

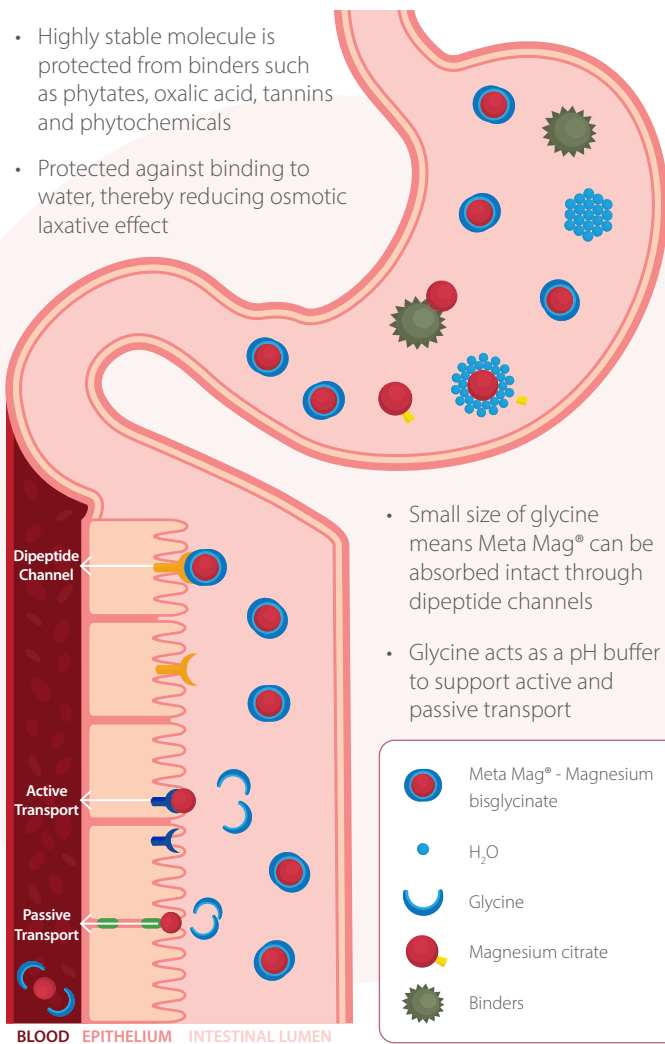
Clinically Effective Magnesium

Prescribe the right magnesium for your patient.

LOWER SIDE EFFECTS

- Highly stable molecule is protected from binders such as phytates, oxalic acid, tannins and phytochemicals
- Protected against binding to water, thereby reducing osmotic laxative effect

BETTER ABSORPTION



- Small size of glycine means Meta Mag[®] can be absorbed intact through dipeptide channels
- Glycine acts as a pH buffer to support active and passive transport

	Meta Mag [®] - Magnesium bisglycinate
	H ₂ O
	Glycine
	Magnesium citrate
	Binders



Why is Meta Mag® the Best Magnesium for Your Clinic?

Supporting Effective Digestive Utilisation of Magnesium

Meta Mag® is a unique chelated form of magnesium, known as magnesium bisglycinate, that has superior demonstrated bioavailability due to its ability to traverse the challenging forces in the digestive system (Figure 1).¹ In particular, Meta Mag® is able to:

- Resist certain binders to anti-nutrients (i.e. phytates, oxalic acid, tannins and polyphenols) in the upper gastrointestinal (GI) tract that create complexes with magnesium and ultimately diminish bioavailability.^{2,3}
- Protect magnesium against the binding effect of water.^{4,5}
- Buffer pH to optimise transportation mechanisms (i.e. active and passive transport) further improving absorption of magnesium.^{6,7,8,9}

These key elements are crucial for improving patient absorption outcomes that prevent unnecessary GI side effects in your patients.

Meta Mag®: An Exclusive and Advanced Type of Magnesium

Meta Mag® is composed of a magnesium molecule which is covalently bound to two glycine molecules. Glycine is a small amino acid, therefore making it small enough to be absorbed via dipeptide channels.¹⁰ This feature is rare in the magnesium kingdom which proves to be an advantage when it comes to selecting a form that enhances absorption capabilities. Glycine itself demonstrates considerable qualities when it comes to maximising magnesium retention during digestive processes, so that the body can utilise magnesium where it is required.

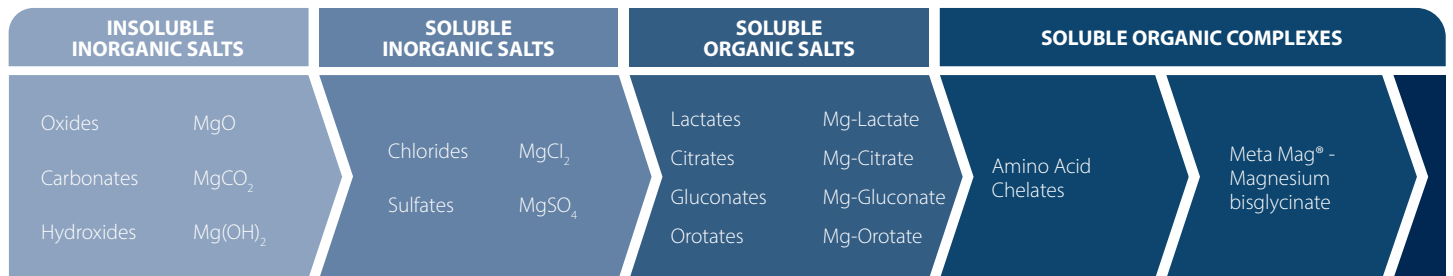


Figure 1: Meta Mag® - Magnesium Bisglycinate Is a Highly Bioavailable Form of Magnesium.¹

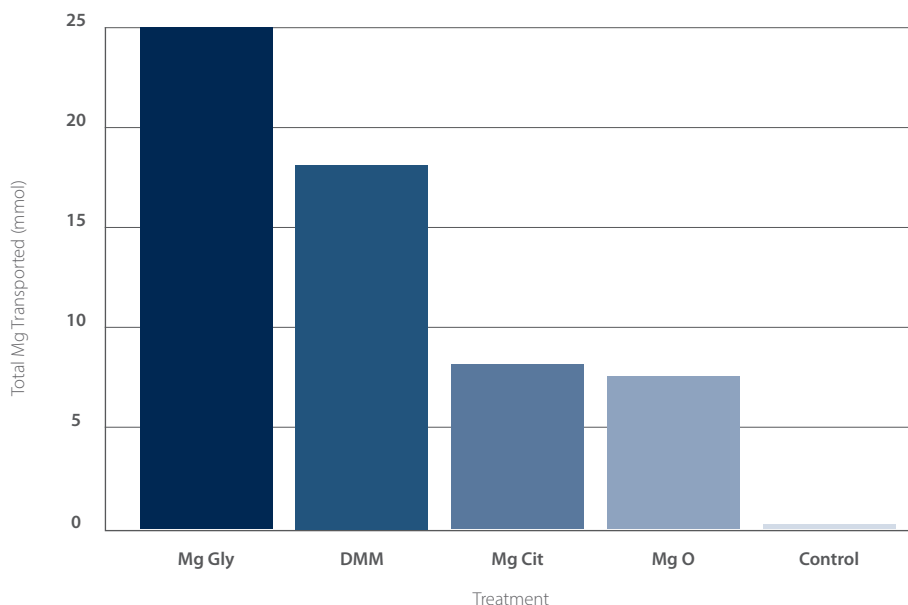
Provides a Unique Absorption Response in the Digestive System

The majority of magnesium absorption relies on passive transportation mechanisms that utilises claudin proteins.¹¹ The pH conditions are important to support the activity of these proteins.^{12,13} Glycine is able to respond to this process as it operates as a buffer to modulate pH, thereby improving the passive transport system.¹⁴

When it comes to Meta Mag® and its superior absorption, fast clinical benefits and minimised risk of side effects, you will be prescribing your patients the most advantageous form of magnesium.

Did you know glycine also provides your patients with other clinical benefits beyond its magnesium absorption abilities? Glycine may be especially beneficial for those experiencing symptoms of:

- Sleep issues – glycine has been shown to increase muscle relaxation during REM sleep, as well as assist with latency to sleep onset and overall sleep efficiency.^{24,25}
- Fatigue – glycine has been shown to reduce fatigue and improve clear headedness during the day.²⁶



Mg Gly: Magnesium bisglycinate
 DMM: DiMagnesium malate
 Mg Cit: Magnesium citrate
 Mg O: Magnesium oxide

Figure 2: Magnesium Bisglycinate Demonstrates Superior Bioavailability When Compared to Other Forms of Supplemental Magnesium.¹³

Choose the Right Magnesium for Your Patient

Everyday Magnesium Replenishment



- Magnesium supplementation for deficiency and correlated muscle cramps, energy support and relaxation.
- Contains the metabolically active form of vitamin B6.
- Neutral and flavoured options for versatility.
- Fibroplex MagActive for Kids is a children's specific magnesium formula.



Fibroplex MagActive Range



STRESS



CalmX

- Healthy stress response
 - Nervous system support
-
- 350 mg Meta Mag® Magnesium
 - 3 g Taurine
 - 2 g Glutamine
 - 275 mg Potassium citrate



ENERGY



EnergyX

- Mental fatigue
 - Physical fatigue
-
- 200 mg Meta Mag® Magnesium
 - 1.2 g Acetyl-L-Carnitine
 - 1 g Tyrosine
 - Selenium, iodine and zinc



SLEEP



SleepX

- Healthy sleeping patterns and sleep quality
 - Restores circadian rhythm
-
- 300 mg Meta Mag® Magnesium
 - Lutein and Zeaxanthin
 - 400 mg Ornithine
 - Sensoril™ Ashwagandha



PAIN



PainX

- Pain relief
 - Neuromuscular function
-
- 210 mg Meta Mag® Magnesium
 - 300 mg PEA (Palmitoylethanolamide) (Levagen+™)



WOMEN'S HEALTH



FemmeX

- Oestrogen metabolism
 - Reproductive support from preconception to menopause
-
- 300 mg Meta Mag® Magnesium
 - 750 mg Broccoli sprouts
 - 1.5 g Boswellia
 - Supportive nutrients



CARDIOVASCULAR



CardioX

- Blood pressure support
 - Glycaemic health
 - Healthy homocysteine levels
-
- 300 mg Meta Mag® Magnesium
 - 3 g Taurine
 - Active B vitamins
 - Chromium



Fibroplex MagActive Powder

Meta Mag® Magnesium and Active Bs for Daily Magnesium Supplementation.

Contents: 210 g (15 days) and 420 g (30 days) oral powder

Order Code: Neutral: FMANS (210 g), FMANL (420 g)

Raspberry: FMARS (210 g), FMARL (420 g)

Storage: Store below 30°C

- Helps prevent symptoms associated with magnesium deficiency.¹
- Supports healthy muscle function.²
- Highly bioavailable Meta Mag® with active B vitamins, in raspberry or neutral flavour.

Each dose (7 g) contains:

Magnesium glycinate dihydrate (Meta Mag® - Magnesium bisglycinate)	3 g
Equivalent Magnesium	300 mg
Taurine	600 mg
Glutamine	500 mg
Ascorbic acid (Vitamin C)	300 mg
Calcium hydrogen phosphate	269 mg
Equivalent Calcium	63 mg
Monobasic potassium phosphate	182 mg
Equivalent Potassium	52 mg
Acetyl levocarnitine hydrochloride (Acetyl-L-Carnitine)	118 mg
Pyridoxal 5-phosphate monohydrate (Vitamin B6)	50 mg
Nicotinamide (Vitamin B3)	50 mg
Riboflavin sodium phosphate (Riboflavin 5-phosphate sodium)	2.6 mg
Equivalent Riboflavin (Vitamin B2)	1.9 mg
Chromium nicotinate	250 micrograms
Equivalent Chromium	25 micrograms
Mecobalamin (Co-methylcobalamin) (Vitamin B12)	150 micrograms
Selenomethionine	62.5 micrograms
Equivalent Selenium	25 micrograms

Excipients (Raspberry): Malic acid, citric acid, flavours (natural raspberry and strawberry), colloidal anhydrous silica, natural colour and steviol glycosides.

Excipients (Neutral): Malic acid, citric acid, maltodextrin, colloidal anhydrous silica and steviol glycosides.

Directions for use: Adults: Add 1 scoop (7 g) to 200 mL of water or juice twice daily.

Clinical Benefits:

Preventing magnesium deficiency and associated symptoms: Magnesium intake has been shown to be inadequate in teenagers aged 14 to 18 years (61% of males and 72% of females), and adults over 19 years of age were found to have inadequate magnesium intake (41% males and 35% females).³ Indicators of magnesium deficiency include muscle symptoms (weakness, spasms or cramps) and/or fatigue,^{2,5} which may be induced by conditions such as exercise⁶ or emotional stress.⁴

Magnesium has a relaxing effect on smooth muscle.⁷ It is used for muscular spasm, cramping and irregular contractibility of muscle.⁷ Magnesium is able to depress the excitability of the muscle fibre membrane and inhibit contraction to exert a muscle relaxant effect.⁸

Meta Mag® is a unique chelated form of magnesium. This form of magnesium has demonstrated superior bioavailability due to its ability to traverse the challenging forces in the digestive system.

Fructose free: All Fibroplex MagActive Powders are naturally sweetened, suitable for people who are fructose sensitive.

Vegan friendly: All Fibroplex MagActive Powders are free from animal products.

Natural colourings: The raspberry flavour of this product is naturally coloured with anthocyanins derived from black carrot extract. As the anthocyanins mix with water and malic acid (contained within Fibroplex MagActive Powder) they turn blue, before returning to a red hue.

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein and salt. Free from artificial colours, flavours and preservatives. Sweetened with steviol glycosides. Contains 52 mg potassium per 7 g dose.

Meta Mag® is a registered trademark of Balchem Corp.

Sweetening and Flavouring for Compliance

Patient compliance is paramount to getting results and taste contributes greatly to this. The Meta Mag® Magnesium range provides a wide range of flavours to balance patient choice with therapeutic considerations. Some of the ways we achieve this include:

- A dedicated flavour technologist to oversee taste trials, flavouring and sweetening.
- Using the right sweetener for the right product.
- Offering a range of sweetness levels to suit personal taste.
- Fructose free options.
- Use of natural colouring agents to enhance flavour perception.
- Avoidance of artificial colours, flavours and sweeteners.



Fibroplex MagActive Tablet

Meta Mag® Magnesium with Active Vitamin B6 for Every Day Magnesium Supplementation.

Contents: 90 tablets (30 days)
Order Code: FMAT
Storage: Store below 30°C

- Helps prevent symptoms associated with magnesium deficiency.¹
- Supports healthy muscle function.²
- Provides 200 mg elemental magnesium featuring exclusive Meta Mag®, a highly bioavailable magnesium, in convenient tablet form.

Each tablet contains:

Magnesium glycinate dihydrate (Meta Mag® - Magnesium bisglycinate)	1 g
Equivalent Magnesium	100 mg
Magnesium amino acid chelate	500 mg
Equivalent Magnesium	100 mg
Total equivalent Magnesium	200 mg
Zinc amino acid chelate (Meta Zn® - Zinc bisglycinate)	40 mg
Equivalent Zinc	8.0 mg
Pyridoxal 5-phosphate monohydrate (Vitamin B6)	15 mg
Chromic chloride hexahydrate	1 mg
Equivalent Chromium	200 micrograms

Directions for use: Adults: Take 1 tablet three times daily.

For magnesium supplementation: Take 1 tablet daily.

Clinical Benefits:

Preventing magnesium deficiency and associated symptoms: Magnesium intake has been shown to be inadequate in teenagers aged 14 to 18 years (61% of males and 72% of females) and adults over 19 years of age were found to have inadequate magnesium intake (41% males and 35% females).³ Indicators of magnesium deficiency include muscle symptoms (weakness, spasms or cramps) and/or fatigue,^{2,5} which may be induced by conditions such as exercise⁶ or emotional stress.⁴

Magnesium has a relaxing effect on smooth muscle.⁷ It is used for muscular spasm, cramping and irregular contractibility of muscle.⁷ Magnesium is able to depress the excitability of the muscle fibre membrane and inhibit contraction to exert a muscle relaxant effect.⁸

Meta Mag® is a unique chelated form of magnesium. This form of magnesium has demonstrated superior bioavailability due to its ability to traverse the challenging forces in the digestive system.

Vegan friendly: Fibroplex MagActive Tablet is free from animal products.

Free from animal products, corn, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast and soy protein. Free from artificial colours, flavours and preservatives.

Meta Mag® is a registered trademark of Balchem Corp.



FemmeX

Magnesium Supplementation for Women.

Contents: 252 g oral powder (14 days) Lemon Lime flavour
Order Code: FEMXL
Storage: Store below 30°C

- Nutrients for healthy oestrogen metabolism.*^{2,3}
- Exclusive, highly bioavailable Meta Mag® Magnesium, plus BosPure® Boswellia and broccoli.
- Symptomatic relief of premenstrual syndrome (PMS) with additional hormonal support.^{1,2,3,4,5}

*In healthy people.

Each dose (9 g) contains:

Brassica oleracea var. italica (Broccoli), sprout powder	750 mg
Magnesium glycinate dihydrate (Meta Mag® - Magnesium bisglycinate)	3 g
Equivalent Magnesium	300 mg
Calcium hydrogen phosphate dihydrate	1.1 g
Equivalent Calcium	250 mg
Calcium ascorbate dihydrate	605 mg
Equivalent Ascorbic acid (Vitamin C)	500 mg
Tyrosine	400 mg
Calcium pantothenate (Vitamin B5)	50 mg
Pyridoxine hydrochloride (Vitamin B6)	25 mg
Zinc amino acid chelate (Meta Zn® - Zinc bisglycinate)	25 mg
Equivalent Zinc	5.0 mg
Chromic chloride hexahydrate	513 micrograms
Equivalent Chromium	100 micrograms
Mecobalamin (Co-methylcobalamin) (Vitamin B12)	250 micrograms
Folic acid	250 micrograms
Potassium iodide	98 micrograms
Equivalent Iodine	75 micrograms
Dry herbal extracts:	
Boswellia serrata (BosPure® Boswellia), gum oleoresin	150 mg
Derived from fresh gum oleoresin	1.5 g
Matricaria chamomilla (German chamomile), flower	250 mg
Derived from dry flower	1.5 g

Directions for use: Adults: Add 2 level scoops (9 g) to 200 mL of water twice daily. Stir well and take immediately.

Clinical Benefits:

Magnesium deficiency has been found to be associated with conditions such as dysmenorrhoea and PMS.⁶ A magnesium status study was conducted on women with and without PMS during the luteal phase of their menstrual cycle.⁷ It was found that magnesium levels were significantly lower in those with PMS. PMS can both cause, and be associated with, magnesium deficiency and therefore supplementation may be useful for symptomatic relief.⁷ FemmeX has been scientifically formulated to provide additional nutritional support for women at various stages – during preconception, reproductive years and menopause – as many women do not consume enough magnesium from other sources.^{6,7} Magnesium deficiency has been shown to result in a number of symptoms, including PMS and dysmenorrhea, stress, insomnia and cramping.

Boswellia is traditionally used for painful periods in Ayurvedic medicine.

FemmeX contains nutrients essential for phase II methylation of oestrogen metabolites.⁸ Phase I detoxification requires little nutritional support to be fully active.⁹ However phase II detoxification, particularly glucuronidation, requires adequate vitamin B6, B12, magnesium and folate-nutrients present in FemmeX.⁶ Glucuronidation is the major phase II liver detoxification process for conjugating and removing oestrogens and endocrine disruptors.¹⁰ Broccoli sprouts also increase phase II metabolism.¹¹

Fructose free. FemmeX is free from fructose and suitable for people who are fructose sensitive.

Free from dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein and salt. Free from artificial colours and flavours. Sweetened with steviol glycosides. Meta Mag® is a registered trademark of Balchem Corp.



CalmX

Magnesium Combination for a Healthy Stress Response.

Contents: 241 g (9.5 days) and 482 g (19 days) oral powder

Order Code: Raspberry: CALMR (241 g), CALMRL (482 g)

Tropical: CALMT (241 g) and CALMTL (482 g)

Storage: Store below 30°C

- Supports a healthy stress response.¹
- Assists metabolism and synthesis of some neurotransmitters including the calming neurotransmitter GABA.^{2,3}
- 350 mg Meta Mag[®] Magnesium for extra replenishment during times of stress.

Each dose (12.7 g) contains:

Magnesium glycinate dihydrate (Meta Mag [®] - Magnesium bisglycinate)	3.5 g
Equivalent Magnesium	350 mg
Taurine	3 g
Glutamine	2 g
Potassium citrate	275 mg
Equivalent Potassium	100 mg
Calcium ascorbate dihydrate	605 mg
Equivalent Ascorbic acid (Vitamin C)	500 mg
Calcium citrate tetrahydrate	711 mg
Equivalent Calcium	150 mg
Thiamine hydrochloride (Vitamin B1)	25 mg
Riboflavin sodium phosphate	34 mg
Equivalent Riboflavin (Vitamin B2)	25 mg
Nicotinamide (Vitamin B3)	25 mg
Calcium pantothenate (Vitamin B5)	25 mg
Pyridoxal 5-phosphate monohydrate (Vitamin B6)	25 mg
Zinc amino acid chelate (Meta Zn [®] - Zinc bisglycinate)	50 mg
Equivalent Zinc	10 mg

Directions for use:

Adults: Add 2 level scoops (12.7 g) to 200 mL of water, twice daily.

Clinical Benefits:

Provides 350 mg of highly bioavailable Meta Mag[®] Magnesium to be of benefit during times of stress. Magnesium, B vitamins, vitamin C and zinc are all nutrients required to be able to cope with stress effectively and may be depleted in chronic stress.⁴ The adrenergic effects of stress induce a shift of magnesium to the extracellular space, increasing urinary excretion and depleting body stores (Figure 1).⁵ Magnesium deficiency adversely affects excitatory neurotransmitters such as serotonin and acetylcholine, and is associated with stress.^{6,7}

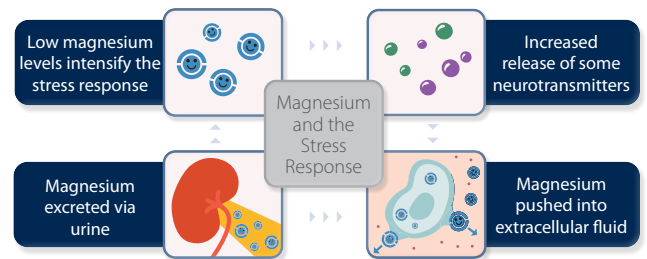


Figure 1: Magnesium and the Stress Response.

A double-blind, placebo-controlled trial using 6 g of taurine per day investigated its impact on stress symptoms and biochemistry. This study showed taurine to inhibit the stress-induced release of adrenaline.⁸ Magnesium, B vitamins, vitamin C and zinc are required to regulate the stress response as cofactors in neurotransmitter synthesis.⁴

Zinc is essential in modulating the stress response.⁹ Zinc levels have been found to be deficient in people with generalised anxiety disorder.¹⁰ Exposure to acute stress increases serum glucocorticoids and induces metallothionein synthesis which consequently decreases serum zinc.¹¹

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast and soy protein. Free from artificial colours, sweeteners, flavours and preservatives (Raspberry flavour). Sweetened with steviol glycosides. Contains 100 mg of potassium per dose.

Meta Mag[®] is a registered trademark of Balchem Corp.



EnergyX

Magnesium Combination with Active Bs for Fatigue.

Contents: 200 g (10 days) and 400 g (21 days) oral powder

Order Code: Tropical: EGYXT (200 g) and EGYXTL (400 g)

Chocolate: EGYX (200 g) and EGYX400 (400 g)

Storage: Store below 30°C

- Energy support for fatigue and lethargy.^{1,2}
- Support healthy thyroid hormones.³
- 200 mg magnesium from Meta Mag® plus Acetyl-L-Carnitine for cellular energy.⁴

Each dose (9.5 g) contains:

Magnesium glycinate dihydrate (Meta Mag® - Magnesium bisglycinate)	2 g
Equivalent Magnesium	200 mg
Acetyl levocarnitine hydrochloride (Acetyl-L-Carnitine)	1.2 g
Tyrosine	1 g
Calcium hydrogen phosphate dihydrate	2.1 mg
Equivalent Calcium	500 mg
Ascorbic acid (Vitamin C)	500 mg
Dibasic sodium phosphate	250 mg
Equivalent Sodium	81 mg
Thiamine hydrochloride (Vitamin B1)	25 mg
Riboflavin sodium phosphate (Vitamin B2)	25 mg
Equivalent Riboflavin	18 mg
Nicotinamide (Vitamin B3)	25 mg
Calcium pantothenate (Vitamin B5)	50 mg
Zinc amino acid chelate (Meta Zn® - Zinc bisglycinate)	50 mg
Equivalent Zinc	10 mg
Borax (Sodium borate)	13 mg
Equivalent Boron	1.5 mg
Potassium iodide	98 micrograms
Equivalent Iodine	75 micrograms
Mecobalamin (Co-methylcobalamin) (Vitamin B12)	200 micrograms
Selenomethionine	62.5 micrograms
Equivalent Selenium	25 micrograms

Directions for use:

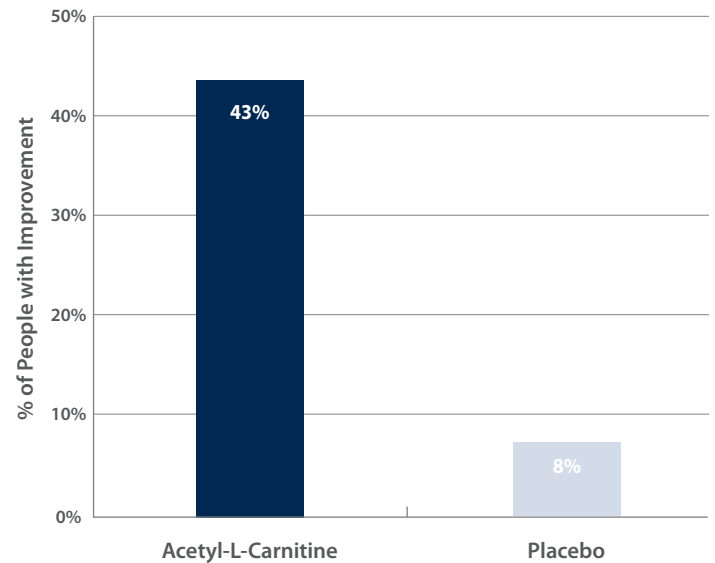
Adults only: Add 2 level scoops (9.5 g) to 200 mL of water twice daily.

Clinical Benefits:

Acetyl-L-Carnitine (ALC) is involved in the production of cellular energy in the mitochondria.⁵ Magnesium from Meta Mag® provides support for fatigue and lethargy.⁶ A placebo-controlled, blind study showed that 2 g of ALC daily helped to improve mental fatigue, therefore assisting healthy cognitive function in older people (Figure 1).⁷ ALC's affinity for mental fatigue has been demonstrated in a clinical study comparing different forms of carnitine against symptoms and serum levels of carnitine. It showed that ALC serum levels correlated with changes in mental fatigue as contrasted with other forms of carnitine which only assisted general fatigue.⁸

Thyroid hormone requires iodine, selenium and zinc for synthesis and activation. Peripheral conversion of thyroxine (T4) into the more physiologically active tri-iodothyronine (T3) is dependent on tyrosine and iodine.^{3,9,10}

Tyrosine is used in the biosynthesis of catecholamine neurotransmitters such as dopamine, noradrenaline and adrenaline.¹¹ A double-blind randomised trial using 2 g of tyrosine per day in army cadets suggested that supplementation with tyrosine may modulate the effects of stress and fatigue on cognitive task performance.¹²



Malaguamera M, Gargante MP et al. Acetyl L-carnitine (ALC) treatment in elderly patients with fatigue. Arch Gerontol Geriatr 2008; 46(2):181-90.

Figure 1: Acetyl-L-Carnitine Improves Mental Fatigue.

Chocolate flavour: Free from dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein, and salt. Free from artificial colours and flavours. Contains steviol glycosides.

Tropical flavour: Free from dairy protein, lactose, eggs, gluten, wheat, nuts, yeast and soy protein. Free from artificial colours, sweeteners and flavours. Contains steviol glycosides.

Meta Mag® is a registered trademark of Balchem Corp.



SleepX

Magnesium, with Lutein and Zeaxanthin for a Healthy Circadian Rhythm.

Contents: 114 g oral powder (20 days) Tropical flavour
Order Code: SLX
Storage: Store below 30°C

- Improves sleep quality.¹
- Supports healthy sleeping patterns,^{2,3} restores circadian rhythm^{4,5} and helps mitigate the effect of blue light exposure on sleep.^{6,7}
- Supports muscle relaxation⁸ and nervous system function.⁹
- A unique combination of highly bioavailable Meta Mag[®] Magnesium, lutein, zeaxanthin with Sensoril[™] Ashwagandha and the essential amino acid, ornithine.

Each dose (5.7 g) contains:

Magnesium glycinate dihydrate (Meta Mag [®] - Magnesium bisglycinate)	3 g
Equivalent Magnesium	300 mg
Ornithine monohydrochloride	400 mg
Lutein	20 mg
Zeaxanthin	4 mg
Dry herbal extract:	
<i>Withania somnifera</i> (Sensoril [™] Ashwagandha),	250 mg
Consisting of:	
<i>Withania somnifera</i> , root	125 mg
Derived from dry root	625 mg
<i>Withania somnifera</i> , leaf	125 mg
Derived from dry leaf	625 mg

Directions for use: Adults: Take 1 scoop (5.7 g) in 200 mL of water, once daily in the evening.

Many Australian adults report poor sleep quality having a negative impact on their lives, with almost half reporting two or more sleep-related problems, such as difficulty initiating or maintaining sleep, or daytime sleepiness or fatigue.¹⁰

1 in 4 patients that visit a Natural Healthcare Practitioner report having sleep issues.¹¹

Clinical Benefits:

SleepX supports healthy sleeping patterns and regulate healthy circadian rhythms. The restoration of the circadian rhythm relies on an adequate ebb and flow of serum cortisol and melatonin levels.¹² Elevated cortisol levels, a consequence of hypothalamic-pituitary-adrenal (HPA) overactivity, may affect sleep onset due to its melatonin-suppressing ability, resulting in hyperarousal. Magnesium regulates key circadian rhythm markers, aiding the reduction of serum cortisol and inducing serum melatonin.¹³ Sensoril[™] Ashwagandha has been shown to reduce cortisol, to help counteract HPA overactivity that disrupts melatonin production.¹⁴ Ornithine improves objective and subjective sleep and stress markers in healthy adults through the regulation of cortisol and DHEA-S production.

Digital devices and blue light exposure. Exposure to artificial nocturnal light (i.e. from electronic devices) interferes with the natural circadian rhythm cycle through the stunting of melatonin production in the hypothalamic suprachiasmatic nuclei.^{15,16} Lutein and Zeaxanthin act as blue light filters, increasing macular pigment optical density, improving visual function and sleep quality due to preferential absorption of blue light.¹⁷ Daily supplementation of 20 mg of Lutein and 4 mg of Zeaxanthin has been clinically demonstrated to show significant improvements in sleep parameters including reducing sleep latency and increasing overall sleep duration and quality.¹⁸

SleepX supports restorative sleep (Figure 1). Typical sleep architecture consists of 80 to 120 minute sleep cycles which incorporate various stages and include rapid eye movement (REM) and non-REM sleep. The last stage

of non-REM sleep is also known as slow wave sleep (SWS) which plays an important role in cerebral restoration and recovery.¹⁹ This natural sleep homeostasis is reset and supported through several phytonutrients, such as Lutein, Zeaxanthin and Sensoril[™] Ashwagandha which decrease the time to the onset of slow wave sleep. Ornithine, magnesium and Triethylene glycol (TEG) contained in Ashwagandha leaves help to increase the time in non-REM/ slow wave sleep during the cycle.^{20,21,22} Combined, these actions support an increase in sleep quality for a more restorative and refreshing night's sleep.

SleepX supports muscle relaxation and neuromuscular function. The proper relaxation of muscles is important to sleep and is facilitated by effective neuromuscular signalling.²³ Symptoms of magnesium deficiency include muscle cramps and spasms.²⁴

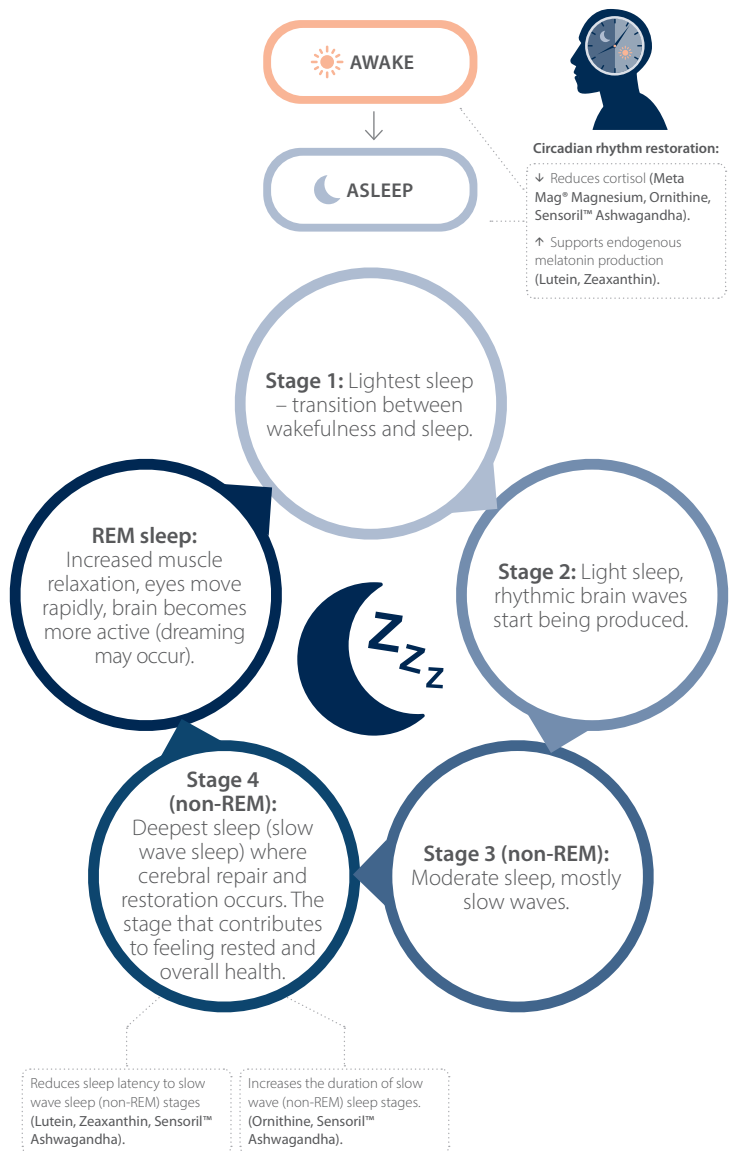


Figure 1: Ingredients in SleepX Restore Circadian Rhythm and Improve Sleep Quality.

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast and soy protein. Free from artificial colours, sweeteners, flavours and preservatives. Sweetened with steviol glycosides.

Sensoril[™] is a registered trademark of Natreon, Inc.

Meta Mag[®] is a registered trademark of Balchem Corp.



PainX

For Neuromuscular Function and Pain Relief.

Contents: 120 g oral powder (12 days) Raspberry flavour
Order Code: PXR
Storage: Store below 30°C

- Reduces and relieves nerve pain and persistent muscular pain, cramps, and spasm.
- For neuromuscular pain, such as shoulder and back pain, head and neck pain, sciatic pain, and fibromyalgia pain.
- PEA is analgesic and anti-inflammatory, exerts endocannabinoid activity and reduces pain amplification and muscle pain.
- Contains highly bioavailable PEA and exclusive Meta Mag® Magnesium.

Each dose (5 g) contains:

Magnesium glycinate dihydrate (Meta Mag® - Magnesium bisglycinate)	2.1 g
Equivalent Magnesium	210 mg
Palmitrol (Palmitoylethanolamide) (Levagen+™)	300 mg

Directions for use: Adults: Add 1 scoop (5 g) to 200 mL water twice daily.

Clinical Benefits:

Relieves neuromuscular pain: Magnesium exerts muscle-relaxing actions (and prevents muscle spasms) via multiple mechanisms and is a natural glutamate antagonist.¹ Glutamate is involved in central sensitisation and pain amplification.² Magnesium regulates neuromuscular transmission by blocking the entry of calcium ions in synaptic nerve terminals,³ as well as inhibiting presynaptic acetylcholine release, which propagates impulses between motor nerves and muscles.⁴

Higher magnesium intake has found to be protective against chronic pain.⁵ However, one third of Australian adults fail to meet their requirements for adequate magnesium intake.⁶ PainX contains 420 mg/d to support adults to meet the recommended intake of 310 to 320 mg/d in women and 400 to 420 mg/d in men.⁷

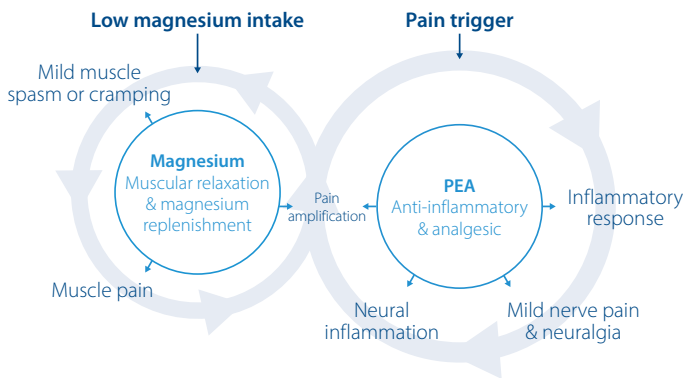


Figure 1: Magnesium and PEA Address Multiple Drivers of Pain Amplification.

Palmitoylethanolamide (PEA) promotes endogenous cannabinoid system (ECS) activity through its ability to augment the activity of cannabinoid receptor 1 (CB1) and cannabinoid receptor 2 (CB2).⁸

These receptors are expressed in nerve tissue and immune cells and are involved in modulating the inflammatory response by suppressing immune cell activation, which can reduce pain perception.⁹ PEA proves to be effective and safe in nerve compression syndromes. In one pivotal, double blind, placebo-controlled trial in 636 sciatic pain patients, subjective pain scores were reduced from 6.5/10 to 3.6/10 in the 300 mg/d group, while in the 600 mg/d group scores were reduced from 7.1/10 to 2.1/10 compared to placebo, which decreased from 6.6/10 to 4.6 (Figure 2).¹⁰

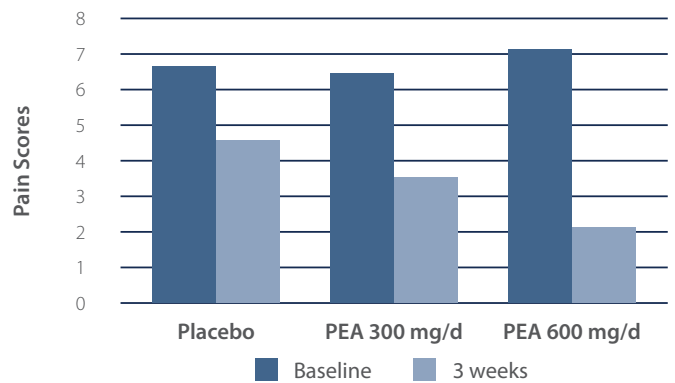
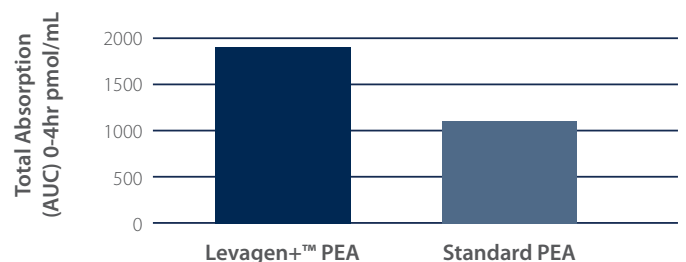


Figure 2: Outcomes of 600 mg/d of PEA on Sciatic Pain.

Meta Mag® and Levagen+™ are both exclusive types of magnesium and PEA, respectively, that show enhanced bioavailability.¹¹ Meta Mag® is different to magnesium salts and other magnesium chelates because it is covalently bound to two glycine molecules.¹² Levagen+™ is a highly bioavailable PEA using LipiSpere® technology for enhanced absorption.¹³ The Levagen+™ absorption studies show that Levagen+™ is 1.7 times better absorbed and that it stays in the plasma for a longer period of time compared to a standard PEA (Levagen®) (Figure 3). Clinically, 600 mg/d of Levagen+™ PEA is likely to equate to consuming 1,000 mg/d of a standard micronised PEA (Levagen®). A Practitioner can expect Levagen+™ to produce greater efficacy and to last longer in the body.¹⁴



Briskey D, Mallard AR, Rao A. Increased absorption of palmitoylethanolamide using a novel dispersion technology system (LipiSpere®). J Nut Food Sci. 2020 May;5(2):1-6.

Figure 3: Levagen+™ PEA vs Standard PEA.

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast and soy protein.

PainX contains 750 mg of malic acid per dose.

Levagen+™ is owned by Gencor Pacific Limited.

Meta Mag® is a registered trademark of Balchem Corp.



CardioX

Magnesium and Active Bs for Cardiovascular Health.

Contents: 200 g (12.5 days) and 400 g (25 days) oral powder

Order Code: Banana Berry: CDXBB (200 g), CDXBBL (400 g)

Tropical: CDX (200 g), CDX400 (400 g)

Storage: Store below 30°C

- Maintain normal cardiovascular health.¹
- Maintain healthy levels of biomarkers associated with cardiovascular health such as homocysteine.²
- Contains clinically trialled levels of magnesium (Meta Mag[®]) and taurine.
- Chromium is a cofactor of the biochemical pathway assisting the transport of glucose into cells.

One level scoop (8.1 g) contains:

Magnesium glycinate dihydrate (Meta Mag [®] - Magnesium bisglycinate)	3 g
Equivalent Magnesium	300 mg
Taurine	3 g
Calcium amino acid chelate	300 mg
Equivalent Calcium	60 mg
Pyridoxal 5-phosphate (Vitamin B6)	25 mg
Riboflavin sodium phosphate	2.7 mg
Equivalent Riboflavin (Vitamin B2)	2 mg
Chromic chloride hexahydrate	513 micrograms
Equivalent Chromium	100 micrograms
Mecobalamin (Co-methylcobalamin) (Vitamin B12)	200 micrograms
Levomefolate calcium	163 micrograms
Equivalent Levomefolic acid (5-Methyltetrahydrofolate)	150 micrograms
Selenomethionine	125 micrograms
Equivalent Selenium	50 micrograms

Directions for use:

Adults: Add 1 level scoop (8.1 g) to 200 mL of water or juice twice daily.

Clinical Benefits:

Studies on 600 mg magnesium and 6 g taurine have been shown to decrease mean blood pressure by 4.77% and 5.63% respectively after supplementation (Figure 1).^{5,6} Taurine may assist in the maintenance of normal blood pressure in healthy people by normalisation of the increased sympathetic adrenal tone and inhibiting the stress-induced release of epinephrine from adrenal chromaffin granules.⁶

In healthy people, riboflavin, folate and vitamin B12 may help support healthy homocysteine levels,^{7,8,9} a biomarker associated with cardiovascular health.¹⁰ A randomised placebo-controlled study in healthy women aged 18 to 40, examined the effect of low-dose folic acid administration on total plasma homocysteine concentrations. Results showed a significant change in homocysteine in just four weeks.² Folinic acid has advantages over folic acid as it bypasses a number of steps in the conversion of folic acid to 5-methyltetrahydrofolate, the active form required for the remethylation of homocysteine to methionine.^{11,12}

Mechanisms for blood glucose support¹³ in healthy people may include the synthesis of chromodulin, by chromium, which stimulates phosphorylating cytosolic proteins. These are involved in signalling within the pancreas, thereby assisting healthy blood glucose levels.¹⁴

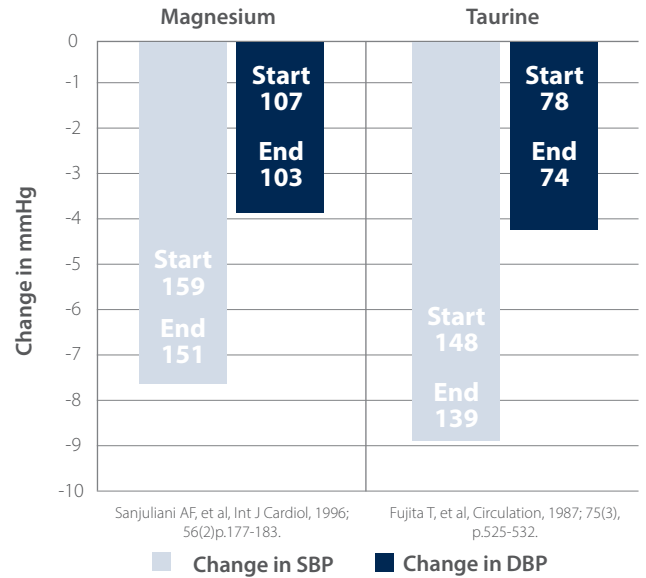


Figure 1: Magnesium and Taurine Supplementation in Blood Pressure.

Banana Berry: Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, soy protein and salt. Free from artificial colours, flavours and sweeteners. Sweetened with steviol glycosides.

Tropical: Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts and soy protein. Free from artificial colours and flavours. Sweetened with steviol glycosides.

Meta Mag[®] is a registered trademark of Balchem Corp.

Clinical Tools and Resources

All clinical tools and resources are available on  Metagenics Institute™

Visit metagenicsinstitute.com.au and you will find a wealth of information readily available, to assist you in your practice for free.



Clinical Tools



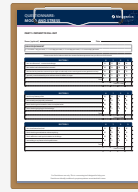
Technical Data



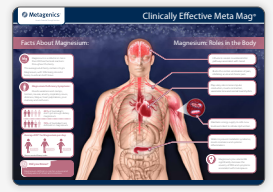
Treatment Protocols



Health Appraisal Questionnaire



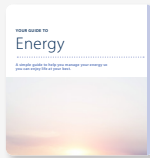
Mood and Stress Questionnaire



Clinically Effective Meta Mag® Infographic



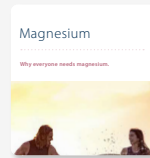
Patient Resources



Your Guide to Energy Booklet (Pack of 10)



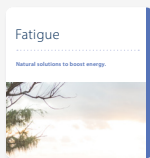
Your Guide to Stress Booklet (Pack of 10)



Magnesium Brochure (Pack of 15)



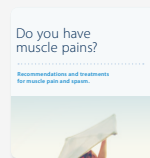
Public Facebook Page facebook.com/metagenics



Fatigue Brochure (Pack of 15)



Managing Stress Brochure (Pack of 15)



Muscle Pain Brochure (Pack of 15)

Available to order through your Metagenics Territory Manager.



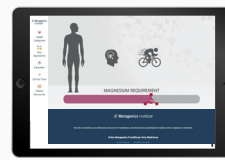
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Freedom From the Mind: A Complete Approach to Supporting Complex Mental Health Issues



Pain Management: Solutions to Short Circuit the Cycle of Pain



Magnesium Patient Video



Metagenics Institute Podcast



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Delivering Practitioner to Practitioner support and access to an industry leading Clinical team with 202 years of combined clinical experience. Available to help save you time and support your business and patient needs.

- Clinical support (i.e. treatment plans/product prescriptions/test results and interpretation/contraindications);
- Writing resources (technical/patient/digital tools);
- Education;
- Researching cases (providing information and evidence to support your research/patient treatment needs).

Our Clinical Support team can be reached on:

AUSTRALIA
1800 777 648
8:00 am – 5:00 pm AEST

NEW ZEALAND
0508 227 744
8:00 am – 5:00 pm



Clinically Effective Magnesium Range Summary

	Product Highlights	Page		Product Highlights	Page
	Fibroplex MagActive Powder <i>Meta Mag® Magnesium and Active Bs for Daily Magnesium Supplementation.</i> <ul style="list-style-type: none"> • 300 mg Meta Mag® • 600 mg Taurine • 500 mg Glutamine 	4		EnergyX <i>Magnesium Combination with Active Bs for Fatigue.</i> <ul style="list-style-type: none"> • 200 mg Meta Mag® • 1.2 g Acetyl-L-Carnitine • 1 g Tyrosine 	7
	Fibroplex MagActive Tablet <i>Meta Mag® Magnesium with Active Vitamin B6 for Every Day Magnesium Supplementation.</i> <ul style="list-style-type: none"> • 100 mg Meta Mag® • 40 mg Meta Zn® • 15 mg Vitamin B6 	5		SleepX <i>Magnesium, with Lutein and Zeaxanthin for a Healthy Circadian Rhythm.</i> <ul style="list-style-type: none"> • 300 mg Meta Mag® • Lutein and zeaxanthin • 400 mg Ornithine • Sensoril™ Ashwagandha 	8
	FemmeX <i>Magnesium Supplementation for Women.</i> <ul style="list-style-type: none"> • 300 mg Meta Mag® • 1.5 g Boswellia • 1.5 g German chamomile • 750 mg Broccoli sprouts 	5		PainX <i>For Neuromuscular Function and Pain Relief.</i> <ul style="list-style-type: none"> • 210 mg Meta Mag® • 300 mg PEA (Palmitoylethanolamide) (Levagen+™) 	9
	CalmX <i>Magnesium Combination for a Healthy Stress Response.</i> <ul style="list-style-type: none"> • 350 mg Meta Mag® • 3 g Taurine • 2 g Glutamine 	6		CardioX <i>Magnesium and Active Bs for Cardiovascular Health.</i> <ul style="list-style-type: none"> • 300 mg Meta Mag® • 3 g Taurine 	10



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