



# BioFoundation-G®

## Multiple Vitamin & Mineral Formula Supports Healthy Glucose Metabolism

- A full spectrum of vitamins and minerals
- Provides rate-limiting nutrients for glutathione production, necessary for xenobiotic detoxification
- Contains clinical doses of resveratrol, lipoic acid, CoQ10, milk thistle, and green tea extract
- Broad-spectrum antioxidant support, including bilberry and citrus extracts, lipoic acid, lycopene, and lutein
- Highly bioactive and bioavailable nutrients, such as pyridoxal-5-phosphate and vitamin K2 (Menaquinone 7)

**Code:** 9476 **NPN:** 80051438  
**Size:** 180 Tablets  
**Actual Size:** 19.74 mm x 8.32 mm



### PRODUCT SUMMARY

BioFoundation-G is a comprehensive vitamin and mineral supplement to support healthy living in the modern world. A broad-spectrum and highly bioavailable multivitamin and mineral, BioFoundation-G's formulation uses clinically driven research to provide the nutritional foundation needed for the modern environment. This complete multivitamin and mineral formula contains clinical doses of nutrients such as N-acetyl-cysteine and R-alpha-lipoic acid, well established to increase cellular levels of glutathione, the most prevalent intercellular antioxidant. Glutathione is one of the most important conjugators of numerous environmental and endogenous toxins. It is known to be depleted not only by xenobiotics, but also by chronic conditions such as inflammatory and neurodegenerative diseases.

Glutathione support is linked to lower rates of cell death and apoptosis. BioFoundation-G provides physiologically relevant doses of hepatoprotectors such as milk thistle, antioxidants, mitochondrial bioenergetic enhancers such as CoQ10, and co-factors for critical detoxification enzymes. It also provides the biological modifiers natural trans-resveratrol and green tea phytosome, two nutrients shown to have anti-inflammatory, weight management, anti-aging, cardiovascular, and stress-related benefits.



**Serving Size:** 1 tablet  
**Servings per Container:** 180

**Each Tablet Contains:**

		Daily Dose:
Vitamin A (Palmitate).....	500 IU (150 mcg RAE) ...	1500 IU (450 mcg RAE)
Vitamin B1 (Thiamine Hydrochloride).....	4.2 mg .....	12.6 mg
Vitamin B2 (Riboflavin) .....	4.2 mg .....	12.6 mg
Vitamin B3 (Niacin).....	12.5 mg .....	37.5 mg
Vitamin B3 (Niacinamide) .....	33.3 mg .....	100 mg
Vitamin B5 (Pantothenic Acid) (Calcium <i>d</i> -Pantothenate).....	16.7 mg .....	50 mg
Vitamin B6 (Pyridoxine Hydrochloride) (Pyridoxal 5-Phosphate) .....	2.5 mg .....	7.5 mg
Biotin.....	8.3 mcg .....	25 mcg
Betaine Hydrochloride .....	16.7 mg .....	50 mg
Folate (from (6S)-5-Methyltetrahydrofolic Acid (MTHF), Glucosamine Salt, Quatrefolic®).....	83 mcg .....	249 mcg
Vitamin B12 (Methylcobalamin).....	167 mcg .....	501 mcg
Para-Aminobenzoic Acid (PABA).....	4.2 mg .....	12.6 mg
Choline (Bitartrate) .....	4.2 mg .....	12.6 mg
Inositol .....	4.2 mg .....	12.6 mg
Vitamin C (Ascorbic Acid).....	167 mg .....	501 mg
Vitamin D3 (Cholecalciferol).....	333 IU (8.3 mcg) .....	999 IU (25 mcg)
Vitamin E ( <i>d</i> -Gamma Tocopherol) .....	33.3 mg .....	100 mg
Vitamin K2 (Menaquinone) (MK-7) (Natto Bean) .....	7.5 mcg .....	22.5 mcg
Boron (Citrate).....	41.7 mcg .....	125 mcg
Calcium (HVP* Chelate).....	16.7 mg .....	50 mg
Chromium (Polynicotinate).....	33.3 mcg .....	100 mcg
Copper (HVP* Chelate).....	170 mcg .....	510 mcg
Iodine ( <i>Ascophyllum nodosum</i> ) (whole plant).....	50 mcg .....	150 mcg
Magnesium (HVP* Chelate).....	33.3 mg .....	100 mg
Manganese (Citrate).....	0.8 mg .....	2.4 mg
Molybdenum (Citrate).....	66.7 mcg .....	200 mcg
Potassium (Citrate).....	6.8 mg .....	20.4 mg
Selenium (Selenomethionine).....	33.3 mcg .....	100 mcg
Vanadium (Citrate).....	2.5 mcg .....	7.5 mcg
Zinc (Citrate).....	2.5 mg .....	7.5 mg
Bilberry Extract ( <i>Vaccinium myrtillus</i> ) (36% Anthocyanosides) (fruit) .....	6.6 mg .....	20 mg
Citrus Bioflavonoids 4:1 Extract ( <i>Citrus limon</i> , <i>Citrus sinensis</i> , <i>Citrus paradisi</i> , <i>Citrus reticulata</i> , <i>Citrus aurantiifolia</i> ) (fruit) .....	8.3 mg .....	25 mg
Coenzyme Q10 (Microorganism) (whole cell).....	8.3 mg .....	25 mg
Green Tea Phytosome® ( <i>Camellia sinensis</i> , <i>Glycine max</i> ) (13% EGCG**) (leaf, seed).....	8.3 mg .....	25 mg
Hesperidin ( <i>Citrus sinensis</i> ) (fruit).....	4.2 mg .....	12.6 mg
Lutein ( <i>Tagetes erecta</i> ) (flower) .....	550 mcg .....	1650 mcg
Lycopene ( <i>Lycopersicon esculentum</i> ) (fruit).....	280 mcg .....	840 mcg
Silybin Phytosome® ( <i>Silybum marianum</i> , <i>Glycine max</i> ) (15% Silybin) (fruit, seed).....	25 mg .....	75 mg
N-Acetyl-L-Cysteine.....	25 mg .....	75 mg
R-Alpha-Lipoic Acid.....	41.7 mg .....	125 mg
ResveratrolRich® Proprietary Blend [Wine Grape ( <i>Vitis vinifera</i> ) (fruit), Purified Japanese Knotweed ( <i>Polygonum cuspidatum</i> ) (root)].....	33.3 mg .....	100 mg
Providing Natural Trans-Resveratrol .....	16.7 mg .....	50 mg

\*HVP: Hydrolyzed Vegetable Protein      \*\*EGCG: epigallocatechin-3-gallate

**Non-medicinal Ingredients:** Microcrystalline cellulose, croscarmellose sodium, coating (carbohydrate gum [cellulose], glycerin), vegetable grade magnesium stearate (lubricant).

**Recommended Adult Dose:** 3 tablets per day with meals, a few hours before or after taking other medications or natural health products, or as directed by a health care practitioner. Consult a health care practitioner for use beyond 12 weeks.

**Recommended Use:** Helps maintain the body's ability to metabolize nutrients. Helps form red blood cells, tissue formation, and normal growth and development. Helps maintain eyesight, skin, membranes, and immune function. Helps in the development and maintenance of night vision, bones, cartilage, teeth, and gums, in connective tissue formation, and in wound healing. An antioxidant for the maintenance of good health. Provides support for healthy glucose metabolism, absorption and use of calcium and phosphorus, maintaining proper muscle function, and helps in the function of the thyroid gland.

**Caution:** Consult a health care practitioner prior to use if you have diabetes, kidney stones, a liver disorder, an iron deficiency, a history of non-melanoma skin cancer, peptic ulcer, excess stomach acid, if you are pregnant or breastfeeding, or if you are taking blood thinners, sulfonamides, or blood pressure medication. Consult a health care practitioner prior to use if you are taking prescription medications, as resveratrol may alter the effectiveness of these medications. Hypersensitivity (e.g., allergy) has been known to occur, in which case discontinue use. Do not use this product if you are taking antibiotics or nitroglycerin. If you experience sweating, paleness, chills, headache, dizziness, and/or confusion, discontinue use and consult a health care practitioner (as these may be symptoms of serious low blood sugar). Stop use and consult a health care practitioner if you develop symptoms of liver trouble such as yellowing of the skin/eyes (jaundice), stomach pain, dark urine, sweating, nausea, unusual tiredness, and/or loss of appetite. Rare, unpredictable cases of liver injury associated with products containing green tea extract have been reported (in Canada and internationally). People sensitive to nicotinic acid may experience flushing of the skin that is generally mild and transient. Keep out of reach of children.

**Drug Interactions:** Vitamin K supplementation may decrease the efficacy of warfarin, or require more close monitoring of its administration. This product contains nutrients known to reduce hypertension and hyperglycemia, and may require lower dosing or discontinuation of related medications.

**Contains no artificial colours, preservatives, or sweeteners; no dairy, sugar, wheat, gluten, yeast, egg, fish, shellfish, tree nuts, or GMOs.** Sealed for your protection. Do not use if seal is broken. For freshness, store in a cool, dry place.

References available at [bioclinicnaturals.com](http://bioclinicnaturals.com)



· GUARANTEED ·

Bioclinic Naturals® products are guaranteed to meet or exceed Good Manufacturing Practices (GMP) of the U.S. Food and Drug Administration (FDA), Health Canada, and the Therapeutic Goods Administration (TGA) of Australia.



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# BioFoundation-G™ – Broad Spectrum Nutrient Support

## About BioFoundation-G

- BioFoundation-G is a broad spectrum, highly bioavailable multivitamin and mineral compound, formulated by Dr. Joseph Pizzorno (Naturopathic Physician) to provide the comprehensive nutritional foundation needed to replenish dietary deficiencies caused by our modern food supply, stress, pollutants and poor farming methods.
- It contains a number of powerful antioxidants, including N-acetylcysteine (NAC), lipoic acid and the herb milk thistle, which have all been shown to increase the production of glutathione. Glutathione helps deter cellular damage and supports the detoxification of numerous environmental pollutants.
- BioFoundation-G also contains nutrients such as CoQ10, which improve the efficient production of energy throughout the body.
- This all natural product provides anti-aging phyto-nutrients, such as resveratrol from Japanese knotweed, green tea catechins, bilberry anthocyanins and lycopene from tomato. These nutrients regulate cellular functions, thereby reducing inflammation, improving blood sugar and insulin sensitivity.
- It contains clinically effective doses of many nutrients in their biologically active forms, such as vitamin D<sub>3</sub>, gamma tocopherol (vitamin E) and vitamin B6 as pyridoxal 5 phosphate. Additionally, it contains vitamin K<sub>2</sub> (MK-7 form) which is the most stable and long lasting form of vitamin K, important for cardiovascular and bone health.

## How To Use BioFoundation-G

- 2 tablets 3 times per day with meals or as directed by a health care professional.

## Cautions and Contraindications

- No known adverse reactions and contraindications. Vitamin D supplementation should be done with caution in those with elevated levels of blood calcium (hypercalcemia) or an inflammatory condition called sarcoidosis. This product is not recommended for use during pregnancy and lactation.

## Drug Interactions

- Vitamin K and CoQ10 supplementation may decrease the efficacy of the blood thinning drug warfarin (Coumadin). Close monitoring of its administration by you and your health care professional may be required.

PATIENT NAME: \_\_\_\_\_

### PRACTITIONER NOTES

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## Quick Tips for Optimal Health

### Eat a plant-rich diet that supports glutathione

A diet which emphasizes plant-based whole foods, rich in glutathione is recommended. Rich dietary sources of glutathione include asparagus, avocados, squash, okra, cauliflower, broccoli, potatoes, spinach, walnuts, garlic and raw tomatoes.

### Get off the couch and exercise

Moderately intensive and regular physical activity that you enjoy helps to reduce inflammation, improve muscle and bone strength, increase metabolism and enhance overall mood and well being. 30 minutes to 1 hour 3 times a week combining aerobic and weight bearing exercise is a good starting point.

### Get a good night's sleep

Lack of sleep is associated with a wide number of chronic diseases including an increased risk of diabetes, obesity, heart disease and depression. Optimal sleep time varies but the National Sleep Foundation suggests 7 to 9 hours per night.

### Fish oils and probiotics are essential nutrients

Fish oil supplements have been heavily researched and shown to reduce the risk of heart disease. Probiotics not only improve your digestion but play an important role in improving immunity and decreasing your risk of GI cancers.

### Optimize your vitamin D levels

Insufficient vitamin D levels have been shown to be widespread throughout the population. You may be at risk for deficiency depending on how much sun exposure you get every day, where you live, your age, if you are obese or have a chronic illness. Have your vitamin D levels tested and make sure you are in the optimal range of 60 to 80 ng/ml.

### Regularly practice stress reduction techniques

Whether it is yoga, tai-chi, or mindful meditation, a regular daily practice that lowers stress levels will vastly impact your health including enhanced immune function and lowered risk of heart disease and diabetes.

PRACTITIONER CONTACT INFORMATION:

## BioFoundation-G™

By Joseph Pizzorno, ND

### BROAD NUTRITIONAL FOUNDATION WITH ADVANCED GLUTATHIONE SUPPORT

I created BioFoundation-G with several important goals in mind; to provide an optimal nutritional foundation of highly bioavailable nutrients at clinically relevant doses, to improve the detoxification of environmental pollutants by supporting glutathione synthesis, to enhance cellular energy metabolism and protect mitochondrial function, and to include key antioxidants and other biological modifiers which protect against today's chronic diseases. The nutrient and botanicals I chose were guided by the latest research.

A large body of research points to shared underlying physiological dysfunctions underlying most modern diseases. For example, mitochondrial dysfunction is known to play a role in diabetes, cardiovascular disease, and many neurodegenerative diseases.<sup>1,2</sup> Persistent environmental pollutants are both ubiquitous and toxic to many cellular functions, and are now well established contributors to diabetes and insulin resistance, as well as obesity and hypertension.<sup>3,4,5</sup> Recognition of these underlying causes of disease, combined with a better understanding of cellular physiology and intracellular signalling, suggests that many of us need more robust nutritional support, and that we need to expand the nutrients considered "basic" in a multivitamin. BioFoundation-G contains the broad spectrum of nutrients in one bottle that many physicians are currently recommending multiple supplements to achieve.

### WHY IS GLUTATHIONE SO IMPORTANT?

Glutathione is the most abundant intracellular antioxidant, and plays a crucial role in shielding cellular macromolecules from endogenous and exogenous reactive oxygen/nitrogen species. Of at least equal importance, conjugation with glutathione is also one of the leading detoxification pathways for many environmental toxins, which can cause direct cellular damage when glutathione regeneration is overwhelmed.<sup>6</sup> For example, organochlorine pesticides and PCBs are both known to deplete glutathione levels and increase oxidative damage, an effect countered by supplementation with N-acetyl cysteine.<sup>7,8</sup> Very recent research points to these and other persistent organic pollutants (POPs) as major drivers of

diabetes and cardiovascular disease, with one large study documenting a 38-fold risk for those with the highest levels. Additionally, serum GGT (which metabolizes reduced glutathione, allowing for intracellular synthesis) has emerged as a potential biomarker for exposure not only to POPs, but also to other toxins such as lead, cadmium and other exogenous causes of oxidative stress.<sup>9,10</sup> Thus, supporting glutathione synthesis helps to conjugate harmful toxins, as well as protect cells from their damage, which seems to be underlying many chronic diseases. BioFoundation-G contains 150 mg N-acetyl cysteine and 250 mg alpha-lipoic acid per serving, both of which have been shown to increase glutathione levels, and to protect cells from numerous types of metal and organic toxins.<sup>11,12,13</sup>

### BIOACTIVE VITAMINS AT CLINICAL DOSES

BioFoundation-G also contains clinically relevant levels of vitamins not found in other multivitamins. For example, each serving provides 2000 IU of vitamin D3, 45 mcg vitamin K2 and 200 mg niacinamide. Given widespread vitamin D deficiency, a multivitamin with a higher dose helps to improve the multi-system consequences of sub-optimal levels. Vitamin K has emerged as an important factor not just to bone health, but to cardiovascular health as well. The form of vitamin K2 used in BioFoundation-G is menaquinone-7, known to have a longer half-life than other forms and result in more stable serum levels and critical to support deposition of calcium into bone rather than arteries.<sup>14</sup>

### CELLULAR ENERGY/MITOCHONDRIAL SUPPORT

Mitochondrial damage or inefficiency seems to underlie so many of today's pathologies, typically due to poor diet and exogenous toxins, leading many clinicians to recommend supplemental nutrients such as CoQ10. BioFoundation-G contains 50 mg CoQ10 per serving, as well as 250 mg alpha-lipoic acid, both nutrients shown to enhance and protect mitochondrial function, providing many cardiovascular and metabolic benefits.<sup>15,16</sup>

## ANTIOXIDANT SUPPORT & HEPATOPROTECTION

BioFoundation-G provides diverse antioxidant support, as well as protection from hepatotoxins. For example, each serving contains 150 mg milk thistle, shown to provide protection from many environmental toxins, as well as 40 mg bilberry extract, 50 mg bioflavonoids, along with hesperidin, lycopene, and lutein.<sup>17</sup> Rather than high levels of single antioxidants which causes imbalances, this formulation is designed to achieve superior results by ensuring adequate levels of synergistic nutrients.

## BIOLOGICAL MODIFIERS

Finally, several plant-based nutrients have emerged as important regulators of cellular signalling pathways, and modify multiple biological processes thought to be involved in longevity-related functions. For example, resveratrol has remarkably similar effects to caloric restriction in terms of life span extension, and has been shown to improve insulin sensitivity, mitochondrial function and reduce inflammation.<sup>18,19,20</sup> BioFoundation-G contains 100 mg resveratrol per serving, as well as 50 mg green tea extract.

## QUALITY

Bioclinic Naturals has the highest and most rigorous standards for quality, potency, purity and integrity of its products. To ensure that you can be totally confident prescribing BioFoundation-G to your patients, 400 individual quality control tests were performed on the raw materials and final product.

## CONCLUSION

In summary, BioFoundation-G contains clinically relevant doses of highly bioactive and bioavailable nutrients, which in addition to providing an optimal nutritional foundation, supplies nutrients which improve various cellular processes, including mitochondrial function. It also contains biological modifiers known to have diverse benefits, such as resveratrol, and rate limiting nutrients for glutathione synthesis to counter the effects of our toxic environment. Smart, Effective, Potent, Pure.

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