



# HPA Axis Support Booklet

Presented by:

Dr Kamal Karl MBBS, FRNZCGP, FACNEM, FNZCAM, FACCS

*“HPA Axis Dysfunction in Chronic Disease Management”* Webinar





# CONTENTS

Product	Page	Product	Page
<b>Improve Glycemic Control</b>		<b>Balance Cortisol Feedback Mechanisms</b>	
Berberine-500	1	a-Drenal	11
GlucoFunction	1	Ashwagandha	9
Medi Restore	2	Ayu-Phos	9
UltraChrome-500	2	Cortisol Calm	10
		L-theanine	10
<b>Decrease Inflammatory Signalling</b>		<b>Adrenal Support - Protect Zone Reticularis</b>	
Boswelya Plus	3	a-Drenal	9
Curcutex	3	Ashwagandha	11
CytoQuel	4	C-RLA – Liposomal Vitamin C	11
ProOmega 2000	4	CytoQuel	11
<b>Increase Circadian Signaling</b>		<b>Nutrient Support for Adrenal Steroidogenesis</b>	
5HTP-CR	5	a-Drenal	12
Ayu-Phos	5	C-RLA – Liposomal Vitamin C	13
Cortisol Calm	10	Double Strength Zinc Picolinate	13
L-Tyrosine	6	Magnesium Glycinate	14
Magnesium Glycinate	6	Niacinamide B3	14
Sleep & Relax	6	Stress B – complex	12
<b>Balance Neurotransmitters/Neurosteroids</b>		<b>Functional Testing</b>	
5HTP-CR	7	DUTCH Complete	15
Double Strength Zinc Picolinate	7	DUTCH Plus	16
L-5MTHF	7		
L-Tyrosine	8		
Magnesium Glycinate	8		
Methyl Fortify			

# IMPROVE GLYCEMIC CONTROL



## Berberine-500

Berberine is an alkaloid present in a number of plants, including Barberry, Tree turmeric, Oregon grape, Goldenseal and Goldthread. Although most well-known for its antimicrobial activity (against bacteria, viruses, protozoans, helminthes, fungi, and Chlamydia), this plant extract also demonstrates important benefits for:

- Blood-sugar management and insulin sensitivity.
- Cardiovascular support and healthy lipid levels.
- Gastrointestinal health – eradication of bacteria overgrowth (hydrogenic bacteria).
- Biofilm disruptor activity.
- Weight management.
- Oncology support, immune modulation, and cognitive support.

In a three-month clinical study, 116 subjects with type 2 diabetes and dyslipidemia received either 1 g berberine daily or placebo. Statistically significant decreases were seen in the berberine group in fasting and post-prandial glucose levels, hemoglobin A1c (HbA1c), triglycerides, and total- and LDL-cholesterol.

## Supplement Facts

Serving Size: Two Capsules	
Servings Per Container: 30	
<b>Two Capsules Contain:</b>	
Berberine HCl (from Indian Barberry extract) (root) ( <i>Berberis aristata</i> )	1 g *
*Daily Value (DV) not established.	
Other Ingredients: Hypromellose (derived from cellulose) capsule, Microcrystalline Cellulose, Silicon Dioxide, Leucine.	

**Suggested Use:** 1-2 capsules twice daily.

Clinical Research Paper available from Thorne Research: *A versatile Botanical Compound With Wide Clinical Application available.*



## GlucoFunction

A combination of key nutrients, antioxidants and herbal extracts designed to promote healthy glucose uptake and metabolism, microcirculation and pancreatic function.

- Chromium, Magnesium and Zinc – key nutrients involved in glucose transport, utilization and gluconeogenesis.
- Gymnema sylvestre – shown to promote healthy glucose uptake into the intestines, supports enzyme activity for glucose utilization and promotes healthy pancreatic beta cell function.
- Bitter melon – supports kidney health and blood glucose metabolism.
- Cinnamon – promotes healthy glucose and lipid metabolism by supporting healthy receptor activity.
- Vitamin C and Alpha lipoic acid – antioxidant support, red blood cell and vascular health.
- Chromium – shown to be most effective in reducing depressive symptoms for those individuals with pronounced carbohydrate craving and over-eating features which are present in 'atypical depression'.

## Supplemental Facts

<b>Amount Per Serving</b>	
three vegetarian capsules contain:	
vitamin C (as ascorbic acid)	200 mg
biotin	6 mg
magnesium (as magnesium citrate)	150 mg
zinc (as zinc citrate)	15 mg
chromium (as chromium polynicotinate)	400 mcg
vanadium (as bis-glycinato oxo vanadium (BGOV))	1.5 mg
alpha lipoic acid (thioctic acid)	300 mg
cinnamon (cinnamomum cassia) extract (dried bark)	250 mg
gymnema (gymnema sylvestre) extract (leaf)	150 mg
bitter melon (momordica charantia) extract (fruit)	225 mg
other ingredients: vegetarian capsule (cellulose, water)	
3 capsules daily, in divided doses, before meals.	

**Suggested Use:** 3 capsules daily, in divided doses, before food.

# IMPROVE GLYCEMIC CONTROL



researchnutrition

## Medi Restore

Research Nutrition's Medi Restore is a great tasting, highly concentrated nutritional support formula. The formula is comprised of low allergen, synergistic ingredients to support numerous body processes and systems including digestion, detoxification, immune function, inflammatory balance, energy production and healthy weight management.

- Provides a complete source of protein, 100% certified organic protein – 28 grams of protein per serve.
- Serves as a nutritious meal replacement providing a therapeutic and comprehensive dose of B vitamins and trace minerals.
- Supports healthy gut membrane integrity.
- Provides a source of prebiotic fibre for healthy intestinal flora.
- Supports healthy detoxification and liver function.
- Contains botanicals Silymarin (Milk Thistle) – detoxification, antioxidant and liver support.
- Matcha Green Tea powder and Pomegranate husk – for digestion and microbial balance.
- Ginger – supports digestion and balanced inflammatory response.
- Additional amino acids Glutamine, Glycine and Taurine for extra support.
- Dairy/Whey and Soy free and Vegan friendly.

### NUTRITION INFORMATION

Serving Size: 1 - 2 scoops (22.9g) – (45.8g)

	Quantity Per Single Scoop Serve	Quantity Per Double Scoop Serve
Energy	289kj	578kj
Protein	14.0g	28.0g
Fat, Total	0.8g	1.6g
- Saturated	0.7g	1.4g
Carbohydrate, Total	1.6	3.2g
- Sugars	0g	0g
Fibre	4.1g	8.2g
- Soluble	3.6g	7.2g
- Insoluble	0.5g	1.0g

### Each Level Scoop (22.88g) Contains:

Oryza sativa (Rice) seed extract concentrate	10,000 mg
equiv. Oryza sativa dry seed	100,000 mg
Pisum sativum (Pea) seed extract concentrate	3,320 mg
equiv. to Pisum sativum dry seed	28,220 mg
L-Glutamine	1,500 mg
L-Glycine	1,500 mg
Larix (Larch) Arabinogalactan	1,000 mg
Taurine	350 mg
Ascorbic Acid (Vitamin C)	250 mg
Palm Tocotrienols Complex (Mixed Vitamin E)	110 mg
(from environmentally sustainable source)	
Choline Dihydrogen Citrate	30 mg
Thiamine Hydrochloride	20 mg
equiv. to Thiamine	17.8 mg
Riboflavin-5-Phosphate Sodium	5 mg
equiv. to Riboflavin	3.93 mg
Nicotinamide	50 mg
Calcium Pantothenate	55 mg
equiv. to Pantothenic Acid	50 mg
Pyridoxal-5-Phosphate	15 mg
equiv. Pyridoxine	10.26 mg
Calcium L-5-methyltetrahydrofolate	220 mcg
equiv. Levomefolic acid (L-5MTHF)	200 mcg
Hydroxocobalamin	200 mcg
Biotin	50 mcg
Cholecalciferol (Vitamin D <sub>3</sub> )	(400 IU) 10 mcg
Magnesium Citrate	322 mg
equiv. elemental Magnesium	50 mg
Calcified Lithothamnion Species (Red Algae)	157 mg
equiv. to elemental Calcium	50 mg
Zinc Citrate Dihydrate	46 mg
equiv. elemental Zinc	15 mg
Manganese Glycinate	3,700 mcg
equiv. elemental Manganese	1,000 mcg
Selenomethionine	130 mcg
equiv. elemental Selenium	50 mcg
Chromium Nicotinate	200 mcg
equiv. elemental Chromium	25 mcg
Molybdenum Trioxide	75 mcg
equiv. elemental Molybdenum	50 mcg
Potassium Iodide	65 mcg
equiv. elemental Iodine	50 mcg
Silybum marianum (Milk Thistle) extract (80% Silymarin)	150 mg
equiv. Silybum marianum dry seed	10,500 mg
Punica granatum (Pomegranate Husk) extract	200 mg
equiv. Punica granatum dry peel	4,000 mg
Camellia sinesis leaf (Matcha Green Tea) powder	250 mg
equiv. Caffeine	4.5 mg
Zingiber officinale (Ginger) root powder	135 mg

Excipients: Medium Chain Triglycerides, Hypromellose, Xanthan Gum, Xylitol, Monk Fruit Extract, Stevia, Natural Vanilla Flavour, Colloidal Anhydrous Silica.

**Suggested Use:** Blend, shake, or briskly mix 1-2 scoops with at least 200ml of water/coconut milk per day.



THORNE RESEARCH  
Pure ingredients. True health. Whole life.

## UltraChrome 500

UltraChrome is Thorne Research's patented chromium product, consisting of chromium arginate and chromium 4-oxypyridine, 2,6-dicarboxylate. Compared to other chromium compounds, including picolinates, this combination of chromium chelates appears to have the highest bioavailability.

- Shown to provide high tissue levels of chromium.
- Helps maintain healthy blood sugar levels.

## Supplement Facts

Serving Size: One Capsule  
Servings Per Container: 60

Each Capsule Contains:	% DV
Chromium (as Chromium Chelidamate Arginate)†	500 mcg 417%

Daily Value (DV)

Other Ingredients: Microcrystalline Cellulose, Hypromellose (derived from cellulose) capsule, Leucine, Silicon Dioxide.

**Suggested Use:** Take 1 capsule one to two times daily or as recommended by a health-care practitioner.

If pregnant, consult your health-care practitioner before using this product.

†Thorne's trade name for Chromium (4 oxypyridine, 2,6-dicarboxylate, arginate) is UltraChrome®. Its use in this product is protected by U.S. Patent No. 5,665,385.

**Suggested Use:** 1 capsule one to two times daily.



# DECREASE INFLAMMATORY SIGNALING



## Boswelya Plus

Boswelya Plus™ contains a standardized extract of *Boswellia serrata*, which supports a healthy inflammatory response and healthy blood circulation.

- Zingiber officinale (Ginger), *Withania somnifera*, and *Curcuma longa* have long been used in Ayurveda to help provide support for joint and cartilage function.
- Curcumin – supports the maintenance of a healthy inflammatory response.
- Glucosamine sulphate and chondroitin – nutritional support for healthy joints.
- Bromelain – supports a healthy inflammatory response.

## Supplement Facts

Serving Size: 1 Caplet

Servings Per Container: 90

Proprietary blend containing	272 mg	*
Bromelain 2400 GDU		*
Glucosamine Sulphate 2KCl	95%	*
Chondroitin sulphate sodium	90%	*

Extracts of:	Amt. Per Serving	%DV
<i>Boswellia serrata</i> (containing 150 mg of Boswellic acid)	300 mg	*
<i>Zingiber officinale</i>	100mg	*
<i>Withania somnifera</i>	100mg	*
<i>Curcuma longa</i>	50mg	*

### \*Daily value not established

Other Ingredients: Calcium Carbonate, Microcrystalline Cellulose, Stearic Acid, Croscarmellose Sodium, Magnesium Stearate™, and Silicon Dioxide, Natural Glaze Coating.

™Magnesium stearate from vegetarian source

Free from Milk, Soy, Egg, & Wheat.

**Suggested Use:** 1 caplet twice to three times daily.



## Curcutex

Curcutex delivers a highly absorbable form of curcumin, using soy-free proprietary Meriva® phytosome complex technology.

- Curcumin – shown to significantly reduce oxidation, inflammation and pain, offering the potential to support a broad range of health conditions.
- Anti-inflammatory properties – supporting gut, skin and brain.
- Antioxidant properties – supporting vascular and mitochondria.
- May assist muscle recovery, reduce joint pain and stiffness.

Each Vegetarian Capsule Contains:  
Meriva® Curcumin Phytosome...500mg  
Equivalent to Curcumin.....90mg

Excipients: Leucine, Colloidal Anhydrous Silica.

FOR PRACTITIONER DISPENSING ONLY

Directions for use:

Adults take 1-6 capsules daily or as prescribed by your healthcare practitioner.

If symptoms persist consult your healthcare practitioner.

**Suggested Use:** 1-6 capsules daily.

# DECREASE INFLAMMATORY SIGNALING



## CytoQuel

CytoQuel™ has been developed to promote healthy cytokine activity. Offers your patients an effective new tool in the quest for healthy inflammation levels.

- N-Acetyl-L-Cysteine (NAC) – promotes healthy NF-K Beta, IL-6, IL-8 levels.
- Black Tea Extract – polyphenol EGCG exert their anti-inflammatory effects through the inhibition of the NF-K $\beta$  signaling pathway, which decreases expression of several inflammatory proteins.
- CurcuWIN Turmeric Extract – 46% better absorbed than standard curcumin.
- DeltaGold Tocotrienols – contains pure delta and gamma tocotrienols.
- Resveratrol – natural Trans-resveratrol inhibits a variety of pro-inflammatory compounds.

## Supplement Facts

Serving Size: 3 vegetable capsules

Servings Per Container: 30

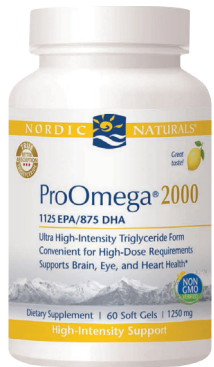
Amount Per Serving	%Daily Value*
<b>CQ™ Blend</b>	<b>1850 mg</b> **
Black Tea Extract (50% EGCG), N-Acetyl-L-Cysteine, CurcuWIN™ Turmeric Extract, DeltaGold® Tocotrienols, Resveratrol (Natural Trans-Resveratrol)	

\* Percent Daily Values are based on a 2000 calorie diet.

\*\* Daily Value not established.

**OTHER INGREDIENTS:** vegetable capsule, L-Leucine, silicon dioxide

**Suggested Use:** 1 capsule daily with a meal for the first week, and 3 capsules daily with a meal in week two and beyond.



## ProOmega 2000

One of our most concentrated formulas, high levels of EPA and DHA for those needing intensive support. Research shows that EPA promotes cardiovascular health, joint mobility, proper immune function, and gastrointestinal health. EPA has also been shown to support a healthy mood.

- Delicious natural lemon flavour.
- Highly concentrated EPA and DHA formula.
- Promotes cardiovascular health.
- Promotes brain, eye, and neurological health.
- Supports gastrointestinal health.
- Helps optimize immune function.
- Triglyceride form for better absorption of essential omega-3s.
- Contains Essential Fatty Acids (EFA) to help with inflammatory signaling.

## Supplement Facts

Serving Size: 2 Soft Gels

Amount Per Serving	% Daily Value*
Calories	25
Calories from fat	25
Total Fat	2.5 g 4%
Saturated Fat	0 g 0%
Trans Fat	0 g †
Total Omega-3s	2150 mg †
EPA (Eicosapentaenoic Acid)	1125 mg †
DHA (Docosahexaenoic Acid)	875 mg †
Other Omega-3s	150 mg †

\* Percent Daily Values are based on a 2,000 calorie diet.

† Daily Value not established.

Less than 5 mg of Cholesterol per serving.

**Ingredients:** purified deep sea fish oil (from anchovies and sardines), soft gel capsule (gelatin, water, glycerin, natural lemon flavor), natural lemon flavor, d-alpha tocopherol, rosemary extract (a natural preservative).

No gluten, milk derivatives, or artificial colors or flavors.

**Suggested Use:** 2 capsules once to twice daily with food.

# INCREASE CIRCADIAN SIGNALING



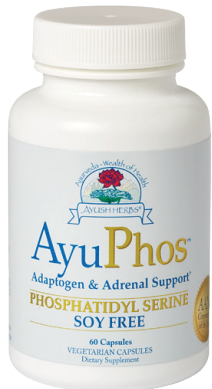
## 5-HTP CR 100mg

5-hydroxytryptophan (5-HTP) is a precursor to serotonin. Supplementing with 5-HTP bypasses the somewhat limited conversion of tryptophan to 5-HTP. Oral 5-HTP is well-absorbed in the intestine without the need for a transporter; other amino acids do not compete with it for absorption.

- Supports healthy biosynthesis of serotonin.
- Supports healthy mood and positive outlook.
- Promotes a normal appetite and a restful sleep pattern.
- 5-HTP CR – controlled released tablet designed to naturally increase the body's level of serotonin quickly and steadily over a 12-hour period.

Serving Size: 1 Tablet	
	Amount Per Serving %Daily Value
5-HTP (5-Hydroxytryptophan) (derived from <i>Griffonia simplicifolia</i> ) (seed)	100 mg **
** Daily Value not established.	
<b>Other Ingredients:</b> Cellulose, dibasic calcium phosphate, hypromellose, silica, stearic acid, magnesium stearate, methylcellulose, and glycerin.	
<b>DIRECTIONS:</b> Take one to two tablets daily, or the dose recommended by your health care practitioner.	
<b>DOES NOT CONTAIN:</b> Yeast, wheat, corn, milk, egg, soy, gluten, artificial colors or flavors, added sugar, starch, or preservatives.	
<b>CAUTIONS:</b> Consult your licensed health care practitioner prior to use if you have, or suspect you have, a medical condition or are taking prescription drugs including drugs for depression, migraine, Parkinson's disease, or psychiatric disorders. Do not use with other supplements containing L-tryptophan or 5-HTP or certain other dietary supplements, such as St. John's Wort, SAME, and Hawaiian Woodrose. To date, there are no reported cases of Serotonin Syndrome due to overdose of 5-HTP, despite the theoretical possibility. Keep out of reach of children. Do not use if you are, or suspect you are, pregnant or if you are lactating. Do not use if you are allergic to any ingredient.	
<b>STORAGE:</b> Keep tightly closed in a cool, dry place.	

**Suggested Use:** 1-3 tablets daily, individual doses, before meals.



## Ayu-Phos

AyuPhos™ is soy-free and is naturally derived from sunflowers. Phosphatidylserine is a natural phospholipid essential for proper cell function and signaling and is found in particularly high levels in the brain.

- An important cell membrane phospholipid.
- Promotes cognitive function, a healthy stress response and sleep.
- Supports mental acuity, memory and health.
- Promotes emotional well-being.
- Helps modulate cortisol levels during stress.
- Improves cell to cell communication in the brain.
- Improves cell metabolism (glucose utilisation) and enhanced neurotransmitter formation.
- Enhances recovery from strenuous exercise.
- Bound to ionic calcium and magnesium which improve the absorption and utilization of phosphatidylserine in the body.

## Supplement Facts

Serving Size: 2 Vegicaps  
Servings Per Container: 30

Amount per serving	%Daily value
Phosphatidyl Serine 60%	250 mg *

**\*Daily value not established**

**Other ingredients:** TriCalcium phosphate, Magnesium Citrate, Hypromellose (vegetarian capsule), Leucine (vegan), Titanium dioxide and Sodium Copper Chlorophyllin (vegetarian capsule).

**NO ADDED:** Milk, Eggs, Wheat, Soy, Tree Nuts, Peanuts, Fish, Shellfish or ingredients from these sources.

**Suggested Use:** 1 capsule once to twice daily.



# INCREASE CIRCADIAN SIGNALING



**THORNE RESEARCH**  
Pure Ingredients. Proven Results. No Compromise.

## L-Tyrosine

L-tyrosine is an amino acid precursor for synthesis of the neurotransmitters norepinephrine and dopamine. This improved rate of neurotransmitter synthesis, stimulates the central nervous system. L-tyrosine appears to function as an adaptogen by relieving physical symptoms of stress, such as mood swings. Chronically stressed individuals may not efficiently convert phenylalanine to L-tyrosine, making supplementation with L-tyrosine desirable.

- Essential for neurotransmitter and thyroid hormone synthesis. Supports the thyroid gland.
- Stimulates growth hormone and is involved in adrenal and pituitary function.
- A powerful antioxidant, scavenging and neutralizing free radicals and inhibiting fat oxidation.
- Promotes a positive mental state and healthy stress management.

Supplement Facts	
Serving Size: One Capsule	
Servings Per Container: 90	
Each Capsule Contains:	% DV
L-Tyrosine	500 mg *
*Daily Value (DV) not established.	
Other Ingredients: Hypromellose (derived from cellulose) capsule, Leucine, Silicon Dioxide.	

**Suggested Use:** 1 capsule three times daily.



**pure encapsulations**

## Magnesium Glycinate

Magnesium activates the enzymes necessary for a number of physiological functions, including neuromuscular contractions, cardiac function, and the regulation of the acid-alkaline balance in the body.

- Magnesium is a nutritional cofactor for serotonin.
- This vital mineral also helps utilize B-complex vitamins, vitamin C, and vitamin E.
- Magnesium also plays important roles in muscle function, mood and calming, and cranial vessel comfort.
- Magnesium helps activate neurotransmitters that are responsible for calming the body and the mind.
- May help prepare your body and mind for sleep, by calming the nervous system.
- It also regulates the hormone melatonin, which guides sleep-wake cycles in your body.

Supplemental Facts	
Amount Per Serving	
each vegetarian capsule contains:	
magnesium (as magnesium glycinate)	120 mg
other ingredients: ascorbyl palmitate, vegetarian capsule (cellulose, water)	
1-4 capsules daily, in divided doses, with meals.	

**Suggested Use:** 1-4 capsules daily, in divided doses, with meals.



**gaia HERBS**

## Sleep & Relax

Sleep & Relax formula – a blend of organic herbs traditionally recognized to support tranquil sleep, promotes a healthy sleep cycle by calming tension and helping the mind unwind.

- Valerian – helps improve quality of sleep, and reduces the time it takes to fall asleep. Valerian does not cause somnolence in the morning or affect dream recall.
- Passionflower – a known nervine relaxant. Passiflora has been demonstrated to cause allosteric modulation of GABA-A receptor complex via interaction at the benzodiazepine site.
- Lemon balm, California poppy, Lavender and Marjoram – a proprietary blend of calming, restorative herbs.
- Botanicals offer a well-tolerated, low toxicity option for improving sleep quality.
- Aids relaxation and calms nervous agitation.
- Promotes relaxing and restorative sleep.

Supplement Facts		
Serving Size 2 Capsules		
Servings Per Container 25		
	Amount Per Serving	% Daily Value
Passionflower leaf ( <i>Passiflora incarnata</i> ) multi-fraction freeze-dried extract (Passiflo2-LMF)	386 mg	†
Valerian root ( <i>Valeriana officinalis</i> ) freeze-dried extract and powder (WPC**)	290 mg	†
Proprietary Blend	290 mg	†
Lemon balm leaf freeze-dried extract and powder (WPC**) ( <i>Melissa officinalis</i> ); California Poppy flower tops freeze-dried extract and powder ( <i>Eschscholzia californica</i> ); Lavender flowers ( <i>Lavandula angustifolia</i> ) essential oil; Marjoram ( <i>Origanum majorana</i> ) essential oil.		
†Daily Value not established. **Whole Phytocomplex Concentrate		
Other ingredients: Vegetable cellulose (capsule)		

101116-0710  
Product of Italy. Manufactured for Gaia Herbs by Aboca S.p.A. – Italy. Distributed by: Gaia Herbs, Inc. 101 Gaia Herbs Dr., Brevard, NC 28712 GaiaHerbs.com

**Suggested Use:** 2-3 capsules one to two hours before bed.

# BALANCE NEUROTRANSMITTERS/NEUROSTEROIDS



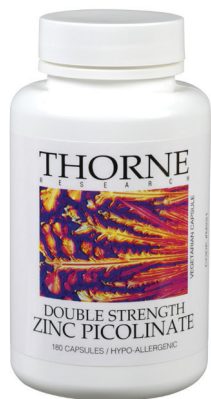
## 5-HTP CR 100mg

5-hydroxytryptophan (5-HTP) is a precursor to serotonin. Supplementing with 5-HTP bypasses the somewhat limited conversion of tryptophan to 5-HTP. Oral 5-HTP is well-absorbed in the intestine without the need for a transporter; other amino acids do not compete with it for absorption.

- Supports healthy biosynthesis of serotonin.
- Supports healthy mood and positive outlook.
- Promotes a normal appetite and a restful sleep pattern.
- 5-HTP CR – controlled released tablet designed to naturally increase the body's level of serotonin quickly and steadily over a 12-hour period.

Serving Size: 1 Tablet	Amount Per Serving	%Daily Value
5-HTP (5-Hydroxytryptophan) (derived from <i>Griffonia simplicifolia</i> ) (seed)	100 mg	**
** Daily Value not established.		
<b>Other Ingredients:</b> Cellulose, dibasic calcium phosphate, hypromellose, silica, stearic acid, magnesium stearate, methylcellulose, and glycerin.		
<b>DIRECTIONS:</b> Take one to two tablets daily, or the dose recommended by your health care practitioner.		
<b>DOES NOT CONTAIN:</b> Yeast, wheat, corn, milk, egg, soy, gluten, artificial colors or flavors, added sugar, starch, or preservatives.		
<b>CAUTIONS:</b> Consult your licensed health care practitioner prior to use if you have, or suspect you have, a medical condition or are taking prescription drugs including drugs for depression, migraine, Parkinson's disease, or psychiatric disorders. Do not use with other supplements containing L-tryptophan or 5-HTP or certain other dietary supplements, such as St. John's Wort, SAME, and Hawaiian Woodrose. To date, there are no reported cases of Serotonin Syndrome due to overdose of 5-HTP, despite the theoretical possibility. Keep out of reach of children. Do not use if you are, or suspect you are, pregnant or if you are lactating. Do not use if you are allergic to any ingredient.		
<b>STORAGE:</b> Keep tightly closed in a cool, dry place.		

**Suggested Use:** 1-3 tablets daily, individual doses, before meals.



## Double Strength Zinc Picolinate

Zinc is essential for growth, immune system function, testosterone metabolism, as a cofactor for the antioxidant enzyme superoxide dismutase, and for many other functions in the body. Zinc is involved in the functioning of over 200 enzymes and plays a key role in genetic expression, cell division, and growth. Zinc deficiency has been associated with adverse impacts on a number of structures and functions of the body.

- Zinc deficiency is common in those who suffer from Pyrolle disorder (Pyroluria) due to HPL binding to zinc, rendering it unavailable for normal functions.
- Essential for growth and immune function.
- Promotes reproductive health.
- Picolinic acid facilitates the absorption of minerals, Zinc Picolinate is absorbed to a higher degree than other zinc supplements.

Supplement Facts		
Serving Size: One Capsule		
Servings Per Container: 60 or 180		
Each Capsule Contains:		% DV
Zinc (as Zinc Picolinate)	25mg	200%
Daily Value (DV)		
Other Ingredients: Microcrystalline Cellulose, Hypromellose (derived from cellulose) capsule, Leucine, Silicon Dioxide.		
Suggested Use: Take 1 capsule one to two times daily or as recommended by your health-care practitioner.		
If pregnant, consult your health-care practitioner before using this product.		

**Suggested Use:** 1 capsule once daily.



## L-5MTHF

Research Nutrition's L-5MTHF is a pure and highly bioavailable form of folate. Directly facilitating methyl group donation in the body, L-5MTHF supports numerous metabolic processes for optimum healing, development, detoxification, mental health and wellbeing.

- Provides a methylated and metabolically active form of folate.
- Bypasses the biochemical steps normally required by other folates. Demonstrates greater metabolic activity than folic acid as a source of folate, with reduced potential for side effects.
- Contributes to the normal growth of the foetus during pregnancy.
- May support normal stress and cognitive function through healthy neurotransmitter production.
- Supports healthy red blood cell formation.
- Plays an important role in supporting healthy methylation.
- Supports healthy homocysteine levels, cardiovascular and vascular endothelial function.

Each Vegetarian Capsule Contains:
Calcium L-5-methyltetrahydrofolate..... 550 mcg
Equiv. Levomefolic acid (L-5MTHF)..... 500 mcg
Excipients: Leucine, Tapioca Starch, Microcrystalline Cellulose, Colloidal Anhydrous Silica.
Store below 25°C in a cool, dry, dark place.

**Suggested Use:** 1 capsule daily.

# BALANCE NEUROTRANSMITTERS/NEUROSTEROIDS



**THORNE RESEARCH**  
Pure Ingredients. Trusted Results. Worldwide.

## L-Tyrosine

L-tyrosine is an amino acid precursor for synthesis of the neurotransmitters norepinephrine and dopamine. This improved rate of neurotransmitter synthesis, stimulates the central nervous system. L-tyrosine appears to function as an adaptogen by relieving physical symptoms of stress, such as mood swings. Chronically stressed individuals may not efficiently convert phenylalanine to L-tyrosine, making supplementation with L-tyrosine desirable.

- Essential for neurotransmitter and thyroid hormone synthesis. Supports the thyroid gland.
- Stimulates growth hormone and is involved in adrenal and pituitary function.
- A powerful antioxidant, scavenging and neutralizing free radicals and inhibiting fat oxidation.
- Promotes a positive mental state and healthy stress management.

Supplement Facts	
Serving Size: One Capsule	
Servings Per Container: 90	
Each Capsule Contains:	
L-Tyrosine	500 mg *
*Daily Value (DV) not established.	
Other Ingredients: Hypromellose (derived from cellulose) capsule, Leucine, Silicon Dioxide.	

**Suggested Use:** 1 capsule three times daily.



**pure encapsulations**

## Magnesium Glycinate

Highly bioavailable magnesium chelate for sensitive individuals. Magnesium activates the enzymes necessary for a number of physiological functions, including neuromuscular contractions, cardiac function, and the regulation of the acid-alkaline balance in the body.

- Magnesium is a nutritional cofactor for neurotransmitter serotonin. Helps activate neurotransmitters that are responsible for calming the body and the mind.
- The body uses Magnesium for of 300 enzymatic reactions.
- This vital mineral also helps utilize B-complex vitamins, vitamin C, and vitamin E.
- Magnesium also plays important roles in muscle function, mood and calming, and cranial vessel comfort.

Supplemental Facts	
Amount Per Serving	
each vegetarian capsule contains:	
magnesium (as magnesium glycinate) .....	120 mg.
other ingredients: ascorbyl palmitate, vegetarian capsule (cellulose, water)	
1-4 capsules daily, in divided doses, with meals.	

**Suggested Use:** 1-4 capsules daily, in divided doses, with meals.



**research nutrition**

## Methyl Fortify

Invaluable for delivering highly focused clinical methylation support, and the optimisation of cardiovascular, neurological and detoxification function.

- Provides the externally methylated forms of folate and vitamin B12.
- Activated forms of vitamin B2 and B6 provide crucial co-factor support for the proper metabolism of folate, B12 and methylation.
- Provides a therapeutic dose of choline for support of the alternate BHMT homocysteine methylation pathway.
- May help to support the maintenance of healthy homocysteine levels via remethylation of homocysteine back to methionine.

Each Vegetarian Capsule Contains:	
Riboflavin-5-Phosphate sodium.....	31.7 mg
Equiv. to Riboflavin.....	25 mg
Pyridoxal-5-Phosphate.....	29.2 mg
Equiv. to Pyridoxine.....	20 mg
Calcium L-5-methyltetrahydrofolate.....	550 mcg
Equiv. Levomefolic acid (L-5MTHF).....	500 mcg
Methylcobalamin.....	1,000 mcg
Choline Dihydrogen Citrate.....	300 mg
Excipients: Leucine, Microcrystalline Cellulose, Tapioca Starch, Colloidal Anhydrous Silica.	
Store below 25°C in a cool, dry, dark place.	

**Suggested Use:** 1 capsule daily.



# BALANCE CORTISOL FEEDBACK MECHANISMS



## Ashwagandha

Ashwagandha, also known as Indian ginseng, and a daily rasayana is one of the most highly regarded and widely used Ayurvedic herbs. It acts as an adaptogen to support the immune system, nourishing and strengthening the inner reserve of the human body.

- The key constituents of Ashwagandha, withanolides, play an important role in its ability to promote physical and mental health, i.e. occasional stress, cognitive and brain function, immune system support and healthy metabolism.
- The withanolides serve as important hormone precursors that convert into human physiologic hormones as needed by the body that act as a natural anti-inflammatory.
- Helps restore vitality to those suffering from overwork or nervous exhaustion, or acute/chronic stress.
- Promotes physical and mental health.
- Anti-stress and supportive to the adrenal glands.
- Supports the activity of lymphocytes and macrophages and may promote thyroid function health.

## Supplement Facts

Serving Size: 1 Capsule  
Servings Per Container: 60

Extracts of:	Amt. Per Serving	%DV
Withania somnifera (Ashwagandha)	500 mg	*
Providing Withanolides	25 mg	*

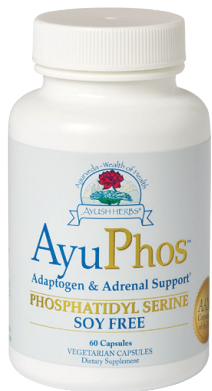
**\*Daily value not established**

Other Ingredients: Crosscarmellose Sodium, Vegetable Stearate, Silica, Vegetarian capsule (Cellulose and Chlorophyll).

Free from Milk, Soy, Egg and Wheat.

-Magnesium stearate from vegetarian source-

**Suggested Use:** 1 capsule twice to three times daily.



## Ayu-Phos

AyuPhos™ is soy-free and is naturally derived from sunflowers. Phosphatidylserine is a natural phospholipid essential for proper cell function and signaling and is found in particularly high levels in the brain.

- An important cell membrane phospholipid.
- Promotes cognitive function, a healthy stress response and sleep.
- Supports mental acuity, memory and health.
- Promotes emotional well-being.
- Helps modulate cortisol levels during stress.
- Improves cell to cell communication in the brain.
- Improves cell metabolism (glucose utilisation) and enhanced neurotransmitter formation.
- It is also helpful during recovery from strenuous exercise.
- This flower-powered brain food is bound to ionic calcium and magnesium which improve the absorption and utilization of phosphatidylserine in the body.

## Supplement Facts

Serving Size: 2 Vegicaps  
Servings Per Container: 30

Amount per serving	%Daily value
Phosphatidyl Serine 60%	250 mg *

**\*Daily value not established**

Other ingredients: TriCalcium phosphate, Magnesium Citrate, Hypromellose (vegetarian capsule), Leucine (vegan), Titanium dioxide and Sodium Copper Chlorophyllin (vegetarian capsule).

**NO ADDED:** Milk, Eggs, Wheat, Soy, Tree Nuts, Peanuts, Fish, Shellfish or ingredients from these sources.

**Suggested Use:** 1 capsule once to twice daily.



# BALANCE CORTISOL FEEDBACK MECHANISMS



## Cortisol Calm

Cortisol Calm is a blend of herbal extracts and vitamin D designed to maintain healthy cortisol levels and to support relaxation, restful sleep and positive mood during times of stress.

- In a recent study, Sensoril® Ashwagandha extract promoted relaxation and maintained healthy cortisol and C-reactive protein levels. Subjects in this randomized, double blind, placebo-controlled study reported support for healthy sleep, positive mood and cognitive function. The effects were most pronounced for subjects taking 500 mg per day compared to lesser doses.
- Rhodiola and Magnolia – supports healthy adrenal cortisol activity and offers support for stress, mood and emotional well-being.
- L-Theanine – supports normal brain alpha-wave activity, helping calm the sympathetic nervous system for a relaxing effect.
- Vitamin D – recent research suggests that maintaining healthy vitamin D levels supports normal cortisol production within abdominal adipocytes.

Supplemental Facts	
Amount Per Serving	
two vegetarian capsules contain:	
vitamin D (as cholecalciferol) (D <sub>3</sub> )	800 I.U.
Sensoril® ashwagandha	500 mg
(withania somnifera) extract (root and leaf)	
rhodiola (rhodiola rosea) extract (root)	250 mg
(standardized to contain 3% total rosavins and min. 1% salidroside)	
magnolia (magnolia officinalis) extract (bark)	200 mg
(standardized to contain 2% honokiol)	
L-theanine	100 mg
<b>Not to be taken by pregnant or lactating women. Consult a health professional before taking this or any other product.</b>	
other ingredients: ascorbyl palmitate, vegetarian capsule (cellulose, water)	
1 capsule in the morning and 1 capsule in the evening, with meals.	

**Suggested Use:** 1 capsule in the morning and evening with meals.



## L-Theanine

L-Theanine is a naturally occurring, amino acid found in green tea leaves. L-Theanine has shown to reduce stress by promoting relaxation without drowsiness, easing nervousness due to overwork and fatigue, and reducing nervous irritability.

- Supports nervous system health and function.
- May reduce systolic and diastolic blood pressure.
- Supports antioxidant and detoxification mechanisms.
- Increases levels of dopamine and improves mental awareness.
- Increases GABA and reduces restlessness, insomnia and other disrupted conditions.
- L-Theanine – supports normal brain alpha-wave activity, helping calm the sympathetic nervous system for a relaxing effect.
- 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.
- Research 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.

Serving Size: 2 Capsules		
	Amount Per Serving	%Daily Value
L-Theanine (Suntheanine®)	400 mg	**
** Daily Value not established.		
<b>Other Ingredients:</b> HPMC (capsule), microcrystalline cellulose, stearic acid, magnesium stearate, silica, and medium-chain triglyceride oil.		
<b>DIRECTIONS:</b> Take one to two capsules twice daily, or as directed by your healthcare practitioner.		
Consult your healthcare practitioner prior to use. Individuals taking medication should discuss potential interactions with their healthcare practitioner. Do not use if tamper seal is damaged.		
<b>DOES NOT CONTAIN:</b> Wheat, gluten, corn, yeast, soy, animal or dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, or artificial preservatives.		
<b>STORAGE:</b> Keep closed in a cool, dry place out of reach of children.		

**Suggested Use:** 1-2 capsules twice daily.

# ADRENAL SUPPORT - PROTECT ZONE RETICULARIS



## a-Drenal

Provides comprehensive support from stress induced symptoms, supports adrenal function and promotes calm, balanced physical and mental energy.

- Comprehensive formulation of organic adrenal tissue and adaptogenic herbs.
- Helps maintain and normalize healthy cortisol and blood sugar levels.
- Supports healthy adrenal function.
- The adrenal cortex is responsible for synthesis of corticosteroids therefore adrenal extracts play a role in supporting normal adrenal function and healthy cortisol levels. This helps maintain normal immune and stress responses and many other vital processes in the body.
- Beta-Sitosterol – a plant sterol, known to aid the immune system by maintaining a healthy balance between Th-1 and Th-2 white blood cells. It also helps to modulate the stress response by supporting normal cortisol and DHEA levels.

## Supplement Facts

Serving Size 4 Capsules  
Servings per Container 30

Amount Per Serving	% Daily Value
Pantothenic Acid (as D-Calcium Pantothenate)	250 mg 2500%
<i>Cordyceps sinensis</i> Rhizome Powder	400 mg †
Adrenal Tissue (from Organic Bovine*)	250 mg †
Ashwagandha ( <i>Withania somnifera</i> ) Root PE (standardized for 1.5% Withanolides)	150 mg †
<i>Rhodiola rosea</i> Root PE (standardized for 3% Rosavins)	100 mg †
Siberian Ginseng ( <i>Eleutherococcus senticosus</i> ) Root PE (standardized for 0.8% Eleutherosides)	100 mg †
Korean Ginseng ( <i>Panax ginseng</i> ) Root PE (standardized for 7% Ginsenosides)	100 mg †
<i>Astragalus membranaceus</i> Root PE (concentrated 4:1)	100 mg †
<i>Epimedium grandiflorum</i> Herb Powder	100 mg †
L-Theanine (from Green Tea Leaf PE)	100 mg †
Ginger ( <i>Zingiber officinalis</i> ) Root PE (standardized for 5% Gingerols)	50 mg †
Beta-Sitosterol	40 mg †

† Daily Value Not Established

**Suggested Use:** 2 capsules twice daily.



## C-RLA

C-RLA™ offers a safe, efficacious delivery system of high dose Vitamin C and R-Lipoic Acid in one formulation.

- Each serving contains 1500mg of Vitamin C and 70mg of R-Lipoic Acid in a natural (GMO-free) liposomal preparation.
- Lipoic acid helps protect against oxidative stress generated by high glucose levels.
- The pure R-Lipoic Acid in C-RLA™ supports a healthy inflammatory response and is a potent free-radical scavenger.

## Supplement Facts

Serving Size: 10 mL (two tsp)  
Servings per Bottle: 30

	Amount Per Serving	% Daily Value
<b>Vitamin C (as sodium ascorbate)</b>	<b>1500 mg</b>	<b>2500%</b>
<b>Sodium (as sodium ascorbate)</b>	<b>197 mg</b>	<b>8%</b>
<b>R-Lipoic Acid</b>	<b>70 mg</b>	<b>*</b>

\* Daily Value not established.

**OTHER INGREDIENTS:** Purified water, GMO-free/Soy-free phospholipids, glycerin, natural flavors, potassium sorbate.

**Suggested Use:** 10ml (two teaspoons) once or twice per day, away from food.



## CytoQuel

CytoQuel™ has been developed to promote healthy cytokine activity. Offers your patients an effective new tool in the quest for healthy inflammation levels.

- N-Acetyl-L-Cysteine (NAC) – promotes healthy NF-K Beta, IL-6, IL-8 levels.
- Black Tea Extract – polyphenol EGCG exert their anti-inflammatory effects through the inhibition of the NF-K $\beta$  signaling pathway, which decreases expression of several inflammatory proteins.
- CurcuWIN Turmeric Extract – 46% better absorbed than standard curcumin.
- DeltaGold Tocotrienols – contains pure delta and gamma tocotrienols.
- Resveratrol – natural Trans-resveratrol inhibits a variety of pro-inflammatory compounds.

## Supplement Facts

Serving Size: 3 vegetable capsules  
Servings Per Container: 30

Amount Per Serving	%Daily Value*
<b>CQ™ Blend</b>	<b>1850 mg **</b>
Black Tea Extract (50% EGCG), N-Acetyl-L-Cysteine, CurcuWIN™ Turmeric Extract, DeltaGold® Tocotrienols, Resveratrol (Natural Trans-Resveratrol)	

\* Percent Daily Values are based on a 2000 calorie diet.  
\*\* Daily Value not established.

**OTHER INGREDIENTS:** vegetable capsule, L-Leucine, silicon dioxide

**Suggested Use:** 1 capsule daily with a meal for the first week, and 3 capsules daily with a meal in week two and beyond. They may be taken at the same meal or spread amongst your meals. For best results take away from Vitamin E (tocopherol).

# NUTRIENT SUPPORT FOR ADRENAL STEROIDOGENESIS



## a-Drenal

Provides comprehensive support from stress induced symptoms, supports adrenal function and promotes calm, balanced physical and mental energy.

- Comprehensive formulation of organic adrenal tissue and adaptogenic herbs.
- Helps maintain and normalize healthy cortisol and blood sugar levels.
- Supports healthy adrenal function.
- The adrenal cortex is responsible for synthesis of corticosteroids therefore adrenal extracts play a role in supporting normal adrenal function and healthy cortisol levels. This helps maintain normal immune and stress responses and many other vital processes in the body.
- Beta-Sitosterol – a plant sterol, known to aid the immune system by maintaining a healthy balance between Th-1 and Th-2 white blood cells. It also helps to modulate the stress response by supporting normal cortisol and DHEA levels.

## Supplement Facts

Serving Size 4 Capsules  
Servings per Container 30

Amount Per Serving	% Daily Value
Pantothenic Acid (as D-Calcium Pantothenate)	250 mg 2500%
<i>Cordyceps sinensis</i> Rhizome Powder	400 mg †
Adrenal Tissue (from Organic Bovine*)	250 mg †
Ashwagandha ( <i>Withania somnifera</i> ) Root PE (standardized for 1.5% Withanolides)	150 mg †
<i>Rhodiola rosea</i> Root PE (standardized for 3% Rosavins)	100 mg †
Siberian Ginseng ( <i>Eleutherococcus senticosus</i> ) Root PE (standardized for 0.8% Eleutherosides)	100 mg †
Korean Ginseng ( <i>Panax ginseng</i> ) Root PE (standardized for 7% Ginsenosides)	100 mg †
<i>Astragalus membranaceus</i> Root PE (concentrated 4:1)	100 mg †
<i>Epimedium grandiflorum</i> Herb Powder	100 mg †
L-Theanine (from Green Tea Leaf PE)	100 mg †
Ginger ( <i>Zingiber officinalis</i> ) Root PE (standardized for 5% Gingerols)	50 mg †
Beta-Sitosterol	40 mg †

† Daily Value Not Established

**Suggested Use:** 2 capsules twice daily.



## Stress B-complex

A vitamin B-complex with extra B5 for adrenal support and stress management. Stress B-Complex contains active B-vitamin forms for enhanced absorption. Healthy HPA axis play an important role in managing stress effectively. Pantothenic acid (vitamin B5) is part of the B-vitamin complex and is essential for healthy adrenal and immune function. In particular, pantothenic acid serves as the starting material for the synthesis of coenzyme A, which is important for metabolism of fats and synthesis of adrenal hormones. Pantothenic acid plays a key role in the formation of acetylcholine, which is needed in the transmission of nerve impulses.

- Stress B-Complex consists of a group of eight water-soluble compounds.
- Although each B vitamin is chemically distinct, they regularly work together in various biochemical functions throughout the body – including cellular energy production, healthy red-blood-cell formation, and healthy neurological function.
- Most B vitamins, with the exception of vitamin B12, are not stored in the body; consequently, they must be acquired daily from the diet in order to maintain optimal health.

## Supplement Facts

Serving Size: One Capsule  
Servings Per Container: 60

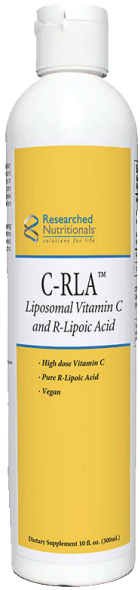
Each Capsule Contains:	% DV
Thiamin (as Thiamin HCl)	50 mg 3,333%
Riboflavin (25 mg as Riboflavin and 3.6 mg as Riboflavin 5'-Phosphate Sodium)	28.6 mg 1,682%
Niacin (as Niacinamide)	80 mg 400%
Vitamin B6 (25 mg as Pyridoxine HCl and 3.4 mg as Pyridoxal 5'-Phosphate)	28.4 mg 1,420%
Folate (as L-5-Methyltetrahydrofolate† from L-5-Methyltetrahydrofolic Acid, Glucosamine Salt)	200 mcg 50%
Vitamin B12 (as Methylcobalamin)	100 mcg 1,667%
Biotin	80 mcg 27%
Pantothenic Acid (as Calcium Pantothenate)	250 mg 2,500%
Choline Citrate	40 mg *

\*Daily Value (DV) not established.

**Suggested Use:** 1 capsule one to three times daily.



# NUTRIENT SUPPORT FOR ADRENAL STEROIDOGENESIS



## C-RLA

C-RLA™ offers a safe, efficacious delivery system of high dose Vitamin C and R-Lipoic Acid in one formulation.

- Each serving contains 1500mg of Vitamin C and 70mg of R-Lipoic Acid in a natural (GMO-free) liposomal preparation.
- Lipoic acid helps protect against oxidative stress generated by high glucose levels.
- The pure R-Lipoic Acid in C-RLA™ supports a healthy inflammatory response and is a potent free-radical scavenger.

### Supplement Facts

Serving Size: 10 mL (two tsp)  
Servings per Bottle: 30

	Amount Per Serving	% Daily Value
Vitamin C (as sodium ascorbate)	1500 mg	2500%
Sodium (as sodium ascorbate)	197 mg	8%
R-Lipoic Acid	70 mg	*

\* Daily Value not established.

**OTHER INGREDIENTS:** Purified water, GMO-free/Soy-free phospholipids, glycerin, natural flavors, potassium sorbate.

**Suggested Use:** 10ml (two teaspoons) once or twice per day, away from food.



## Double Strength Zinc Picolinate

Zinc is essential for growth, immune system function, testosterone metabolism, as a cofactor for the antioxidant enzyme superoxide dismutase, and for many other functions in the body. Zinc is involved in the functioning of over 200 enzymes and plays a key role in genetic expression, cell division, and growth. Zinc deficiency has been associated with adverse impacts on a number of structures and functions of the body.

- Zinc deficiency is common in those who suffer from Pyloric disorder (Pyloruria) due to HPL binding to zinc, rendering it unavailable for normal functions. Supplementing with Zinc Picolinate may reduce Pyloric levels and severity of the signs and symptoms experienced.
- Essential for growth and immune function.
- Promotes reproductive health.
- Picolinic acid facilitates the absorption of minerals, Zinc Picolinate is absorbed to a higher degree than is other zinc supplements.
- Contains 25 mg of zinc per capsule.

### Supplement Facts

Serving Size: One Capsule  
Servings Per Container: 60 or 180

Each Capsule Contains:	% DV
Zinc (as Zinc Picolinate)	25mg 200%
Daily Value (DV)	

Other Ingredients: Microcrystalline Cellulose, Hypromellose (derived from cellulose) capsule, Leucine, Silicon Dioxide.

Suggested Use: Take 1 capsule one to two times daily or as recommended by your health-care practitioner.

If pregnant, consult your health-care practitioner before using this product.

**Suggested Use:** 1 capsule once daily.



# NUTRIENT SUPPORT FOR ADRENAL STEROIDOGENESIS



## Magnesium Glycinate

Highly bioavailable magnesium chelate for sensitive individuals. Magnesium activates the enzymes necessary for a number of physiological functions, including neuromuscular contractions, cardiac function, and the regulation of the acid-alkaline balance in the body.

- Magnesium is a nutritional cofactor for neurotransmitter serotonin.
- The body uses Magnesium for of 300 enzymatic reactions.
- This vital mineral also helps utilize B-complex vitamins, vitamin C, and vitamin E.
- Magnesium also plays important roles in muscle function, mood and calming, and cranial vessel comfort.
- Nutrient Utilization; Bone Health and Cardiovascular Support.
- Supports metabolism of carbohydrates, amino acids and fats; also for energy production, and the utilization of calcium, phosphorus, sodium, and potassium.
- Supports sleep.

### Supplemental Facts

#### Amount Per Serving

each vegetarian capsule contains:

magnesium (as magnesium glycinate) ..... 120 mg.  
other ingredients: ascorbyl palmitate, vegetarian capsule (cellulose, water)

1-4 capsules daily, in divided doses, with meals.

**Suggested Use:** 1-4 capsules daily, in divided doses, with meals.



## Niacinamide B3

Research Nutrition's Niacinamide B3 is a pure and hypoallergenic source of non-flushing vitamin B3. Supporting cellular mitochondrial energy production and anti-aging, detoxification, skin protection, and calming of neurological over-excitation (including from over-methylation).

- Nicotinamide improves choline retention and may assist in the consumption of excess circulating methyl groups.
- This optimisation of nicotinamide and choline/methyl group availability is important for brain function and the prevention of degenerative neurological conditions.
- Essential to the formation of NAD and NADP, involved in over 400 enzyme reactions in the body.
- Assists the metabolism of carbohydrates, fats, and proteins.
- May help calm the nervous system.
- May assist in the detoxification of alcohol and the recycling of glutathione.
- Enhances mitochondrial quality, function and lifespan.

Each Vegetarian Capsule Contains:

Nicotinamide (Niacinamide).....250 mg

Excipients: Leucine, Tapioca Starch, Microcrystalline Cellulose, Colloidal Anhydrous Silica.

Store below 25°C in a cool, dry, dark place.

**Suggested Use:** 1-4 capsules daily.

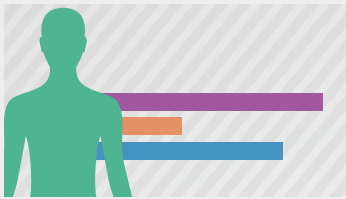
# FUNCTIONAL TESTING



## DUTCH Complete

This advanced hormone testing was developed to surpass industry standards for available testing options. DUTCH testing offers the most extensive profile of sex and adrenal steroid hormones, along with their all-important metabolites. The daily (diurnal) pattern of free cortisol, along with melatonin is included. This unique combination of clinical information is not available by any other testing method.

This advanced hormone testing was developed to surpass industry standards for available testing options. DUTCH testing offers the most extensive profile of sex and adrenal steroid hormones, along with their all-important metabolites.



### EFFECTIVE HRT MONITORING

DUTCH testing was specifically made to be optimally effective for most forms of hormone replacement therapy. Unique methods are used for improved monitoring of oral progesterone and vaginal hormones.



### THE EASIEST COLLECTION

Patients collect just four or five dried urine samples over a 24-hour period. Dried specimen samples are convenient to collect, easy to ship and stable for several weeks.



### CLINICAL VALIDATION

All Precision Analytical testing methods go through a rigorous and ongoing validation process to verify accuracy, precision, recovery, linearity, etc. in the pursuit of the most accurate and precise techniques available for hormone testing.

Test	Result	Normal Range	Reference Range
Progesterone	200.0 ng/dL	400-2000	100-1000
Androstenedione	100.0 ng/dL	400-1500	100-1000
Testosterone	200.0 ng/dL	200-800	100-1000
DHEA-S	10.0 ng/dL	10-20	10-20
17-OH Progesterone	2.0 ng/dL	1.0-2.0	1.0-2.0
Cortisol	10.0 ng/dL	10-20	10-20
Free Cortisol	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Estradiol	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Estrone	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Androstenedione	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Testosterone	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Progesterone	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Androstenedione	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Testosterone	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Progesterone	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Androstenedione	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Testosterone	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Progesterone	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Androstenedione	1.0 ng/dL	1.0-2.0	1.0-2.0
17-OH Testosterone	1.0 ng/dL	1.0-2.0	1.0-2.0

# FUNCTIONAL TESTING



## The DUTCH Plus™ Report includes:

**DUTCH Complete** (Metabolites of Estrogens, Androgens, Progesterone, Cortisol, Melatonin and 8-OHdG).

### PLUS

**Cortisol Awakening Response (CAR)** - shows incremental cortisol levels upon waking, which provides valuable information on HPA Axis function.

### What is the Cortisol Awakening Response and how do we test for it?

- Upon waking, cortisol levels naturally begin to rise by 50%. 30 minutes after waking, cortisol levels will still show this sharp increase. By 60 minutes after waking, cortisol levels have peaked and begin to decline.
- Measuring this rise and fall of cortisol levels at waking can be used as a “mini stress test”.
- Research shows that the size of this increase correlates with HPA Axis function, even if the sample measurements are all within range.
- The assessment of this endocrine response is able to uncover subtle changes in HPA Axis activity, which is associated with various health conditions and risk factors.
- A quick saturation of saliva swabs upon waking, and at 30 and 60 minutes after waking, provide what is required to assess a patient’s Cortisol Awakening Response.

### A low Cortisol Awakening Response

- This can be a result of an underactive HPA Axis, excessive psychological burnout, seasonal affective disorder (SAD), sleep apnea or poor sleep in general, PTSD, chronic fatigue and/or chronic pain.
- A decreased CAR has also been associated with systemic hypertension, functional GI diseases, postpartum depression, and autoimmune diseases.

### An elevated Cortisol Awakening Response

- This can be a result of an over-reactive HPA Axis, ongoing job related stress (anticipatory stress for the day), glycemic dysregulation, pain (i.e. waking with painful joints or migraine), and general depression (not SAD).
- A recent study showed that neither the waking nor post-waking cortisol results correlated to Major Depressive Disorder, but the CAR calculation (the change between the first two samples) did.
- This measurement of the response to waking has independent clinical value showing dysfunction that may be hidden by current testing options.

### What’s Included in the DUTCH Plus™?

- The DUTCH Plus™ uses four dried urine samples and five saliva samples.
- These samples are collected over the course of one day, from waking to bed time.





---

*First in Nutritional and Environmental Medicine*

---

Please call our Technical Support Team on 0800 439 633 if you have further questions or email [techsupport@fxmed.co.nz](mailto:techsupport@fxmed.co.nz)



**Australian customers** please contact our sister company Research Nutrition for further information on testing or Research Nutrition products mentioned in this booklet.

Phone: 1800 110 158 or Email: [support@researchnutrition.com.au](mailto:support@researchnutrition.com.au)