

Metabolic Rejuvenation™

Prepare • Detox • Renew†

DESCRIPTION

Metabolic Rejuvenation™ is a comprehensive 28-day, 3-phase detoxification support program with nutrients specifically chosen to prepare the body through elimination, detox through support of phase 1 and 2 liver detoxification, and renewal of the metabolic system and intestinal tract.† One Metabolic Rejuvenation box includes 4 bottles (one for each week) with convenience packs.

FUNCTIONS

Week 1- Prepare†

The goal of the first week is to open pathways for elimination and prepare the body to properly detoxify in the next phase. The proprietary blend supplies fibers from pectin, glucomannan, and slippery elm bark to naturally stimulate the bowel, and may contribute to immobilizing unwanted compounds in the gastrointestinal tract.† Magnesium citrate may also support regular bowel movements.†

Week 2 and 3 - Detox†

The goal of weeks 2 and 3 is to support phase 1 and phase 2 detoxification of the liver.† As the body's main detoxification organ, the liver is responsible for removing all potentially harmful molecules. This detoxification process occurs in 2 phases. The supplements in week 2 and 3 convenience packs help to maintain liver structure and function in response to environmental toxins.† Isothiocyanates (ITCs) found in *Wasabia japonica* are naturally occurring compounds that have the ability to stimulate liver detoxification pathways.† Sulforaphane in broccoli extract has been found to increase the activity of Phase II enzymes.† For efficient Phase 2 detoxification, the liver cells require sulphur-containing amino acids such as taurine, methionine and cysteine.† As a biologically active precursor for glutathione synthesis, N-Acetyl-L-cysteine raises intracellular glutathione levels.† L-Glutathione scavenges toxic free radicals and inhibits peroxidation by slowing down free-radical catalyzed chain reactions.† Glutathione is involved in DNA synthesis and repair, protein and prostaglandin synthesis, amino acid transport, metabolism of toxins and carcinogens, immune system function, prevention of oxidative cell damage, and enzyme activation.† Dietary sulfur assumes a major role in detoxification as part of the hepatic sulfur conjugation pathways.† Glutathione, sulfur and NAC support mercury detoxification.† High mercury in the body can inhibit antioxidant enzymes and deplete intracellular glutathione. B vitamins, vitamin C and lipoic acid perform as antioxidants to scavenge free radicals.† Silymarin supports healthy levels of glutathione and superoxide dismutase, two primary substances with antioxidant activity in the liver that reduce free radicals known to interfere with normal cell function.† Garlic appears to prevent endothelial cell depletion of glutathione, which may be responsible for its antioxidant effects.† Extracts of artichoke, *Cynara scolymus*, can help stimulate the flow of bile from the liver and support liver cells from oxidative damage.† *Cynara's* usefulness in liver health is thought to be due to its content of caffeoylquinic acids, e.g. cynarin, and flavonoids.† Lipopolysaccharide (LPS) triggers excessive secretion of a variety of mediators including nitric oxide (NO) and prostaglandin E2 (PGE2). Luteolin and luteolin-7-O-glucoside, the active compounds with antioxidant activity from dandelion extract, may support cellular protection and reduce lipopolysaccharides in animal models.†

Week 4- Renew†

The goal of week 4 is to replenish lost nutrients through the detoxification phase and provide specific nutrients to help support the gut microflora and metabolism.† A multivitamin/mineral with phenolic proprietary blend provides adequate amounts of vitamins, minerals, and antioxidants to nutritionally replenish the body.† Omega-3 fatty acids from fish oil support hormone production and optimal lipid ratio.† Glutamine helps maintain normal intestinal permeability, as well as mucosal cell regeneration and structure, especially during periods of physiological stress.† Glutamine also carries potentially toxic ammonia to the kidneys for excretion, which helps maintain normal acid-base balance.† Healthy bacteria in the intestinal tract can be removed during extensive or frequent bowel elimination, thereby making supplementation with probiotic bacteria

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cultures necessary after a detoxification regimen.† A normal intestinal microflora rich in lactobacilli creates acidic conditions that are unfavorable for the settlement of undesirable microorganisms.†

INDICATIONS

Metabolic Rejuvenation is indicated for those individuals wanting to support healthy detoxification pathways in the liver by utilizing the 28-day comprehensive, convenient program.†

FORMULA (#66867-56X)

Week 1 Preparation

SUPPLEMENT FACTS

Serving Size 1 Pack, 14 serving per container, Each Pack contains 4 capsules

Amount Per Serving

Dietary Fiber	1.5 g
Magnesium (from Magnesium Citrate)	150 mg
Proprietary Blend.....	1,800 mg
Glucomannan, Carrot Root, Celery Stalk and Leaves, Citrus Pectin, Apple Pectin, Sodium Alginate and Slippery Elm Bark.	

Other ingredients: Gelatin (capsule), hydroxypropyl methylcellulose (capsule), ascorbyl palmitate, vegetable stearate, silica and cellulose.

Week 2 Detox

SUPPLEMENT FACTS

Serving Size 1 AM and 1 PM Pack • Each AM Pack contains: 4 Capsules

Total Amount Per Serving:

Thiamine (as Thiamin HCL)	62.5 mg
Riboflavin (as Riboflavin 5 Phosphate and Riboflavin)	25 mg
Niacin (as Niacinamide)	50 mg
Vitamin B-6 (as Pyridoxal-5-Phosphate)	20 mg
Folate (as L-methylfolate, Metafolin® 400 mcg)	665 mcg DFE
Vitamin B-12 (as methylcobalamin)	500 mcg
Biotin.....	400 mcg
Pantothenic Acid (Vitamin B-5, as d-calcium pantothenate)	50 mg
Selenium (as Selenomethionine)	50 mcg
N-Acetyl-L-Cysteine	750 mg
Methylsulfonylmethane (MSM).....	250 mg
Garlic (bulb)	125 mg
Barberry Extract.	125 mg
<i>(Berberis vulgaris, root and stem)</i>	
Dandelion (<i>Taraxacum officinalis, leaf</i>).	125 mg
Bilberry Extract (<i>Vaccinium myrtillus, fruit</i>) (Standardized to provide 25% antyocyanidins).....	100 mg
Milk Thistle (<i>Silybum marianum, fruit</i>)	87.5 mg
<i>(standardized to provide 80% silymarin)</i>	
Artichoke Extract (<i>Cynara scolymus, leaf</i>)	75 mg
Schisandra Extract (<i>Schisandra chinensis, fruit</i>)	75 mg
<i>(Standardized to 2% schizandrins)</i>	
Broccoli Extract (<i>Brassica oleracea l. sprout</i>)	62.5 mg
<i>(Standardized to 250 mcg of sulforaphane)</i>	
Parsley (leaf)	50 mg
<i>Wasabia japonica (rhizome)</i>	400 mg
<i>(Providing 300 mcg of isothiocyanates)</i>	

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L-Glutathione	20 mg
Intrinsic Factor (from porcine)	20 mg

Each PM Pack contains: 2 capsules and 2 tablets, 7 servings per container

Vitamin C (Ascorbic Acid).....	1,000 mg
Thiamine (as Thiamin HCL)	12.5 mg
Riboflavin (as Riboflavin 5 Phosphate and Riboflavin)	5 mg
Biotin	100 mcg
Selenium (as Selenomethionine)	50 mcg
N-Acetyl-L-Cysteine	250 mg
Methylsulfonylmethane (MSM).....	250 mg
Garlic (bulb)	125 mg
Barberry Extract	125 mg
(<i>Berberis vulgaris</i> , root and stem)	
Dandelion (<i>Taraxacum officinalis</i> , leaf).....	125 mg
Garlic (bulb).....	125 mg
Bilberry Extract (<i>Vaccinium myrtillus</i> , fruit)	
(Standardized to provide 25% antyocyanidins).....	100 mg
Milk Thistle (<i>Silybum marianum</i> , fruit)	87.5 mg
(standardized to provide 80% silymarin)	
Artichoke Extract (<i>Cynara scolymus</i> , leaf)	75 mg
Schisandra Extract (<i>Schisandra chinensis</i> , fruit)	75 mg
(Standardized to 2% schizandrins)	
Broccoli Extract (<i>Brassica oleracea l. sprout</i>)	62.5 mg
(Standardized to 250 mcg of sulforaphane)	
Parsley (leaf)	50 mg
<i>Wasabia japonica</i> (rhizome).....	400 mg

(Providing 300 mcg of isothiocyanates)

Other ingredients: Cellulose, hydroxypropyl methylcellulose (capsule), bovine gelatin (capsule), silica, stearic acid, vegetable stearate, rose hips, ascorbyl palmitate, magnesium silicate and croscarmellose sodium.

Week 3 Detox

SUPPLEMENT FACTS

Serving Size 1 Pack • Each AM Pack contains 1 Tablets and 3 Capsules: Servings per container 7

Amount Per Serving

Calcium (from Calcium Krebs†/Carbonate)	150 mg
Iodine (from Potassium Iodide)	50 mcg
Magnesium (from Magnesium Krebs†/Oxide)	63.3 mg
Zinc (from Zinc Krebs†).....	6 mg
Selenium (from Selenium Krebs†)	67 mcg
Copper (from Copper Krebs†).....	0.4 mg
Manganese (from Manganese Krebs†).....	10 mg
Chromium (from chromium GTF, polynicotinate).....	100 mcg
Molybdenum (from Molybdenum Krebs†).....	16.7 mcg
Potassium (from Potassium Krebs†/Chloride)	33 mg
Free Form Amino Acids.....	600 mg
Proprietary Blend L-Arginine, L-Ornithine, L-Glutamic Acid, L-Aspartic Acid, L-Lysine, Glycine, L-Leucine, L-Valine, L-Threonine, L-Methionine, L-Alanine, L-Serine, L-Tyrosine, L-Cystine, L-Isoleucine, L-Proline, L-Histidine, L-Phenylalanine.	
N-Acetyl-L-Cysteine	500 mg
Dandelion (<i>Taraxacum officinalis</i> , leaf).....	125 mg
Barberry Extract (<i>Berberis vulgaris</i> , root and stem).....	125 mg

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Bilberry Extract (<i>Vaccinium myrtillus</i> , fruit) (Standardized to provide 25% antyocyanidins).....	100 mg
Milk Thistle (<i>Silybum marianum</i> , fruit)	87.5 mg
(standardized to provide 80% silymarin)	
Artichoke Extract (<i>Cynara scolymus</i> , leaf)	75 mg
Schisandra Extract (<i>Schisandra chinensis</i> , fruit)	75 mg
(Standardized to 2% schizandrins)	
Broccoli Extract (<i>Brassica oleracea l. sprout</i>)	62.5 mg
(Standardized to 250 mcg of sulforaphane)	
<i>Wasabia japonica</i> (rhizome).....	25 mg
(Providing 300 mcg of isothiocyanates)	
Boron (from Boron citrate).....	25 mg
Vanadium (from Vanadium Krebs††)	25 mcg
Silicon (as Silicon Dioxide).....	0.67 mg

Serving Size 1 Pack • Each PM Pack contains 3 Capsules: Servings per container 7

L-Methionine.....	500 mg
Taurine	500 mg
Barberry Extract.	125 mg
(<i>Berberis vulgaris</i> , root and stem)	
Dandelion (<i>Taraxacum officinalis</i> , leaf).....	125 mg
Bilberry Extract (<i>Vaccinium myrtillus</i> , fruit) (Standardized to provide 25% antyocyanidins).....	100 mg
Milk Thistle (<i>Silybum marianum</i> , fruit)	87.5 mg
(standardized to provide 80% silymarin)	
Artichoke Extract (<i>Cynara scolymus</i> , leaf)	75 mg
Schisandra Extract (<i>Schisandra chinensis</i> , fruit)	75 mg
(Standardized to 2% schizandrins)	
Broccoli Extract (<i>Brassica oleracea l. sprout</i>)	62.5 mg
(Standardized to 250 mcg of sulforaphane)	
<i>Wasabia japonica</i> (rhizome).....	25 mg
(Providing 300 mcg of isothiocyanates)	
Other ingredients: Cellulose, hydroxypropyl methylcellulose (capsule), ascorbyl palmitate, bovine gelatin (capsule), magnesium silicate, vegetable stearate, and silica.	

Week 4 Renew

SUPPLEMENT FACTS

Serving Size 1 Packs • Each Pack contains 1 tablet, 1 softgel and 2 capsules:

Servings per container 14

Calories	8
Total Fat	0.9 g
Vitamin A (as Natural Beta-Carotene).....	750 mcg
Vitamin C (as Ascorbic Acid).....	60 mg
Vitamin D3.....	12.5 mcg (500 IU)
Vitamin E.....	33.5 mg
(as d-alpha tocopheryl succinate)	
Thiamine (as Thiamine HCL).....	12.5 mg
Riboflavin (as Riboflavin-5-Phosphate).....	5 mg
Niacin/Niacinamide.....	15 mg
Vitamin B6 (as Pyridoxal-5-Phosphate)	5 mg
Folate (as L-methylfolate, Metafolin®)	400 mcg DFE
Vitamin B-12 (as methylcobalamin)	125 mcg

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Biotin.....	150 mcg
Pantothenic Acid (as d-Calcium Pantothenate).....	12.5 mg
Calcium (as Calcium Citrate/Malate Complex).....	25 mg
Iodine (from Kelp).....	75 mcg
Magnesium (as Magnesium Citrate).....	12.5 mg
Zinc (as Opti-Zinc, monomethionine).....	7.5 mg
Selenium (as amino acid chelate).....	50 mcg
Copper (as Copper amino acid chelate).....	0.5 mg
Chromium (as amino acid chelate).....	60 mcg
Molybdenum (as amino acid chelate).....	50 mcg
Potassium (as Potassium Aspartate).....	15 mg
L-Glutamine.....	500 mg
EPA (Eicosapentaenoic acid).....	330 mg
DHA (Docosahexaenoic acid).....	170 mg
Proprietary Blend Probiotic Blend.....	280 mg

(yielding 20 Billion CFU)

Containing Short Chain Fructooligosaccharide (NutraFlora® scFOS®)

Bifidobacterium bifidum, *Bifidobacterium breve*, *Bifidobacterium lactis (infantis)*, *Bifidobacterium lactis HN019*, *Bifidobacterium longum*, *Lactobacillus acidophilus*, *Lactobacillus brevis*, *Lactobacillus bulgaricus*, *Lactobacillus casei*, *Lactobacillus gasseri*, *Lactobacillus paracasei*, *Lactobacillus plantarum*, *Lactobacillus rhamnosus*, *Lactobacillus salivarius*, *Lactococcus lactis*, *Streptococcus thermophilus*

Polyphenol Proprietary Blend..... 150 mg

Wild Blueberry Extract (fruit, *Vaccinium angustifolium*, standardized to 4% polyphenols),

Strawberry Extract (fruit, *Fragaria vesca*, standardized to 2% polyphenols), Spinach Extract

(leaf, *Spinacia oleracea*, standardized to 1.5% polyphenols)

Choline (from Choline/Bitartrate).....30 mg

Inositol..... 12.5 mg

Pterostilbene (PteroPure™**)..... 5 mg

Lutein (natural)..... 1.5 mg

Lycopene (natural)..... 1.5 mg

Zeaxanthin.....0.5 mg

Astaxanthin.....0.5 mg

Other ingredients: Gelatin (tilapia), ultra refined fish oil concentrate (from sardine, anchovy and mackerel), gelatin (capsule), hydroxypropyl methylcellulose (capsule), croscarmellose sodium, steric acid, hydroxypropyl cellulose, vegetable stearate, silica, magnesium silicate, dextrose, titanium dioxide, glycerin, water, rosemary extract, ascorbyl palmitate, mixed tocopherols, ethylcellulose, coconut oil, ammonium hydroxide, sodium alginate, caramel color, and natural vanilla flavor. Contains: Fish

pTeroPure® is a trademark of ChromaDex, Inc

OptiZinc® is a trademark of InterHealth N.I

Metafolin® is a registered trademark of Merck KGaA, Darmstadt, Germany

NutraFlora® and scFOS® are registered trademarks of GTC Nutrition

SUGGESTED USE

As a dietary supplement, adults take as follows:

Week 1 - take 2 packs daily (1 in the AM and 1 in the PM before a meal)

Week 2 and 3 - take 1 AM and 1 PM pack daily with food

Week 4 - take 2 packs daily (1 in the AM and 1 in the PM)

SIDE EFFECTS

Normal symptoms of headache, fatigue, and change in bowel movements or skin eruptions may occur in some

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individuals during a detoxification program.

WARNING: Do not take if pregnant or lactating. Consult a healthcare professional before use if taking medications, especially blood thinners, or have an immune-compromised condition.

STORAGE

Store in a cool, dry place, away from direct light. Use only if safety seal is intact.

REFERENCES

- Agúndez JA, Lucena MI, Expert Opin Drug Metab Toxicol. 2011 Apr 8.
- Lomaestro BM, Malone M. Ann Pharmacother 1995;29:1263-73.
- Lu SC. FASEB J 1999;13:1169-83.
- Ide N, Lau BH. Phytomedicine 1999;6:125-31
- Gismondo MR, Drago L, Fassina MC, et al. Dig Dis Sci 1998;43:1752-4.
- Robinson MK, Ziegler TR, Wilmore DW. Eur J Pediatr Surg 1999;9:200-6.
- Collins MD, Gibson GR. Am J Clin Nutr 1999;69:1052S-1057S.
- Flora K, Hahn M, Rosen H, et al. Am J Gastroenterology 1998;93:139-43.
- Singh SV, Herman-Antosiewicz A, Singh AV, Lew KL, Srivastava SK, Kamath R, Brown KD, Zhang L, Baskaran R. J Biol Chem. 2004 Jun 11;279(24):25813-22.
- Morimitsu Y, Hayashi K, Nakagawa Y, Horio F, Uchida K, Osawa T. Biofactors. 2000;13(1-4):271-6.
- Kropacova K, Misurova E, Hakova H. Radiats Biol Radioecol 1998;38:411-5.
- Smilkstein MJ. N Engl J Med 1988; 319:1557-1562.
- Quig, D. Altern Med Rev 1998;3:262-70.
- Bass, NM. [In Process Citation]. Curr Gastroenterol Rep 1999;1:50-6.
- Tujioka K, Ohsumi M, Hayase K, Yokogoshi H. J Nutr Sci Vitaminol (Tokyo). 2011;57(1):48-55.
- Rondanelli M, et al. World J Clin Cases. 2015 Feb 16;3(2):156-62. doi: 10.12998/wjcc.v3.i2.156. Review.
- Lin CS, et al. Biomed J. 2014 Sep-Oct;37(5):259-68. doi: 10.4103/2319-4170.138314.
- Gibson GR, Fuller R. J Nutr. 2000 Feb;130(2S Suppl):391S-395S. Review.
- Chiang, BL et al. Eur J Clin Nutr. 2000 Nov; 54(11):849-55.
- Arunachalam, K, et al. Eur J Clin Nutr. 2000 Mar;54(3):263-7.
- Ahmed, M et al. J Nutr Health Aging. 2007 Jan-Feb;11(1):26-31.
- Gopal, Pramod K et al. Nutr Research. 2003 Oct: 1313-28.
- Waller, Phillip et al. Scand J Gastro, 2011; 46: 1057-64.
- Prescott, S.L. et al. Clinical and Expir.Allergy, 2008. 1-9
- Collins MD, Gibson GR. Am J Clin Nutr 1999;69:1052S-1057S.
- Robert J Boyle, American Journal of Clinical Nutrition, Vol. 83, No. 6, 1256-1264, June 2006
- Verna EC, Lucak S. Therapeutic Advances in Gastroenterology 2010 3: 307-319
- Rhode CL. Nutr Clin Pract 2009 24: 33-40.
- Toxikologische Pathologie [serial online]. September 2008;60(6):475-480. [artichoke].
- Hfaiedh M, Brahmi D, Zourgui L. Environmental Toxicology [serial online]. October 1, 2014. [dandelion].
- Chung Mu Park, Young-Sun Song. Nutr Res Pract. 2013 Dec; 7(6): 423-429. [dandelion]

For more information on Metabolic Rejuvenation visit douglaslabs.com

† These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.

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