

# **PRODUCT KNOWLEDGE HANDBOOK**

Info compiled for educational purposes only. Not reviewed by MA or FDA.

## **REAL FOOD FIRST**

First Real Food – Organic and locally grown

### **SUPPLEMENT:**

If needed

As needed

For as long as needed.

### **You may need to supplement if**

- *You do not eat lots of plant foods, grown in mineral rich soil*
  - *You do not exercise at least 30 minutes a day*
    - *You smoke*
  - *You drink alcohol, coffee or sodas*
    - *You are pregnant*
    - *You are over 50*
- *You have a disease that contributes to Malabsorption [obesity, crohns etc.]*
- *You are taking a prescription drug that depletes important nutrients.*
  - *You are overweight or presenting with disease*

### **SUPPLEMENTS SHOULD BE**

- Well-absorbed
- Pure
- Quantified – what is on the label is in the bottle
- Presented at efficacious [therapeutic] levels

### **GENERAL HEALTH RECOMMENDATIONS**

Info derived from research by Harvard School of Public Health  
– Council for responsible nutrition and other clinical research.

- Multivitamin with 1000 iu of D3
  - Omega 3
- Activated b if under stress, on meds, eating sugar or drinking coffee/soda, vegetarian
  - Calcium with Magnesium/D3 [instead of dairy] or Magnesium
    - Antioxidant – OPC3

### **OTHER FAT BURNING/DETOX SUPPORT**

- Nutriclean Kit
- Core [or Level 90]
- Thermochrome [or Acai]
- CLA or Curcumin Extreme
- TLS shakes/entrees

- ACTS or Bliss

## **WHY MARKET AMERICA PRODUCT LINES**

There is no MARKET AMERICA supplement. Our supplements are brokered through several difference manufacturers who have proven they can meet our high quality control standards and can bear the intense scrutiny of an independent testing company.

## **MEDICAL ADVIORY BOARD – CHECK OUT RESUMES AT [www.Nutrametrix.com](http://www.Nutrametrix.com)**

Steven A. Schnur, MD

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Ruth DeBusk, PhD, RD – Genetic expert and author of It's not Just your Genes

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Steve Lamm, MD – Best-selling author and the Doctor on the talk show – THE VIEW

Mark Lange, PhD

Milan Shannon Moore, MD, MPH – Yale educated Medical Doctor

Nancy J. Miller-Ihli, PhD – Dr. Miller-Ihli is the senior author of 70 peer-reviewed scientific publications and her nutrition research has been supported by the USDA, the National Heart, Lung and Blood Institute (NHLBI), and the National Institutes of Health Office of Dietary Supplements

Frank Schonlau, PhD An accomplished research biochemist, Dr. Schonlau's career commenced with research and development of tumor specific anti-cancer drugs as part of the European Community research program "Europe against Cancer" at the University Clinics of Munster, Germany.

Luke Staudenmaier, DC Dr. Staudenmaier hosts a call in radio talk show on wellness broadcasted throughout WI.

Jim Wilmer, PhD – He received his PhD in environmental toxicology/nutritional biochemistry from Cornell University. He conducted original research in the molecular and cellular mechanisms of skin and liver inflammation at the National Institute of Environmental Health Sciences, NIH. Prior to returning to graduate school, Dr. Wilmer conducted research in genetic toxicology and human cytogenetics at Oak Ridge Associated University, the Chemical Industry Institute of Toxicology and Bristol-Myers Squibb. Author and co-author of 43 publications in peer reviewed basic science journals;

### **What steps are taken to assure the quality of our products?**

- Specifications are set for raw materials and finished products. They products are compounded with the highest quality raw materials from some of the foremost pharmaceutical and nutritional chemical companies in the world
- Raw materials are sourced with Certificates of Analysis.
- All raw materials are assayed and evaluated at the time of receipt, using suppliers' protocols and available testing methods.
- Raw materials are purchased only when the current inventory is low and used as soon as possible.
- Products are manufactured using Standard Operating Procedures.
- Products are inspected at the MA warehouse prior to release for damage, label accuracy, appearance, taste and odor.
- Product is quarantined if failing to pass inspection.
- Products are assayed by independent labs for isotonic capability, micro contamination, and potency on a random basis.
- Manufacturing facilities are audited for GMP compliance and proper documentation.
- All ingredients are USP or NF grade or better. The USP (United States Pharmacopoeia) and the NF (National Formulary) are official compendiums of approved ingredients. The U.S. Food and Drug Administration list the USP and NF in the Food Chemical Codex (FCC).
- There is no ingredient in Isotonix that cannot be found in any highly respected and traditional nutrient supplement. Only the formulation and the delivery to the body make it a unique product.
- Costly quality control procedures are used in its manufacturing to assure potency and quality.
- The products are manufactured in dehumidified rooms to prevent damaging moisture is part of the process.

### **Is the nutrient amount of the label, quantified as actually in the product?**

To ensure 2 year shelf-life Product contains Over 100% of label claim are used in every product formulation. 120% for Vitamins and 105% for Minerals. [FDA only required that 90% of what is listed on label be in the bottle.]

### **Are the ingredients used in our products all natural?**

Natural ingredients are use as long as that is the optimal source. Sometimes it make sense to use a synthetic. The advantages of synthesis are that purity is better controlled, there are no allergens, it is non-GMO, and there is no microbial contamination. Our vitamins and non-active ingredients meet USP specifications for identity, quality and purity

Some ingredients are derived from the electrolysis of sea water, such as the calcium carbonate, or extracted from plants, like Pycnogenol and grape seed extract. Some ingredients, like calcium phosphate, are synthesized.

The vitamins and minerals are of the highest purity available and they are obtained from reputable manufacturing companies known for their quality raw products. If we use herbal extracts, then there are a variety of laboratory methods used to isolate specific active components.

Market America firmly believes in and promises to provide only the highest quality products that will deliver maximum effectiveness. All the ingredients in our products are backed by proven science and technology and we will continue to search out the best of the best to maintain our promise to our customers.

## **Where are the product ingredients sourced from?**

We work with our vendors to carefully select the highest quality ingredients available. Our products are sourced from wherever the best raw material is found and our quality control extends to each ingredient as well as the overall product.

Some examples

The fish oil in our Omega III is derived from sardines, anchovies, mackerel and Clupea generally caught off the coast of Peru. *FYI: The waters of the coast of Peru provide a biologically sustainable population of fish. The waters are nutrient rich. Small fry are used to ensure less likelihoods of contaminants.*

Aloe needs special conditions to grow such as full sun and well-drained soil, with temperatures always above freezing. It takes 18-24 months for an aloe plant to be ready for harvesting. Each plant produces about three good leaves that can be harvested four times per year. Market America's aloe is grown in Mexico below the Tropic of Cancer. Plants are processed within 4 hours of harvesting.

Our OPC contains a natural plant extract from the bark of the maritime pine tree which grows exclusively along the coast of southwest France in Les Landes de Gascogne. This unspoiled and natural forest environment is the unique source of Pycnogenol®.

## **How can we assure the quality of products when they are manufactured at offsite facilities?**

By working with a contract manufacturer, in contrast to being the onsite manufacturer, an extra layer of quality control is in place. Since we act as an intermediary between you and the manufacturer, we have no incentive or interest to receive, accept or ship out inferior, defective or a sub-par product. In fact, just the opposite. Our name and reputation is on every carton, bottle, etc. making us especially committed to the best quality control measures.

Products must be manufactured using predefined ingredients to meet finished goods specifications. Batch records for each lot are sent to the nutraMetrix™ Quality Control (QC) department for review, approval and retention. Batch records document the ingredients used, blending times, equipment used and who did the work.

Laboratory test results performed in the manufacturer's lab are copied to nutraMetrix™ QC. Some products are sent to an independent laboratory to assure adherence to specifications before shipping to the distribution warehouse.

Upon receipt at the warehouse, we examine for damaged goods, proper labeling, and consistency in taste, odor, and appearance. Our in-house lab tests isotonic products for osmolarity confirming that when the product is made as directed, the solution is in the isotonic range.

Furthermore, any product found to be less than optimal is quarantined for destruction or return to the supplier. The manufacturer will bear the cost of returned goods. nutraMetrix™ is committed to accepting and distributing only superior, high quality products adhering to strict quality control procedures.

## ISOTONIX PRODUCTS

**Are there fillers in Isotonix?** There are NO preservatives or fillers, binders, excipients, artificial colors or flavors are used.

**Are the natural ingredients used in our supplements screened for pesticides?** All ingredients extracted from natural sources (such as pine bark, citrus, bilberry, and grape seed) are tested using gas chromatography to ensure there is no pesticide residue.

**What is the difference between Isotonix and oral sprays?** Isotonix shows up in saliva in 10 minutes. Spray cannot get entirely into system, PLUS oral spray is considered a DRUG!!

**Is there an advantage to Isotonix products?** The advantage of ISOTONIX<sup>™</sup> is that they **do not have to be digested** to be absorbed. When taken as directed on an empty stomach **they go immediately into the small intestine** where nutrient absorption takes place.

According to The Physician's Desk Reference Page 1542 of this reference shows that vitamins and minerals in a pill form are only 10 to 20% absorbed by the body. Once a person is over age 30 and the body does not have enough enzymes and hydrochloric acid to dissolve pills, the percentage drops significantly. With Isotonix, this is not a problem as **it goes straight into the bloodstream without the use of enzymes or acid**. Any age gets full amount. Little nutritive value is lost. Isotonix **does not require digestion** before being absorbed into the body's system.

**How much "sugar" is in them?** Sweetened with natural fructose. Analogous foods, in both calories and natural sugar content of a single bite of a peach or apple.

**What about the sugar content of the Isotonix?** Some people do not understand the concept of our Isotonix products. Nutritive sugars have multiple uses including being:

1. Bulking agents for active ingredients in the powder to improve uniformity of blend,
2. Masking agents for covering the off-tastes of various nutrients (think: copper, zinc, B-complex vitamins),
3. Osmotic agents that exert osmotic pressure and create isotonic solutions
4. Active transport agent such as glucose that helps to drag selected nutrients across enterocyte membranes.

The sugar in Isotonix products is fructose. Fructose has a good, clean flavor-enhancing profile, it covers a lot of off-tastes in vitamins and minerals, it has a very low glycemic index (19 out of 100), it contributes about 4 calories per gram, and both fructose and glucose contribute in a major way to the isotonicity of Isotonix products.

**Are Isotonix lactose, soy and gluten free?** Isotonix products are free of milk casein, grain-derived gluten, soy and its by-products, and dyes. We make that claim on all of our Isotonix labels, and we have tested for these substances using sensitive ELISA methodologies. We use nutrients such as riboflavin and beta-carotene to impart color in our products.

## What about Maltodextrin?

We do use a minimal amount of one corn-derived compound—maltodextrin—as a particle-coating agent to prevent Isotonix powder from clumping without diminishing the isotonicity. It is a high-purity material and we again - keep its use to a minimum.

It is true that in many foods maltodextrin acts as a bulking agent, the Maltodextrin in isotonix is used as a coating agent not as a bulk adding filler. Again VERY little is used.

Some make the mistake of confusing Maltodextrin with MSG. They are not the same. MSG is a flavor-enhancing agent used in foods with some serious side effects including migraines. It makes sense for those folks to steer clear of MSG. MSG is found in quite a few pre-packaged foods, as well as foods prepared in restaurants.

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## FAT LOSS ACCELERATORS DESCRIPTIONS

### CORE KEY INGREDIENTS

**LeptiCore** Clinical trials have demonstrated that this ingredient significantly reductions in body weight and triglyceride, blood glucose, and inflammation. Increase serotonin levels significantly. Serotonin is the feel good hormone. When you feel good you are more likely to take a brisk walk, rather than spacing out on the couching - eat an entire sleeve of oreo cookies

**Kidney Bean Extract** – Carbs that turn to sugar rapidly flip us into FAT STORAGE MODE – by elevating our blood sugar and triggering the release of insulin. When insulin is circulating you cannot burn fat. This ingredient block or slow Carb [not the nutrients] absorption in the gastrointestinal tract to prevent the sugar spikes. It is the best CARB Blocker of its kind.

**GREEN TEA phytosome** - Green tea stokes your fat burning fires... When the GREEN TEA is presented as a PHYTOSOME its ability to stoke those fires increases 138%. Green tea is good- GREEN TEA PHYTOSOME is FAR FAR BETTER. In clinical studies those on restricted calories diets lost on average 9.9 lbs. Those using green tea phytosome- lost 30.1 pounds They also doubled and even triple the fat-burning over those using diet along.

If you are allergic to soy, you should not take CORE.  
A good alternative is a product called LEVEL 90.

### CLA KEY INGREDIENTS

CLA is a fatty acid you get from dairy and beef. Unfortunately Americans are becoming increasing deficient because we have converted from grain feed to grass feed dairy and beef cattle. AND many americans are eating far less dairy and beef.

Scientists have linked the steady rise in obesity in the U.S. over the past 30 years to the reduction of CLA in our diets. But not all CLA supplements are alike. The best source that provides the greatest results in **Tonalin® CLA**.

CLA will help your fat cells empty on the fat – and it also prevents the formation of new fat cells. Also it is FAT lost without the loss of lean muscle. VERY IMPORTANT – so that you do not YO –YO back.

Also: enhances immune system, helps maintain blood glucose and insulin levels, lower cholesterol, and show to fight against breast cancer.

IF YOU ARE ALLERGIC TO SOY YOU CANNOT TAKE CLA – a good alternative is CURCUMIN EXTREME.

## **THERMOCHROME KEY INGREDIENTS**

Key ingredient: Citrus aurantium extract (Advantra Z™) has been shown Burn fat – increase energy and maintain lean muscle without impairing cardiovascular health. Improves athletic performance and mood. Suppresses appetite.

## **ACTS KEY INGREDIENTS**

Sensoril® and Holy Basic helps the body bring the stress levels down. L theanine - the IQ supplement. It relaxes and energizes the body as it focusses the mind. It helps with sleep quality and mood control. A low level of Iodine to support thyroid function. For those who cannot take iodine: ALTERNATIVE Bliss.

## **GENERAL WELLNESS SUPPLEMENTS DESCRIPTIONS**

### **ISOTONIX ACTIVATED B**

Many are deficient in basic B vitamins because:

#### **UNDER DIAGNOSED**

Not routinely tested by most physicians. –

Many B12 deficient have so-called “normal” levels of B12. Due to low standards

#### **MALABSORPTION**

Lack of good bacteria [probiotics] in the intestine

Digestive issues; Crohns, celiac, IBS, Colitis, leaky gut and/or gut inflammation

Atrophic gastritis low stomach acid

Pernicious anemia (autoimmune condition)

Medication: acid-reducers, birth control pills, and phenytoin, an anticonvulsant medication , Digoxin, ,

fluorouracil, a cancer therapy drug,, Diuretics especially furosemide, which is known as Lasix, metformin.

Alcohol, coffee and tea

Exposure to nitrous oxide (during surgery or recreational use)

#### **OTHER FACTORS**

vegetarians and vegans

people aged 60 or over

women with a history of infertility and miscarriage

Kidney disease

### **ACTIVATED B OFFERS MOST BIOAVAILALBE INGREDIENTS**

- **B6 - Pyridoxal – 5- phosphate [6 mg/300%]** *most biologically active form of B6. Does not require activation by the liver.*
- **Folic Acid - Folinic acid [800 mcg/200%]** *a highly bioavailable metabolically active derivative of folic acid that can be readily converted into other reduced folic acid derivatives. Does not require dihydrofolate*

*reductase to become active so not affected by medicines and herbs that inhibit this enzyme... Provides all vitamin activity equivalent to folic acid*

- **B 12 – Methylcobalamin [120 mcg/2000%]** *more effective in treating the neurological sequelae of B12 deficiency, better absorbed - bypasses several potential problems in the B12 absorption cycle, provides body with methyl groups that play an role*

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## **ISOTONX MAGNESIUM**

Not only does the mineral support a healthy immune system and maintain normal nerve and muscle function, but it also regulates blood sugar and blood pressure, and keeps bones strong. The U.S. Office of Dietary Supplements notes that most Americans do not get the recommended amounts of magnesium. It is very difficult to absorb. That is why ISOTONIX sets this mineral formula apart. Taking a supplement may help individuals meet the recommended dietary allowance for magnesium.

### **Stress Management**

Low magnesium levels can also **cause the release of certain stress hormones in the body**, particularly high levels of norepinephrine, which increase under stress. When a person feels stressed, hormones signal cells to release magnesium into the blood. **The more stressed a person becomes the more magnesium is lost from the body. Sleep deprivation itself is a chronic stressor that can lower magnesium levels.**

### **Calcium and Magnesium Balance**

Low magnesium levels in the body put a drain on calcium supplies. **Once calcium is exhausted, nerves cells stop functioning.** Calcium has a role in making muscles contract while magnesium is needed to make the muscles relax. **When magnesium levels are low, a person may experience symptoms, such as irritability, muscle twitching and nervous fatigue.**

**Calcium levels within the body's cells increase when an individual is under stress, causing muscles to tense. Magnesium helps push calcium out of the cells so that muscles can relax.** But if there is not enough magnesium present to do its job, calcium will continue to make the muscles to tense. Too much calcium in the body can actually deplete magnesium levels.

### **Sleep disorders and Blood pressure**

Magnesium calms the nerves and induces sleep. Lack of magnesium can cause leg cramps or restless leg syndrome, disrupting restful sleep. Loss of sleep or poor quality sleep over time has been associated with high blood pressure. Magnesium suppresses the release of catecholamines, which stimulate activity in the sympathetic nerves. Increasing dietary intake of magnesium may also help to regulate blood pressure. If you take magnesium supplements to help you sleep, take tablets about 45 minutes before going to bed. Check with your doctor as to how many milligrams you should take on a daily basis.

### **Who may need extra magnesium?**

Doctors can evaluate magnesium status when above-mentioned medical problems occur, and determine the need for magnesium supplementation.

- Some medicines may result in magnesium deficiency, including certain diuretics, antibiotics, and medications used to treat cancer (anti-neoplastic medication) [12,14,19]. Examples of these medications are:
  - Diuretics: Lasix, Bumex, Edecrin, and hydrochlorothiazide
  - Antibiotics: Gentamicin, and Amphotericin
  - Anti-neoplastic medication: Cisplatin



- Individuals with poorly-controlled diabetes may benefit from magnesium supplements because of increased magnesium loss in urine associated with hyperglycemia [21].
- Magnesium supplementation may be indicated for persons with alcoholism. Anyone who substitutes alcohol for food will usually have significantly lower magnesium intakes.
- Individuals with chronic malabsorptive problems such as Crohn's disease, gluten sensitive enteropathy, regional enteritis, and intestinal surgery may lose magnesium through diarrhea and fat malabsorption [22]. Individuals with these conditions may need supplemental magnesium.
- Individuals with chronically low blood levels of potassium and calcium may have an underlying problem with magnesium deficiency. Magnesium supplements may help correct the potassium and calcium deficiencies [19].
- Older adults are at increased risk for magnesium deficiency. Magnesium absorption decreases and renal excretion of magnesium increases in older adults [4]. Seniors are also more likely to be taking drugs that interact with magnesium. This combination of factors places older adults at risk for magnesium deficiency [4]. It is very important for older adults to get recommended amounts of dietary magnesium.

### **Recommended Dietary Allowance**

Males between the ages of 19 and 30 should get 400 mg of magnesium a day, while only 310 mg of magnesium is sufficient for females of that age group. All males 31 years old or older should get about 420 mg a day, while females that age should get 320 mg of magnesium a day. Pregnant and breastfeeding women require more magnesium than other women of their age group. The recommended dietary allowance of magnesium during pregnancy is 400 mg for women between the ages of 14 and 18, 350 mg a day for women between the ages of 19 and 30 and 360 mg a day for women 31 years old or older. The recommended dietary allowance of magnesium for breastfeeding women is 310 - 320 mg.

### **Getting Too Much**

Although getting excess amounts of magnesium through food **does not pose any health risks**, taking too large of a dosage of a magnesium supplement may cause diarrhea, stomach cramps, muscle weakness, nausea, appetite loss, extremely low blood pressure, irregular heartbeat, changes in mental status and difficulty breathing. To avoid these side effects, do not consume more than recommended.

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## **ISOTONIX CALCIUM PLUS with Magnesium and D3**

IN GENERAL THERE IS A LOT OF HYPE ABOUT CORAL CALCIUM THAT IS NOT SUBSTANTIATED. AS YOU CAN SEE BELOW – THE BIGGEST OBSTACLE TO CALCIUM SUFFICIENCY IS ABSORPTION. SOME KEY THINGS YOU NEED TO LOOK FOR IN A CALCIUM SUPPLEMENT:

- ❑ LOW METALS [Coral calcium is one of the most likely to have high levels of lead]
- ❑ HIGH ABSORPTION

ISOTONIX CALCIUM – provides everything you need – a pure calcium in a highly absorbable form.

**Calcium carbonate** - appears suitable for most people. The possible exception is in people who do not produce enough stomach acid, especially post-menopausal women.<sup>7</sup> This is overcome by the isotonic delivery system.

While calcium bound to citrate and other Krebs cycle intermediates such as fumarate, malate, succinate, and **aspartate as well as lactate** have advantages over calcium carbonate in that they are (a) easily ionized, (b) almost completely degraded and utilized by the body, (c) virtually non toxic, and (d) able to increase the absorption of not only calcium, but other minerals as well; **the problem with these calcium supplements is their bulk – it basically requires three to four times as many capsules or tablets to provide the same level of calcium compared to calcium carbonate sources. [overcome with isotonic formula]**

It is also important to point out that microcrystalline calcium hydroxyapatite – another hyped form of calcium - does not provide any greater benefit than other forms of calcium including calcium carbonate. **In fact, in one study looking at five commercially available forms of calcium, microcrystalline calcium hydroxyapatite was the poorest absorbed.**<sup>8</sup>

Advantages and disadvantages of the various forms of calcium

Form	Disadvantages	Advantages
Calcium carbonate	May not be adequately absorbed in people with insufficient output of stomach acid. Should be taken with foods for maximal absorption.	Easier to take because it is not as bulky as other forms.
Coral calcium, oyster shell calcium, dolomite, and bone meal	May contain high levels of lead and other impurities. Since these sources of calcium are essentially calcium carbonate, it makes more sense to use purified calcium carbonate products.	None.
Calcium citrate; calcium bound to other Krebs cycle intermediates; calcium gluconate; calcium lactate	Larger molecule is bulkier than calcium carbonate thus requiring more tablets/capsules to achieve the same dosage as calcium carbonate.	Easily absorbed regardless of the output of stomach acid.
Calcium phosphate	Poorly absorbed compared to other forms. Has a greater effect in blocking the absorption of iron and other minerals.	Least likely to cause constipation.
Microcrystalline calcium hydroxyapatite	Poorly absorbed compared to other forms. More expensive.	May exert additional benefits in bone health due to other components.

## **ISOTONIX VITAMIN D [In calcium/also stand alone with Vitamin K2]**

Do you slather yourself with sunscreen and shroud yourself in hat and shawls to avoid exposure to the cancer-triggering effects of the sun? The truth is, a life in the dark, might not reduce your risk of developing skin cancer; in fact, it might actually increase your risk if it prevents your skin from making vitamin D

Perhaps due, in part, to our paranoia of those damaging UVB rays, an estimated 50% of Americans are deficient in this vital nutrient. The percentage is higher for older adults, breast-fed infants, people of color and the obese.

According to the National Institutes of Health some medicines might also interfere with Vitamin D absorption: Corticosteroid medications such as prednisone, the weight-loss drug orlistat (brand names *Xenical*<sup>®</sup> and *alli*<sup>™</sup>) and the cholesterol-lowering drug cholestyramine (brand names *Questran*<sup>®</sup>, *LoCholest*<sup>®</sup>, and *Prevalite*<sup>®</sup>), phenobarbital and phenytoin (brand name *Dilantin*<sup>®</sup>).

Why is this significant? Vitamin D is technically not a vitamin. It is a hormone. We know if the thyroid hormones are low there are all sorts of unpleasant consequences. You gain weight, lose your hair, become constipated and tired. A deficiency of the Vitamin D hormone can have equally profound effects.

In children, vitamin D deficiency can cause rickets. A child with this condition has bowed, soft bones, muscle weakness, stunted growth, and high risk of low bone density later in life.

In adults, this condition is osteomalacia. Osteomalacia involves aches and pains in the bones and joints, and muscle aches/weakness. Patients with these symptoms are often diagnosed with Fibromyalgia. In a Mayo Clinic study of 150 patients with these symptoms, 139 were deficient in vitamin D.

Current research has implicated vitamin D deficiency as a co-factor in the pathology of at least 17 varieties of cancer, as well as heart disease, stroke, hypertension, autoimmune diseases, diabetes, depression, chronic pain, osteoarthritis, osteoporosis, muscle weakness, birth defects, periodontal disease, MS and more.

### **Getting D from food**

It can be a challenge to get adequate Vitamin D from diet alone. Very few foods in nature contain it. The flesh of wild-caught fish (such as salmon, tuna, and mackerel) and fish liver oils are among the best sources. Small amounts of vitamin D are found in beef liver, cheese, and egg yolks.

Fortified foods provide most of the vitamin D in the American diet. For example, almost all of the U.S. milk supply is fortified with vitamin D. Ready-to-eat breakfast cereals often contain added vitamin D, as do some brands of orange juice, yogurt, and margarine.

### **Getting D From the Sun**

According to Dr. Michael Holick, author of 'The UV Advantage', the best source of Vitamin D is the sun. He recommends exposing at least 10% of your body surface [legs and arms] to the midday sun, for at least 10-30 minute, 3 times a week. This exposure should be done without sunscreen, as even an SPF of 15% will reduce the body's ability to manufacture Vitamin D by 99%. This brief time in the sun will generate a healthy dose of @10,000 IU vitamin D.

If you live above the 35<sup>th</sup> latitude [Atlanta is 33<sup>th</sup>] this exposure period will only be of benefit in late spring, summer, and early fall. During the winter you get little benefit from sun exposure. Limited exposure to tanning lamps can help to supplement your UV requirement.

### **Getting D from Supplementation**

For those of us refusing to leave our UV-protective cocoon, supplements are an option. Apparently, the body can't tell whether you are getting your vitamin D from a short bath in the sun or a capsule.

An increasing number of health professionals support the use of 1000 IU of vitamin D daily. The Vitamin D Council, a non-profit research group committed to the eradication of vitamin D deficiency, suggests that those avoiding the sun take 5,000 IU per day for 3 months. Then obtain a *25-hydroxyvitamin D* test. Adjust your dosage so that blood levels are between 50–80 ng/mL year-round. The most effective type of Vitamin D is D<sub>3</sub>. It has been shown to raise serum concentrations and maintain those levels three times longer than D<sub>2</sub>.

All things considered, a combination of the 3 should cover your bases: a bit of sun, good food and a daily supplement. As always, discuss these matters with your health professional. An excellent resource on the research behind Vitamin D deficiencies can be found at [www.vitamindcouncil.org](http://www.vitamindcouncil.org)

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## **ISOTONIX OPC3**

- Combats free radicals
- Demonstrates anti-inflammatory activity
- Helps maintain healthy cholesterol levels
- Helps maintain healthy circulation by strengthening capillaries, arteries and veins
- Helps maintain joint flexibility
- Helps promote/support cardiovascular health
- Helps reduce mild menstrual cramping and abdominal pain
- Helps support visual health/visual acuity
- Potent free radical scavenger
- Promotes/Supports healthy blood vessel dilation
- Promotes/Supports healthy nitric oxide levels
- Supports a healthy complexion
- Supports healthy blood glucose levels
- Supports healthy platelet activity
- Supports healthy sperm quality

**What is Isotonix® OPC-3®?** Isotonix OPC-3 is a dietary supplement that bears some of the most powerful bioflavonoids currently known to research scientists. These bioflavonoids are scientifically termed oligomeric proanthocyanidins, commonly abbreviated OPCs. The purest and best-researched OPCs chosen for OPC-3 are prepared from grape seed, red wine, bilberries, Pycnogenol from pine bark and citrus fruit. OPCs are difficult to absorb in pill form. **This combination of potent OPCs is unique to OPC-3, as is the Isotonix® delivery system, which enables rapid and highly efficient absorption of the OPCs.**

**Is Isotonix OPC-3 safe?** OPCs have been researched and used for over 30 years throughout Europe. Extensive safety studies were conducted which revealed no evidence for human toxicity or allergic reactions. OPC-3 is free of harmful chemicals, preservatives and alcohol. OPC-3 should be taken as directed.

**How long does it take to benefit?** OPC-3 not only provides the most potent OPCs available, the unique Isotonix delivery system ensures that the small intestine rapidly absorbs the OPCs, which are available in the blood stream within minutes. Because of the rapid absorbability, the body should benefit from Isotonix OPC-3 almost immediately.

**Why should everyone take Isotonix OPC-3?** OPCs are the most powerful natural free radical neutralizers and you get the best of all OPCs by taking Isotonix OPC-3. Laboratory studies have shown that OPCs are more powerful antioxidants than vitamin C [50xs] and vitamin E [20xs].

**Does OPC-3 have visible benefits?** As OPCs support collagen production in the skin, an increase of smoothness and support of elasticity is the natural result. Such an effect was objectively measured in women aged 40 years and older. Skin smoothness was increased after three months as measured by 3-dimensional topography. On a short-term basis, many people notice a fresher-looking skin complexion. This is a result of healthy blood microcirculation, which helps detoxify the skin and improves the nutrient supply. Regular use of OPC-3 helps defy photo-aging of the skin.\*

**Does OPC-3 have a rejuvenating effect?** The damage caused by free radicals adds up with time. A cause for more worry is the fact that your body's own mechanisms to keep free radicals in check decline with increasing age - when you need them the most. Suddenly, we find ourselves confronted with some typical age-related problems. Some cells of our body are more vulnerable to free radicals than others. OPC-3 has the ability to go in and do a knockout job, cleaning and scavenging the free radicals that feast on cellular energy, and take it away from vital processes.\*

**What are the cardiovascular health benefits of OPCs?** In the past 20 years scientists discovered that OPCs bear a lot more benefits for the cardiovascular system. Epidemiological studies have shown that regular intake of powerful OPC antioxidants supports a healthy cardiovascular system. OPCs appear to be particularly helpful in maintaining healthy cholesterol levels and healthy arteries.\*

Pycnogenol® in Isotonix OPC-3 plays a key role, as it promotes healthy nitric oxide (NO) levels. NO is a tiny molecule which serves as a key messenger molecule in the blood stream. It promotes relaxation of smooth muscle-surrounding arteries and supports normal artery diameter and blood flow. Healthy NO levels help maintain normal blood pressure. Helps reverse Erectile Dysfunction. This benefit has been explicitly demonstrated with Pycnogenol in two clinical studies. NO also promotes healthy blood platelet activity thus preserving a normal, fluid environment. OPCs are especially helpful for smokers.

**How can OPC-3® help my eyes?** Bilberry extract was shown to help maintain overall eye health in the vast majority of people in a study.\* Pycnogenol has been shown to support healthy capillaries in the eye. Isotonix OPC-3 helps maintain visual health and supports visual acuity.\*

**Does OPC-3 have benefits specifically for women?** Some OPCs were shown in clinical trials to help women who suffer from mild pain and cramping during the menstrual period. When women were supplemented with OPCs, starting at least a week before their menstrual period, pain values were found to be significantly lowered.

## **HEART HEALTH OMEGA 3**

- Fish oil is best way to get both EPA and DHA
  - Marina Algae provides DHA but not EPA
  - Flaxseed must be converted to Omega 3 and very little actually is converted
  - Heart Health undergoes 200 quality control checks.
  - Highest quality purity and concentration in the market
  - From small fry fished from the bio-sustainable Peruvian arctic water
  - You would need to eat 1 lb of Alaskan wild salmon to get what you get in 1 serving of Heart Health Omega 3
- 

## **WHAT OMEGA 3 SUPPORTS**

- Helps maintain normal cholesterol levels
- Promotes healthy blood pressure levels
- Helps maintain normal blood flow
- Helps maintain normal triglyceride levels in the blood
- Promotes overall cardiovascular health
- Helps maintain healthy levels of C-reactive protein
- Promotes a healthy complexion
- Helps enhance mood

## **FISH OIL QUOTES**

### **AMERICAN HEART ASSOCIATION [2013]**

*Fish intake has been associated with decreased risk of heart disease. On the basis of available data, the American Heart Association recommends that patients without documented heart disease eat a variety of fish – preferably omega-3-containing fish – at least twice a week.*

*Patients with documented heart disease are advised to consume about 1 gram of EPA + DHA (types of omega-3 fatty acids), preferably from fish, although EPA+DHA supplements could be considered, but consult with a physician first.*

*For people with high triglycerides (blood fats), 2 to 4 grams of EPA + DHA per day, in the form of capsules and under a physician's care, are recommended.*

**BRAIN** *"It's like neuronal fertilizer," says Dr. Joseph Hibbeln, a psychiatrist at the National Institutes of Health. "Brain cells given omega-3s grow more synapses." The omega-3 fatty acids in fish oil benefit not just the heart but also a range of psychiatric and neurological problems, from bipolar disorder and schizophrenia to depression, ADHD, Alzheimer's and, yes, borderline personality disorder. The brain is an astonishing 60 percent fat, and it needs omega-3s for optimal function. Studies suggest they help build cell membranes, boost levels of the brain chemical serotonin and increase the number of connections between neurons*

**BONE** *Nutritionist Bruce Watkins at Purdue University has found that they stimulate bone-building cells in the periosteum, the membrane that covers the long bones. —"It's the part that hurts when you bang your shin," says Watkins. "I call it 'the brain of the bone' because it contains a lot of nerve tissue and controls a lot of bone metabolism. OMEGA 3 STIMULATE S THE BONE BUILDING CELLS TO LAY DOWN THE PROTEIN MATRIX ON WHICH CALCIUM AND OTHER MINERALS ARE DEPOSITED.*

### **Key Ingredients of Heart Health™ Essential Omega III Fish Oil with Vitamin E Unique:**

#### **Fish Body Oils (50% Purity) 3000 mg [EPA+ 870 mg and DHA+ 570 mg]**

- Fish oils or marine oils are lipids (fats) found in fish, particularly cold water fish like herring, kipper, mackerel, menhaden, pilchard, salmon, sardine and trout, and phytoplankton. The sources of fish oil in Heart Health™ Omega III Fish Oil are sardines and anchovies
- Tested by the manufacturer and an independent testing company to be virtually free of mercury lead, PCB and other heavy metals. Fish oils are rich sources of omega-3 long-chain polyunsaturated fatty acids.
- EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) are the two most studied fish oils. DHA is a necessary component of the phospholipids in human cellular membranes, especially those found in the brain and retina. Clinical studies have shown omega-3 fatty acids to help maintain healthy triglyceride levels. A strong correlation has also been shown between fish oil consumption and the ability to maintain healthy levels of C-reactive protein. Fish oils are also important in the maintenance of normal blood flow, as they support normal fibrinogen levels (coagulation or blood clotting), which contributes to normal platelet activity.\*

EPA and DHA have several mechanisms of action to help maintain normal triglyceride and cholesterol levels, help maintain normal blood flow and pressure, and support normal platelet activity. EPA and DHA help maintain normal triglyceride levels by promoting normal lipogenesis and supporting normal fatty acid oxidation in the liver. EPA and DHA promote the normal transcription of genes coding for lipogenesis

enzymes and promote the normal transportation of the regulatory enzymes of fatty acid oxidation. Activating PPAR (peroxisome proliferator-activated receptor) - alpha, helps to support normal fatty acid oxidation. The promotion of normal lipogenesis is done through down-regulation of SREBP (sterol regulatory element binding protein) -1c messenger RNA.\*

EPA is the precursor to series-3 prostaglandins (PG), the series-3 thromboxanes (TX) and the series-5 leukotrienes (LT). More specifically, EPA is a precursor to eicosanoids (TXA3 and LTB5), which promote normal platelet activity and promote normal vasodilation. These effects demonstrate EPA's potential ability to help maintain normal blood pressure and support normal blood clotting. Fish oils inhibit the arachidonic acid synthesis of thromboxane A2, which help to promote normal platelet activity and vasodilation. Fish oil may also contribute to the normal production of prostacyclin, a prostaglandin that promotes normal vasodilation and supports normal platelet activity.\*

Omega-3 fatty acids compete metabolically with omega-6 fatty acids, found in higher amounts in typical western diets. Omega-6 fatty acids may inhibit the incorporation of omega-3 fatty acids into tissue lipids. Omega-3 fatty acids may inhibit the conversion of many omega-6 fatty acids into arachidonic acid. Consumption of omega-3 fatty acids DHA and EPA, a corresponding increase of these fatty acids appears to occur in cell membranes and circulatory lipids along with a simultaneous reduction in omega-6 fatty acids.\*

### **Vitamin E (d-alpha tocopherol) 23 IU**

Vitamin E is available in a natural or synthetic form. In most cases, the natural and synthetic forms are identical except the natural form of vitamin E is better absorbed and retained in the body. Heart health contains the natural form of alpha-tocopherol is known as "d-alpha tocopherol." The synthetic "dl-" form is the most common form found in dietary supplements.

The main health benefit of supplemental vitamin E comes from its immune-boosting antioxidant activity. It is also helpful in the healing of wounds and is known to provide protection for the cardiovascular system. Vitamin E is one of the most powerful fat-soluble antioxidants in the body. In turn, vitamin E protects cell membranes from free radical damage. Vitamin E is commonly added to fish oil supplements to provide antioxidant protection of DHA and EPA.\*

*†According to the FDA, supportive, but not conclusive, research shows that consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease.*