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THE FUNDAMENTAL BIG THREE: MULTI-VITAMINS & MINERALS, ANTIOXIDANTS AND ESSENTIAL FATTY ACIDS

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FOUNDATIONAL MULTI-VITAMIN AND MINERALS OPTIMAL DAILY ALLOWANCE

Better nutrition, including the use of appropriate nutritional supplementation, makes significant inroads toward the improvement of our health status as individuals and as a society. Over the years, United States Surgeon Generals have stated that two thirds of all deaths are related to diet and nutrition.

Our bodies require, per pound of flesh, more nutrients than the bodies of our ancestors, partially because we must attempt to neutralize and excrete hundreds of toxins every day: food additives, herbicides and pesticides, drugs in the drinking water, air pollution such as mercury from coal burning plants, outgassing from new cars and buildings and plastics to name a few. Moreover, the nutrient density in our current food supply is markedly lower than it was long ago. Because of the purity and nutrient abundance available in their food, our ancestors didn't have the need for supplemental vitamins to fuel the high demands of a healthy body, and they certainly didn't need an antidote to pollution and environmental poisons.

In a 1977-78 survey of 21,500 people, the USDA examined the nutrient content of the food those Americans consumed for each day, focusing on ten nutrients. Their findings revealed it took at least three days for each of those people to meet the RDA requirements for one day, dramatically demonstrating the significant deficiency of nutrients in our food. The last 40 years have rendered a continued decline. Remember, the RDA is only the minimum dose that hopefully averts scurvy, pellagra and beriberi. It is not a marker for the optimal levels or needed doses for today's toxic world.

So where has the nutrition gone? Unfortunately, nutrient levels have plummeted due to lack of education, creating years of accepted environmental harm, belief in marketing, social conformity and apathetic attitudes. For example, it is not a

common practice to replace the necessary micronutrients in farm soil. Instead, the soil is sick, without beneficial bacteria or earth worms and laden with pathogens, herbicides, pesticides, insecticides and glyphosate (Roundup®). This is commonly referred to as soil depletion and soil toxicity. Commercial farmers also use genetically modified seeds (GMOs), creating food products with modified DNA. There are documented correlations between GMOs and the cause of a myriad of serious disorders and diseases. To complicate things further, most produce is picked or harvested weeks before ripening so it can be shipped long distances and placed in storage where it is then gassed to artificially ripen it. By premature harvesting, the produce has low nutrient density as evidenced by pithy, faded, anemic, tasteless, colorless tomatoes, peaches, etc., as it is the nutrient density that gives fruits and vegetables their flavor, texture and color. Consumers also foster the use of nutrient lacking foods by choosing to ingest processed meals and using microwave ovens. Consumers who take prescription or over the counter medications experience what clinical pharmacists refer to as drug-induced nutrient deficiency. This happens because our bodies require a copious amount of vitamins and minerals to break drugs down into their active and inactive metabolites, usurping vital biochemical allies from our bodies. This further nutrient depletion results in more side effects, more drug toxicities, more dosing errors as well as compromised biochemical functioning.

Obviously, food alone cannot provide the body with what is needed to maintain and repair damaged tissue nor can it heal disease or pathologies, introduced to the body by a variety of toxins. The only way to attempt to break down and negate these toxins, thus preventing their accumulation in our bodies and subsequent harm, is to supplement our nutrient depleted food with a plethora of vitamins, minerals and antioxidants.

The available evidence overwhelmingly confirms the wisdom of getting an optimal, balanced intake of essential nutrients over the risk of a marginal or inadequate intake. The use of high quality supplements is a safe and beneficial means of helping to achieve such balanced nutrient intake.

Unfortunately, not everything we read or hear supports supplementation. In fact, continued reports claim the standard American diet is rich in nutrition and warn of the waste or potential danger from taking vitamins. One such report was presented to the United States government in 1989 by the National Research Council. The 1,300 page report, titled "Diet and Health Implications for Reducing Chronic Disease Risk," was touted as "the most comprehensive scientific analysis to date of the potential health risks and benefits stemming from diet." However, numerous studies from the previous two years that greatly supported the use of supplements in preventing health issues, including cardiovascular disease, cancer, cataracts, and birth defects, were not included. Not only did the executive summary of the report by the National Academy of Sciences ignore the supportive evidence for supplementation, it misrepresented the results of the study itself. The media, including major newspapers throughout the country, published this falsity, leaving Americans with the impression that vitamins are not beneficial and could actually be harmful. While The National Research Council's recommendations were considered, the United States federal government did not adopt them and therefore did not condemn the use of vitamin supplements.

The most common cause of failed response to nutrient supplementation is under-dosing. The primary reasons for under-dosing are supplements that are of poor/cheap quality and/or sub-therapeutic potency. The doses required to facilitate balance and optimal biochemical reactions in the body have to be high enough to not only make up for the deficit in our meals, but to greet and neutralize environmental toxins we face every day. And then there must be enough vitamins left over to run our biochemistry, prompting us to feel healthy and energetic.

Knowing the necessity of providing a truly therapeutic supplement for her patients, but finding there was not a multi-vitamin on the market which could adequately deliver desired results, clinical pharmacist and clinical nutritionist, Lisa Everett Andersen, developed Optimal Daily Allowance.

Her goal was to make supplementation not only meaningful but affordable. With continued dedication to supplying a superior product that actually functions at the cellular level, it has been reformulated twelve times since its inception and yet continues to be, milligram for milligram, ingredient for ingredient, the least expensive multi-vitamin produced. *Optimal Daily Allowance* is unequalled to any multi-vitamin formulation when it comes to potency, bio-availability and biochemical balance. The nutrients in *Optimal Daily Allowance* are as they appear in plants. They are easily broken down for ideal utilization. To this end, *Optimal Daily Allowance* was offered the 2014 five star award by NutriSearch Comparative Guide to Nutritional Supplements as Most Effective Multi-Vitamin Formula in North America.

We recommend 4 tablets of *Optimal Daily Allowance* twice daily.

ANTIOXIDANT PROTECTION BODY & VISION

Every day, at least 10,000 free radical molecules bombard our cells and DNA, threatening our health. Free radicals are molecules missing an electron in their outer shell and are therefore highly charged. The free radicals are dictated by the laws of nature to neutralize this charge by stripping an electron from something else, ideally an antioxidant. If not, they will steal the electron from cellular or mitochondrial membranes, any circulating fats (such as our good cholesterol or the lipids from the sheath surrounding our nerve cells), or from DNA or RNA, causing monumental destruction. This is the process of oxidation, and in essence, the process of aging and disease. When too many cells are damaged from the loss of electrons (oxidation), our cells mutate and our bodies break down. The injured cells then produce yet more free radicals. The effect is like the detonation of a hydrogen bomb. Antioxidants have an extra electron to donate and bond to the free radical, neutralizing the charge and deterring tissue-wide oxidative damage.

Free radicals are introduced to the body through stress, environmental toxins, medications, physical and mental trauma, surgical procedures, ophthalmic laser surgeries, radiation, inflammation, bad fats and diabetes. Antioxidants are the key to minimizing and reversing this free radical assault.

Animal species with diets highest in antioxidants also enjoy the greatest health and longevity, such as tortoises that can live 250 years. They achieve an abundance of antioxidants in their tissues due to their vegan diet. More than 1,000 studies

suggest that people who take antioxidants as well as eat a diet high in antioxidants (fruits, vegetables, raw nuts and whole grains) reduce their risk of developing cancer. Supplementing with high-level antioxidants also improves eye health and enhances overall health. Tissues that demand the highest amounts of antioxidants for healthy functioning include the eyes, lungs, gastrointestinal tract, kidney, liver, skin and brain.

THE EYES HAVE IT

Our eyes are the most susceptible of all of your tissues to free radical damage. Two of the most common and debilitating eye problems are cataracts and macular degeneration.

Cataracts are a clouding of the lens that obscures vision. This happens when the eye is damaged by free radicals from x-rays, diabetes, lack of dietary nutrients, environmental toxins, ophthalmic laser and other surgeries, sunlight, smoking, obesity, various drugs and diseases and the aging process. Eighty-five percent of all Americans will need cataract surgery by age 75, and more than three million cataract surgeries per year will be performed in the United States alone. Experts estimate that number will increase to over five million per year. A Johns Hopkins study predicts if every at risk American took nutritional supplements, at least 300,000 of those people could prevent the development of vision loss within five years.

Macular degeneration is a deteriorative disease of the macula, the part of the retina responsible for straight-ahead vision. Macular degeneration impairs vision, reduces the ability to read, watch television, drive and can ultimately cause blindness. Unfortunately, macular degeneration is no longer just an age-related disease. More young people are at increased risk due to environmental toxins, laser and other ophthalmic surgeries, diabetes and lack of dietary nutrients. Other risk factors include smoking, hypertension, sunlight exposure, light skin and light colored iris, family history, cataract surgeries and drugs. Over eleven million Americans struggle with macular degeneration.

To maintain health and function, our eyes need a complex blend of nutrients. For most people, it's daunting to correctly combine and dose all the necessary supplements. *Body & Vision* is unique because it contains therapeutic amounts of researched ingredients contributing to prevention and recovery from vision problems. These ingredients do not work in a vacuum. They require the sufficient vitamins and minerals found in *Optimal Daily Allowance* to work synergistically and catalytically, completing the biochemical reactions in our bodies.

Inspiration for the antioxidant formula, *Body & Vision*, came to Lisa Everett Andersen from multiple facets of her experiences: her ten years of service overseeing hundreds of FDA studies on an Internal Review Board for Ophthalmology, a family history of cataracts and macular degeneration and a growing prevalence of these conditions amongst her patients. When researching the best supplement manufacturers, she determined none of them produced a formula that met her study criteria. As a result, she created *Body & Vision*.

Again, *Body & Vision* was formulated for patients who are already taking *Optimal Daily Allowance*. Some of the benefits of taking this combination include:

- Improving utilization and absorption of nutrients
- Protecting and maintaining the intestinal lining
- Stimulating the repair of cells in the GI lining and in the GI neurons
- Reversing ulcers and inhibiting ulcer development
- Reducing overgrowth of opportunistic bacteria
- Enhancing the immune system and improving general health
- Decreasing allergies by calming an overactive immune system
- Facilitating the formation of glutathione, the body's primary anti-oxidant, regenerating the liver as well as preventing macular degeneration
- Diminishing the negative effects of prescription/over the counter drugs on the liver and kidneys
- Protecting from cancers of the colon, stomach, esophagus, breast, prostate, and lung
- Reducing the risk of conjunctival melanoma
- Decreasing inflammation
- Promoting wound healing
- Preventing and repairing damage to joints, tendons, and ligaments
- Inciting collagen formation and preventing the premature breakdown of collagen
- Lowering cholesterol
- Strengthening blood vessels
- Regulating heart rhythms
- Guarding against and reversing the "opathies" of diabetes, including retinopathy, angiopathy, nephropathy, and neuropathy
- Improving night vision
- Improving glaucoma
- Preventing and reversing macular degeneration and cataracts
- Deterring presbyopia, which stems from a gradual loss of flexibility of the lens
- Inhibiting the formation of liver spots and age spots
- Decreasing the risk of Alzheimer's and MS

- Down regulating stress
- Helping with erectile dysfunction
- Increasing cellular energy production, resulting in an overall feeling of vitality

We recommend 2 capsules of *Body & Vision* twice daily.



ESSENTIAL FATTY ACIDS: MAKE AN OIL CHANGE

ORGANIC FLAX OIL / ORGANIC FIPRO FLAX / OPTIMAL EFA 820 / OPTIMAL EFA MANGO LIQUID

Certain kinds of fats are actually vital to life itself, and without them we are much more susceptible to disease and premature death. The right fats, or more specifically what are known as essential fatty acids, protect us from the most devastating diseases of our time, including heart disease, cancer, and stroke. The fatty acids crucial to humans are omega-6 and omega-3. Research scientists worldwide are rediscovering the almost unbelievable health enhancing results and therapeutic potential of essential fatty acids.

Bad fats, on the other hand, harbor toxins and by themselves are free radicals, damaging the entire body, but especially the brain and central nervous system, cardiovascular system, kidneys and liver. It is critical that we avoid unhealthy fats such as excess saturated fats from animal sources and the fats from hydrogenated sources like margarine, shortening and canola oil. Ingestion of these fats, and the fats in fried foods, will increase the likelihood of heart, liver, gallbladder and kidney disease, cancer and degenerative neurologic diseases such as MS and Alzheimer's.

Essential fatty acids from unrefined vegetable oils are as imperative to our everyday life as the air we breathe. Good fats can actually aid in weight loss because essential fatty acids help us to adjust metabolism naturally, increasing the body's ability to burn excess calories. These fats even go so far as to escort the bad fats out of our cells and tissues. Unfortunately, because of modern methods of over-refinement, these good fats are scarce in our food. Only raw, unadulterated foods such as some vegetables, seeds, nuts and wild caught (not farm raised) cold fish, as well as nut and vegetable oils extracted the old fashioned way (without chemical refinement, bleaching and deodorization) are able to provide healthy fats. Most of us must supplement essential fatty acids to get therapeutic effects.

Scientific research on breast cancer development in women has established that those who have the highest amounts of omega-3 fatty acid, prevalent in flax oil, *Optimal EFA 820* and *Optimal EFA Mango Liquid*, also have the lowest incidence of breast cancer. More important, if any of these women had an existing tumor, those with the highest amount of omega-3 in their breast tissue had the lowest incidence of the tumor spreading to other tissues and organs.

For flax oil supplementation, we recommend only *Organic Flax Oil with Lignans* and *Organic FiPro Flax* (partially milled flax seed), both manufactured by Health from the Sun, because they are processed in a nitrogen environment, free of oxygen. This keeps the oil from becoming oxidized while in the facility. Water soluble and fat soluble antioxidants are added to prevent free radical formation which would compromise the oil. The partially milled *Organic FiPro Flax* is then vacuum sealed to ensure airtight protection from pollutants and light. The final product of both *Organic Flax Oil with Lignans* and *Organic FiPro Flax* are as void of free radicals as possible, which allows the longest shelf life of any product on the market.

The good fats found in flax affect our health at nearly every level, including combatting infection and allergies by enhancing our immune system, improving memory, boosting athletic performance (including decreasing muscle fatigue), relieving inflammation and arthritic pain, correcting skin conditions, easing mood swings and cravings associated with PMS as well as easing the transition of menopause.

Dramatic evidence suggests flax oil and a special plant fiber found in flaxseed called lignan, can protect us against heart disease and cancer, as well as other degenerative diseases. Flax oil lubricates and relaxes our blood vessels, helps clear clogged arteries and acts as a valuable energy source to keep

the heart beating healthy and strong. Here in the United States, numerous research studies have been conducted with flaxseed and its effect on cancer, including research by the National Cancer Institute (NCI). The NCI found that flaxseed does indeed have an anticancer effect - even to match some chemotherapeutic drugs - but without the side effect of chemotherapy.

FiPro Flax (protected partially milled flax seed) has an added attribute. Not only does it provide the essential fatty acids and their lignans, it is an efficacious stool normalizer. If the stool is too watery, *FiPro Flax* absorbs water from the colon, helping to form the stool. When there's constipation, *FiPro Flax* provides much needed fiber to stimulate bowel movements of proper consistency.

We recommend 1 tablespoon of *Flax Oil with Lignans* daily or 2 tablespoons of *FiPro Flax* daily.

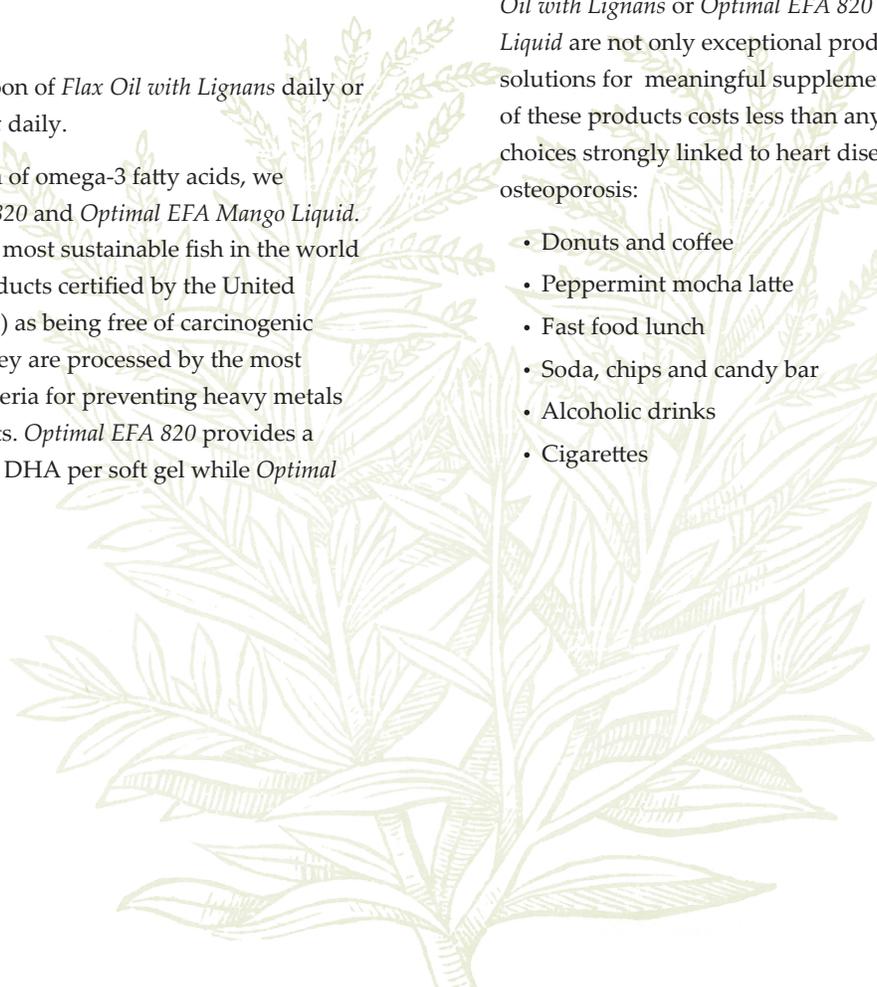
For extra supplementation of omega-3 fatty acids, we recommend *Optimal EFA 820* and *Optimal EFA Mango Liquid*. Both are sourced from the most sustainable fish in the world and the only omega-3 products certified by the United States Pharmacopeia (USP) as being free of carcinogenic solvents and mercury. They are processed by the most stringent international criteria for preventing heavy metals and pesticide contaminants. *Optimal EFA 820* provides a total of 820mg of EPA and DHA per soft gel while *Optimal*

EFA Mango Liquid provides a total of 2,600mg of EPA and DHA per teaspoon. Because both are in the bio-identical triglyceride form, they are better absorbed and better assimilated in the body than most fish oil on the market, which are of a semi-natural ethyl ester form and are resistant to the digestive enzymes that enable us to breakdown fats. The liquid is perfect for children or adults who have difficulties swallowing the large *Optimal EFA 820* soft gels.

We recommend 1-3 soft gels of *Optimal EFA 820* daily or 1/4 -1 teaspoon of *Optimal EFA Mango Liquid* daily.

The Big Three *Optimal Daily Allowance*, *Body & Vision*, and essential fatty acids such as *Organic FiPro Flax* or *Organic Flax Oil with Lignans* or *Optimal EFA 820* or *Optimal EFA Mango Liquid* are not only exceptional products but also affordable solutions for meaningful supplementation. The daily dose of these products costs less than any one of the following choices strongly linked to heart disease, cancer, diabetes and osteoporosis:

- Donuts and coffee
- Peppermint mocha latte
- Fast food lunch
- Soda, chips and candy bar
- Alcoholic drinks
- Cigarettes



PLEASE NOTE: *The premier supplements at O'Brien Pharmacy are backed by independent research, bioavailability studies, and certificates of analysis, translating into optimal outcomes for our patients. Just as we at O'Brien Pharmacy hold our compounding laboratory, under the direction of Eric Everett, RPh, FIACP, to the exceptional standards of the Pharmacy Compounding Accreditation Board (PCAB) and adhere to the compounding regulations specified by the United States Pharmacopeia (USP), we also demand our natural products and supplements meet or exceed elevated standards. As proof of our commitment to excellence, Lisa Everett Andersen, clinical pharmacist and certified clinical nutritionist, selects our supplements and therapeutic remedies, refusing to be influenced by the propaganda of less scrupulous manufacturers who consider cost over efficacy and safety.*

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- The complete supplement to volume 71 of the American Journal of Clinical Nutrition, of which many articles are cited below.

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