maintain healthy bones, cartilage, teeth and gums.
Recommended dose: Adults: Take 1 capsule, 1-2 times per day. Take with food/meal. **Medicinal ingredients:** Each vegetable capsule contains:

Quercefit® (Quercetin Phytosome®) ..... 250 mg
(Sophora japonica Quercetin-Phosphatidylcholine Complex)
Vitamin C (ascorbic acid) ..... 10 mg

Non-medicinal ingredients:
Microcrystalline cellulose, dicalcium phosphate, vegetable grade magnesium stearate, colloidal silicon dioxide and hypromellose
(vegetable capsule).
Cautions and warnings: If you are pregnant or breastfeeding, consult a health care practitioner prior to use.
KEEP OUT OF THE REACH OF CHILDREN. Do not use if under cap safety seal is broken.
Does not contain: animal derivatives, artificial colours, artificial flavours, gluten, wheat, lactose, dairy, preservatives, soy, added sugar, yeast and GMO materials.

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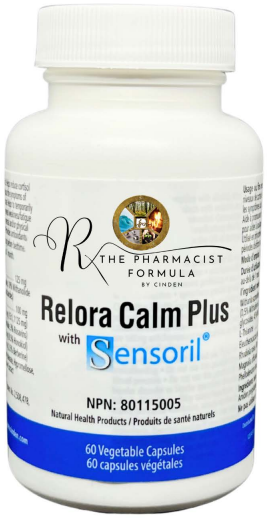
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Relora Calm Plus



- Helps support cardiovascular health.*
- Helps reduce cortisol and C-reactive protein levels, the biomarkers of physical stress.*
- Helps reduce the symptoms of stress, such as fatigue, sleeplessness, irritability, and inability to concentrate.*
- Helps to temporarily promote relaxation.*
- Used in Herbal Medicine as a tonic to help relieve general weakness/fatigue and/or to aid during recovery.*
- Used in Herbal Medicine to help improve mental and/or physical performance after periods of mental and/or physical exertion. Source of/Provides antioxidants.*

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Relora Calm Plus

Discussion

Relora Calm Plus is a multifunctional herbal supplement that has far-reaching and complementary benefits for individuals seeking help in dealing with everyday stress. It features a unique combination of clinically tested and patented ingredients, including Relora®, Sensoril®, and Suntheanine®, along with Siberian Ginseng and Rhodiola. Together, these herbs help the overstressed body and mind work toward their normal state of balance and resolve many of the biochemical changes that occur as a result of repeated, frequent exposure to stressors and cortisol.*

Relora® is a patented and proprietary blend of *Magnolia officinalis* and *Phellodendron amurense* bark extracts standardized to honokiol and berberine, respectively. These herbs have a history of traditional use in treating stress and occasional feelings of anxiousness. In modern times, they and their actives (honokiol and berberine) are used to support relaxation and reduce the perception of stress and stress-related eating. Rodent stress studies demonstrate a reduction in induced feelings of anxiousness.[1,2] Human studies demonstrate positive changes in DHEA (dehydroepiandrosterone) and cortisol levels, less weight gain (compared to controls), and reductions in perceived stress and transitory feelings of anxiousness in subjects taking Relora (500 mg to 750 mg for four to six weeks).[2-5] As an example, cortisol exposure and psychological mood states were studied in 56 subjects (35 men and 21 women) taking Relora (250 mg twice daily) or placebo. After four weeks of supplementation, salivary cortisol exposure was significantly ($p<0.05$) lower (−18%) in the Relora group compared to placebo. The Relora group also had significantly better ($p<0.05$) mood state parameters, including lower indices of overall stress (−11%), tension (−13%), anger (−42%), occasional fatigue (−31%), and confusion (−27%), and higher indices of global mood state (+11%) and vigor (+18%).*[3]

Sensoril® is an optimized ashwagandha (*Withania somnifera*) root and leaf extract that represents a major advancement in ashwagandha preparations. Sensoril's proprietary and patented extraction process produces very high, powerful levels of stress-fighting, cognition-enhancing ashwagandha bioactive constituents. In fact, Sensoril is standardized to a minimum of 10% glycowithanolides. Sensoril's excellent safety record is one of the most comprehensive of any ashwagandha ingredient sold.* Ashwagandha has been revered as an adaptogen for thousands of years. It is used to balance, energize, and revitalize the body and for its value as a cognition enhancer. Sensoril possesses multiple health benefits, and its superior efficacy has been demonstrated in randomized, double-blind, placebo-controlled human clinical trials.[6-10] The results of these trials revealed that Sensoril, taken in doses of 500 to 1000 mg/d, supported healthy cortisol and DHEA levels; enhanced working memory, reaction time, and cognitive capacity; improved auditory-verbal working memory; ameliorated negative changes in cardiovascular parameters associated with mental stress; and improved endothelial function and glucose and lipid metabolism.*

Suntheanine® is a pure form of L-theanine that is produced via a patented fermentation process, resulting in a 100% pure L-isomertheanine. Clinical research suggests that 50 to 200 mg/d of Suntheanine naturally stimulates activity in the brain known as alpha waves, which are associated with a relaxed but alert mental state.[11] L-theanine had significant anti-stress effects on experimental animals under psychosocial stress.[12] In humans, similar results were observed wherein L-theanine helped the body resist biochemical changes associated with stress.[13,14]

In a randomized, double-blind, placebo controlled trial, a high dose of Suntheanine (400 mg/d) given to boys, aged 8-12 years, improved aspects of sleep quality, including significantly higher sleep percentage and sleep efficiency scores as well as a non-significant trend for less activity during sleep.*[15]

Eleutherococcus senticosus (Siberian ginseng - Root) Eleutherococcus senticosus, commonly known as Siberian ginseng, has been traditionally valued for its numerous health benefits. The root of this adaptogenic herb is rich in bioactive compounds that are believed to enhance the body's resilience to stress, both physical and mental. Siberian ginseng is renowned for its ability to boost energy levels, reduce fatigue, and improve overall stamina. It is often used to support the immune system, promoting a robust defense against infections and illnesses. Additionally, Siberian ginseng is recognized for its potential to enhance cognitive function, including improved concentration and mental clarity. As an adaptogen, it helps the body adapt to various stressors, contributing to a sense of balance and well-being. Whether incorporated into dietary supplements or herbal formulations, Siberian ginseng continues to be a popular choice for those seeking natural support for vitality and stress resilience.

Rhodiola rosea (rhodiola) This adaptogenic herb has been used traditionally in Eastern Europe and Asia for centuries to increase stamina, maintain a healthy mood, support the nervous and immune systems, and maintain healthy male sexual function.[8,9] According to Panossian et al, experimental studies performed on isolated organs, tissues, cells, and enzymes demonstrate that rhodiola preparations exhibit adaptogenic effects that support nerve, brain, and heart health and are calming, longevity-enhancing, and central nervous system- stimulating.[9] In addition, experimental animal models suggest that the root extract may be able to support normal heart rhythm.[10] Rhodiola may also have a positive effect on brain neurotransmitters, such as dopamine and serotonin, and may influence endogenous opioid levels. [8] According to a review of the literature on rhodiola, supplementation supports healthy work performance, quality of sleep, appetite, and energy levels subsequent to intense physical or intellectual strain. Salidrosides and rosavin have been identified as primary actives. The rhodiola extract in this formula is standardized to provide no less than 1%-3% salidrosides and 3% rosavin.*

Medicinal Ingredients (per capsule):

Withania somnifera (Ashwagandha - Root, Leaf) ..... 125 mg
(0.5% Withaferin A, 0.05% Withaferin A, 20% Withanolide glycosides, 10% Withanolide glycosides, 45% Withania oligosaccharides, 32% Withania oligosaccharides)
L-Theanine ..... 100 mg
Eleutherococcus senticosus (Siberian ginseng - Root)..... 75 mg (15:1, 1125 mg)
Rhodiola rosea (Root) ..... 37.5 mg (1% Salidroside, 3% Rosavins)
Magnolia officinalis (Magnolia Bark - Stem bark) ..... 34.38 mg (8.5% Honokiol)
Phellodendron amurense (Aged bark)..... 11.25 mg (2.5% Berberine)

Non-medicinal ingredients: Lavender Flower Extract, Microcrystalline cellulose, Magnesium stearate, Hypromellose, Pregelatinized starch, Corn Starch, Silica, Maltodextrin,

Directions of Use: Adults: Take 1 capsule twice a day. Avoid taking at bedtime.

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RELORA

†Relora® is a registered trademark of NPI, LLC
††U.S. Patent No. US 6,582,735

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Suntheanine® is a registered trademark of Taiyo International, Inc.

THE PHARMACIST FORMULA
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REV. 10/02/25

Sere-Calm



- Helps to temporarily promote relaxation

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Green tea, prepared from the *Camellia sinensis* plant, has been consumed since ancient times for its calming influence. Modern research has looked into this "ancient wisdom" and revealed that L-theanine, an amino acid found almost exclusively in green tea, has specific and positive effects on the brain and nervous system, especially the promotion of relaxation without drowsiness.*

Neurological and Brain Support Human studies suggest that within 40 minutes of oral administration, L-theanine positively affected alpha waves in the brain, a phenomenon indicating relaxation.[1] An eight-week, randomized, double-blind, placebo-controlled study, based on the premise that L-theanine "possesses neuroprotective, mood-enhancing, and relaxation properties,"[2] suggested that 400 mg of L-theanine per day was found to be safe and effective. A double-blind counterbalanced study suggested that oral L-theanine positively influenced heart rate and salivary IgA levels, attenuated sympathetic nervous system activation, and positively supported individuals' normal response to stress. [3] In examining L-theanine's effect on cognition, a randomized, double-blind, placebo-controlled study of 91 subjects suggested that individuals taking a combination of L-theanine and green tea extract experienced significant increases in theta waves in several areas of the brain, indicative of increased cognitive alertness.*[4]

In cell studies, L-theanine appears to support neuronal health despite the presence of environmental toxins that ordinarily would increase the vulnerability of nigral dopaminergic neurons and negatively affect their function. L-theanine also appears to support neurological health by exerting a positive and significant impact on neurotrophic factors in the brain and assisting cell-signaling activity.*[5]

Research into animal neurochemistry suggests that L-theanine positively supports overall nervous system health and activity due to its positive effects on serotonin, dopamine, and GABA levels, as well as its modulation of excitatory and inhibitory neurotransmission.[6,7] L-theanine crosses the blood-brain barrier intact and may continue to balance neurochemistry by blocking glutamate transport, significantly reducing levels of extracellular glutamate and supporting the release of dopamine and glycine from neurons.*[6,8,9]

Hepatic, Detoxification, and Cardiovascular Support Research studying ethanol metabolism and hepatic toxicity in animals suggests that administration of L-theanine increases liver alcohol dehydrogenase and aldehyde dehydrogenase activity, reducing blood ethanol concentration within one hour compared to controls. It is also suggested that L-theanine's effect on cytochrome P450 2E1 activity, glutathione recovery, and antioxidant mechanisms supports healthy liver tissue and function.[10-12] L-theanine was observed to significantly inhibit hydrogen peroxide-induced cell death, and it may play an important role in the maintenance of liver health.[13] L-theanine, along with green tea polyphenols, was found to provide antioxidant activity that supports healthy LDL and oxidation levels and may subsequently support cardiovascular health.[14-16] Animal and human studies suggest that L-theanine supports healthy blood pressure in the normal range, in part because it moderates the negative side effects of caffeine.*[1,17,18]

L-theanine and Suntheanine® Although theanine exists in both L- and D- forms, L-theanine is the preferred form due to its greater intestinal absorption and renal retention.[19] An analysis of six commercial products revealed that five of them contained the poorly absorbed D-theanine along with L-theanine. Only Suntheanine, the brand in The Pharmacist Formula Sere-Calm, appeared to contain only the preferred L-theanine enantiomer.[20] Suntheanine is protected by several patents that cover applications, such as reducing anxiety and promoting relaxation. The FDA has consequently approved the following structure/function claims regarding L-theanine: it reduces stress, it eases nervousness due to common everyday overwork and fatigue, and it reduces nervous irritability.[18,21] The Pharmacist Formula Sere-Calm provides 400 mg of Suntheanine L-theanine per two-capsule dose.*

Sere-Calm

Medicinal Ingredients per vegetable capsule)

L-Theanine from *Camellia sinensis*) ..... 200 mg

Non-Medicinal Ingredients

Hypromellose, microcrystalline cellulose, stearic acid, magnesium stearate, silica, medium-chain triglycerides.

Recommended Dose

Adults Take 1 capsule daily or as directed by your health care practitioner.

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THE PHARMACIST FORMULA
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Tri-Magnesium



- Helps in energy metabolism, tissue formation and bone development.
- Helps in the development and maintenance of bones and teeth
- Helps maintain proper muscle function
- Helps to prevent magnesium deficiency.

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Discussion

Di-Magnesium Malate, the other chelate in Magnesium, contains 69% malate (malic acid). Malic acid was chosen because it forms complexes with magnesium.[2] Magnesium and malate play critical roles in energy production under aerobic conditions or when oxygen is lacking.[3] Malic acid also appears to exert a protective effect by binding aluminum.*[4]

Magnesium, the fourth most abundant mineral in the body, participates in about 300-350 enzymatic reactions in nearly all tissues. Deficiency is common and results from poor dietary intake, poor absorption, and excessive losses through urine, stool, perspiration, or lactation. Certain drugs, certain herbs, poor kidney function, excessive alcohol intake, and drinking mostly “soft” water can contribute to magnesium depletion as well.*[5]

Magnesium’s role in the clinical applications cited above is quite well established. Beyond these commonly recognized applications, researchers have demonstrated that magnesium can support cytokine balance and decrease sensitivity to oxidative stress.[6] An analysis of the results of a National Health and Nutrition Examination Survey (NHANES) suggested that children who consumed less than 75% of the recommended dietary allowance (RDA) for magnesium were 58% more likely to have elevated C-reactive protein (CRP) levels.[7] Magnesium’s role in modulating CRP and supporting the body’s normal response to inflammation may be
significant. In addition, although underlying mechanisms remain unclear, it appears that men who consume diets rich in magnesium are able to maintain healthy gallbladder function.[8] Adequate magnesium intake indeed has strong, far-reaching health benefits.*[9]

Tri-Magnesium

Medicinal ingredients: Quantity per 1 capsule:
Magnesium ..... 105 mg
(Albion™ Di-Magnesium Malate, Albion™ Magnesium Bisglycinate, Magnesium Taurate)

Non-medicinal ingredients: Hypromellose, Cellulose, Magnesium stearate, Silicon dioxide.

Recommended Dosage:

Adults 19 years and older:
Take 2 Capsules 2 times per day.

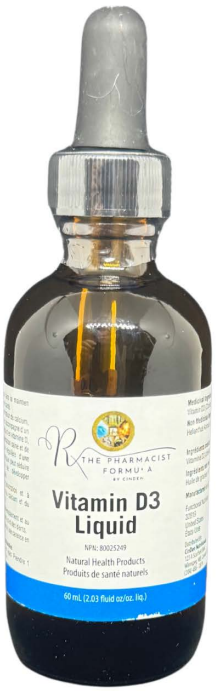
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Vitamin D3 Liquid



- A factor in the maintenance of good health
- Calcium intake, when combined with sufficient Vitamin D, a healthy diet and regular exercise may reduce the risk of developing osteoporosis
- Helps in the absorption and use of calcium and phosphorus
- Helps in the development and maintenance of bones and teeth
- Helps to prevent vitamin D deficiency

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Discussion

While vitamin D3 (cholecalciferol) is made in the skin when 7-dehydrocholesterol reacts with sunlight, many things affect the degree to which this biosynthesis occurs, including time of day, seasons, location, smog/pollution, clothing, shade of skin (darker skin requires more sun), and sunscreen use. Low-cholesterol diets and certain cholesterol therapies can also affect vitamin D formation. By some estimates, one billion people worldwide have vitamin D deficiency or insufficiency.[1] Reversing deficiency and maintaining optimal serum vitamin D levels beneficially impacts biochemistry and numerous body systems; this is largely because calcitriol—the metabolic product of vitamin D—is a secosteroid hormone that targets over 200 genes in a wide variety of tissues.[2,3] As the research demonstrates, vitamin D is clearly imperative for the development, growth, and maintenance of a healthy body from gestation to senescence.*

Bone Health The body needs vitamin D to absorb calcium, and the importance of vitamin D in skeletal health and bone density is well established. Although bone density is most often associated with calcium intakes, insufficient vitamin D negatively affects calcium absorption.[3] Without adequate absorption, the body must take calcium from its stores in the skeleton, which weakens existing bone and prevents the formation of strong, new bone. Clinical research shows that taking vitamin D orally with calcium supplements can support healthy bone turnover[4-6], and adequate calcium and vitamin D throughout life—as part of a well-balanced diet—may reduce the risk of osteoporosis.*

The Expanding Roles of Vitamin D The role of vitamin D in good health continues to expand as the knowledge of this vitamin's effects on different body systems grows. Research now suggests that optimal serum levels of vitamin D support normal cell differentiation,[3,7] cardiovascular health,[2,3] normal immune function,[8] good balance,[2] healthy mood,[9] normal fetal development,[10] neuronal growth and neurodevelopment,[2,3,10,11] healthy glucose metabolism,[2,3] musculoskeletal comfort,[2,3] periodontal health,[12] and normal intestinal immune responses.[8] Areas of research that have gained momentum over the past several years concern the relationship of vitamin D deficiency or insufficiency to changes in cellular proliferation, changes in fetal brain development, and mental health.[7,10,13-15] Evidence is also mounting that vitamin D supplementation may provide key immune support.*[16-19]

D2, D3, and Metabolites As previously stated, D3 is the form of vitamin D produced in the skin. D2 (ergocalciferol) is derived from fungal sources by activating ergosterol with ultraviolet light. It is not naturally present in the human body. After vitamin D is formed in the skin or taken orally, it is metabolized into two different substances within the body: calcidiol (25-hydroxyvitamin D) and calcitriol (1,25-dihydroxyvitamin D). Calcidiol is the body's main storage form of vitamin D, while calcitriol (made from calcidoil) is "activated" vitamin D. Although D2 and D3 are similar biochemically, a recent study reported D3 to be approximately 87% more potent in raising and maintaining serum calcidiol concentrations and in producing two- to threefold greater storage of vitamin D than did equimolar D2.*[20]

Vitamin D3 Liquid

Medicinal Ingredients (per Drop)
Vitamin D3 (Cholecalciferol) ..... 25 mcg (1000 IU)
Non-Medicinal Ingredients
Helianthus Annuus (Sunflower) Seed Oil.

Recommended Dose
All ages: Take 1 drop every day

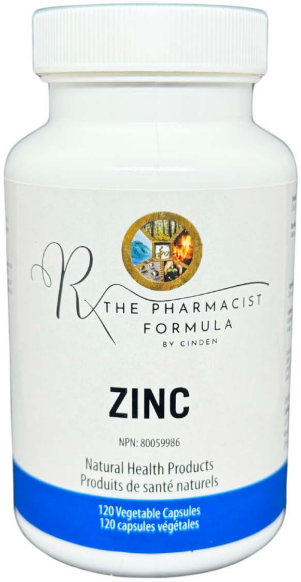
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Zinc

- Zinc helps support immune and metabolic functions in the body

All The Pharmacist Formula Meet or Exceed cGMP Quality Standards

Discussion

Zinc is an essential trace mineral and serves important roles in the body. More than 300 enzymes depend on zinc for their normal activities in cellular metabolism. As a cofactor, zinc participates in carbohydrate and protein metabolism as well as copper-zinc superoxide dismutase (CuZnSOD) antioxidant activity. Zinc's role in supporting immune function includes regulating T lymphocytes, natural killer cells, CD4 cells, and interleukin II.[1] A review of the research suggests that "zinc supplementation can significantly reduce the morbidity and mortality of apparently well-nourished children and shorten the time to recovery from acute [health problems]."*[2]

Zinc's pivotal role in protein metabolism translates into a pivotal role in wound healing, DNA synthesis, normal inflammatory response, and normal growth and development during childhood, adolescence, and pregnancy.[3] Zinc helps maintain the structural integrity of cell membranes; it assists them in their normal function and protects them from oxidative damage.[4] Research in human subjects of various ages suggests that zinc supplementation decreases oxidative stress markers, supports a normal response to inflammation, and appears to be a factor in balancing TH1 and TH2 immune cell activity.[5,6] Skin and mucous membranes also depend on zinc for their maintenance and integrity.*[3,7]

Zinc and vitamin A have a fundamental relationship as zinc is required for synthesis of retinol-binding protein—the protein that transports vitamin A in the blood. Zinc is also essential to the production of an enzyme that converts vitamin A to one of its active forms, and this helps support vitamin A's vital role in night vision.[4] Zinc supports healthy vision in general, especially as we age.[8] Zinc's role in sensory perception extends not only to vision but also to normal taste and smell acuity.*[1,4,5,9]
Zinc is highly concentrated in the liver, pancreas, kidneys, bone, muscles, eyes, prostate gland, sperm, skin, hair, and nails.[1] The mineral is required for sperm maturation and fetal development. The endocrine system relies on adequate zinc status to assist in the regulation of insulin activity and the conversion of thyroxine (T4) to the active thyroid hormone triiodothyronine
(T3).[1] Zinc's regulatory role extends to gene expression, cell signaling, and nerve impulse transmission, as well as normal apoptosis.*[4]

The body has no specialized system for storing zinc, so daily intake and absorption is essential.[3] Phytates—elements found in plant-based, high-fiber foods—can bind minerals (including zinc) and inhibit their absorption. Therefore, the bioavailability of dietary zinc may be compromised.[8] Other minerals, including iron, calcium, and copper, can interfere with zinc absorption, further affecting zinc nutriture.[4] Gastrointestinal and urinary zinc losses should be considered as well. Assessment of overall zinc status must take into account not only intake but also absorption and retention. The Pharmacist Formula Zinc —an Albion® TRAACS amino acid chelate—is a high-potency source of zinc formulated for enhanced absorption. In this form, zinc is coupled with two glycine molecules to facilitate its absorption across the intestinal wall and reduce interference from phytates and competing minerals.*[10]

Medicinal Ingredients (per vegetarian capsule)

Zinc (Zinc bisglycinate)..... ..... 20 mg

Non-Medicinal Ingredients

Microcrystalline cellulose, HPMC (capsule), stearic acid, magnesium stearate, silica.

Recommended Dose

Adults: Take 1 capsule daily or as directed by your healthcare practitioner. Take with food a few hours before or after taking other medications.

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THE PHARMACIST FORMULA
BY CINDEN

123 A Scurfield Blvd
Winnipeg, MB, Canada
(204) 488-1819

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Contact & Ordering Information

The Pharmacist Formula by CinDen

Email: info@cinden.com

Phone: 1-204-488-1819

Website: www.cinden.com/shop

Wholesale: www.cinden.com/wholesale

Address: **123A Scurfield Bvld.**
Winnipeg, Manitoba
R3Y 1L6
Canada