Research Innovator: International Multidisciplinary Peer-Reviewed Journal
ISSN: Print: 2395-4744 http://research-chronicler.com/resinv/index.asp ISSN: Online: 2348-7674

Proper Nutrition for Optimal Health

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Defining Optimal Health

We spend so much time debating carbohydrates, lectins or the ratios of our PUFAs. But what, exactly, "optimal health" really is. Does it mean recovery from disease? Living until a certain age? Maintaining a healthy weight? How can you measure it, and how will you know once you've got it?

When we're taking optimal health as the ultimate goal of all our diet and lifestyle-related efforts, this is a question that we have to answer. Pursuing a goal won't be very effective if you don't even know what the goal is! Unfortunately, most people only have a very vague idea of what "health" means, and their definition is often based entirely on how a person looks, or focused exclusively on just one aspect of health, like athletic performance. Sometimes, people even assume that they don't need to bother defining "health," because they'll know it when they feel it.

It's true that most people have a rough idea of how good they feel at any given time, but unfortunately sickness is so normal in the modern world that our mental estimations of what "healthy" feels like aren't necessarily accurate. Yes, your body can tell you a lot about how healthy you are, but if you want to be as healthy as you possibly can, it helps to have some idea of what you're looking for.

Health is the mental and physical energy, vitality, and resilience to live joyfully in your own body and face the challenges of your life. Optimal health, then, would mean living like that all the time.

Characteristics of Optimal Health

Optimal health is more than the absence of disease. Too many people accept this as "health," mostly because they think about **"health" and "disease"** as opposite sides of a coin, meaning that if you're not sick, you must be healthy by default. This is only reinforced by doctors who focus on treating individual diseases, and then send their patients home when the treatment is done. In reality, "optimal health" and "disease" are more like the endpoints of a whole spectrum of different possibilities, and it's perfectly possible to be not-sick without being in vibrant good health.

Just to give one example, being so chronically sleep-deprived that you have to prop yourself up with caffeine to stay functional is not technically a disease. In fact, it's even very normal – thousands of people live this way – but nobody could argue that it's a state of optimal health. There's more to health than successfully surviving to the end of the day: as there is an entire universe of health beyond "I'm doing fine."

Optimal health is individual. Note that the definition above didn't specify "to live

joyfully in your body at a BMI of 20 or below." There is no one "perfect" height, weight, body composition, or diet and exercise routine that everyone should aspire to. 18% body fat might be normal and healthy for one woman, but her twin sister might be healthiest closer to 25%. Neither one is more or less healthy; they're just healthy in slightly different ways. Of course, there are outer limits to the healthy range. No woman is healthiest at 8% body fat (she'd almost certainly be dead), and very few people are healthiest at over 30% body fat. But within the healthy range, there's an infinite variety of shapes and sizes – the fact that our beauty and fitness industries only market a few of them doesn't make the others any less healthy.

Optimal health is more than skin deep. Plenty of physically attractive people are suffering from nutrient deficiencies or living with chronic diseases. The effects of these problems might not be visible yet (your bones can be weak and fragile from a calcium deficiency for years before you finally fracture something and realize that there's a problem), but that doesn't mean they aren't real.

In fact, outer beauty isn't just an unreliable indicator of true health; it can actually be a sign of poor health and malnutrition. Especially for women, media ideals of beauty celebrate thinness to the point of emaciation, encouraging women and girls to starve their bodies of vital nutrients in pursuit of razor-sharp cheekbones and perfectly flat stomachs. In men the constant push for one specific type of extremely lean, muscular physique can have equally dangerous consequences. The "beautiful" models that embody these standards only look the way they do because they're fighting their bodies' natural and healthy shapes.

This doesn't mean that healthy people don't look good – far from it! Clear skin, shiny hair, and strong teeth are all consequences of optimal health. Maintaining an appropriate weight for your size is another aspect of health, although a physiologically healthy weight might not make you look like a cover model. But health is not about beauty; beauty is only one of the many consequences of health.

Optimal health is more than athletic performance. Dead lifting 400 pounds, or winning a marathon, doesn't necessarily mean you're healthy; it just means you're fit. And fitness is part of health, but it's only one part. Think of the runners who can barely walk up a flight of stairs because their knees are so wrecked: they might be able to win a race but are they really healthy? Professional athletes demonstrate an incredibly high level of physical performance, but many of them are actually quite unhealthy, because the demands of their sport are so extreme (remember Michael Phelps' 12,000 calorie diet, including an entire pizza every night for dinner?).

Of course, optimal health does include some level of fitness, but if meeting a performance goal compromises some other aspect of your life (for example, if you're so chronically exhausted from overtraining that you don't enjoy living in your body anymore), it's actually unhealthy.

Optimal health is mental and physical. It's a state of body, but it's also a state of mind – and more importantly, it's a healthy, joyful, and respectful relationship between your mind and your body. If you're constantly thinking about how much you hate your body, trying to ignore that you even have a body, or punishing your body for existing by pushing it through an exercise routine that you hate, the endless stream of negativity is cutting you off from the vibrant energy of living comfortably inside your own skin.

Optimal health is a lived experience, not a "thing" you can "get." You don't "get" health once and then hang it up on your trophy wall forever after. It's only meaningful as a something you practice in real life, something that changes the way you experience living in your body. Just like a pair of glasses improves the way you perceive things with your eyes, living in a state of good health is a lens that improves the way you perceive your physical existence. The same 10-block walk to the grocery store could be energizing and pleasant to a healthy body, or exhausting and painful to an unhealthy body – health is what changes your experience of the exact same physical actions.

Optimal health is not the only worthwhile goal. Some of us spend very little of our lives in a state of perfect "optimal health" by this definition. Who doesn't have moments of hating their body, or days when just getting up out of bed is a struggle? But that's actually OK – it doesn't mean that you aren't enjoying your life overall. Remember that health is a spectrum, and you're not healthy just because you aren't sick. By the same token, you aren't sick just because you fall short of the absolutely optimal pinnacle of health. "Optimal health" just gives us a way to quantify one extreme of well-being; nobody is doomed to misery because they aren't perfect.

Tying it All Together

So what are the practical goal-setting lessons that come out of it?

First, it highlights the importance of keeping the big picture in mind, even when you're setting specific goals. Specific goals work best for helping you change your behavior, so setting short-term goals that cover just one aspect of health ("I will eat fish at least once a week") is actually much more useful than deciding that "I will achieve optimum health." For one thing, it gives you a concrete action to work on. But bear in mind that all these smaller achievements are means to an end, and don't let them compromise the ultimate goal of optimizing your health. It might be useful to re-evaluate your smaller goals every month or so to see what affect they're really having on your overall well-being.

Secondly, it suggests that when you're setting goals, it might be more useful to think about working towards or getting closer to optimal health, instead of focusing on a black and white contrast between "health" and "sickness." This helps you set more realistic goals, instead of fixating on perfection and then hating yourself for failing. If you can now walk up a flight of stairs without getting winded when you couldn't before, your health is more optimal than it was, even if you're still carrying

around 35 pounds that you'd rather get rid of.

In the end, "optimal health" might not be an achievable goal for everyone, all the time. But having a concrete idea of what it means gives you a framework for evaluating your smaller goals, a measuring stick to see how well particular self-experiments are working, and a reminder of why you're going to all the trouble of taking care of yourself anyway. And who knows: the results of all that effort might get you closer than you think!

The Four Pillars of Optimal Health:

1. **Nutritious Food 2. Regular Exercise 3. Adequate Sleep N Rest 4. Healthy Thinking**

Nutritious Food and Healthy Eating Habits:

a) Protein b) Carbohydrates c) Fats d) Vitamins e) Minerals f) Amino Acids

Many health problems stem from the effect of oxygen on the body. Oxygen, although indispensable for life, is destructive to the cells. The attacks of free radicals, or unstable molecules, (**Free radicals are molecules that have an unpaired electron and can cause damage to DNA**) subject our cells to continuous damage, known as oxidative stress or oxidation. This process makes us age, converts healthy cells into cancerous ones, elevates the blood pressure, hardens the arteries, promotes inflammation in arthritis and asthma, and causes infertility.

Nutrients called antioxidants help the body's natural defense system combat the oxidation process. Antioxidants help your body repair cells damaged by free radicals. The most common antioxidants are beta-carotene, lycopene and vitamins A, C and E. Antioxidants can also be found in fruits, vegetables and teas. Most experts believe that getting antioxidants from food is the most healthful way to obtain them but they may also be taken as supplements.

According to **Dr. Will Clower, PhD. Nutrition & Dietetics, antioxidants** essentially act like the garbage men of the body, removing the waste products left behind after your body processes the nutrients in the foods you eat. Research clearly shows that the cellular waste materials known as reactive oxygen species (ROS) must be removed from your system or it can contribute to illness, sometimes in the form of cancer. One pathway for this to occur is by causing damage to your DNA, which can foster and sustain deadly cancers.

Dr. Janet Brill, PhD, RD, Nutrition & Dietetics, explains ORAC stands for Oxygen Radical Absorbance Capacity, which is a lab technique used to quantify the total antioxidant capacity of a food. The test is done by placing a sample of the food in a test tube (for example, blueberries), combined with certain molecules that generate free radical activity. After some time, they measure how well the blueberries protected the vulnerable molecules from oxidation. The less free radical damage there is, the higher the antioxidant capacity of the food, and therefore the higher the ORAC score.

Toby Smithson, Nutrition & Dietetics, answered on behalf of Academy of Nutrition and Dietetics: Studies are not conclusive on

the **effects of isoflavones and bone health**. While there are a couple of studies showing that women who consumed the most amount of soy, were about one third less likely to develop bone fractures. Worth noting is that many soy foods have a good source of protein and calcium which are beneficial to bone health.

Emilia Klapp, Nutrition & Dietetics, answered: **Flavonoids** are a category of protective chemicals in plant foods called **phytochemicals**. They include **resveratrol, hesperidin, anthocyanin, quercetin, and tangeritin.** All of these act against inflammation and prevent platelets from sticking together. They also block the enzymes that raise blood pressure. Sources include vitamin-C-rich foods such as apples, cherries, blueberries, grapefruit, oranges, plums, limes, strawberries, broccoli, pears, red grapes, kale, onions, and kiwifruit. Cindy Gay, Nutrition & Dietetics, says, prunes, berries, raisins, oranges, plums and red grapes are fruits with flavonoid, this

What is Nutrition Gap?

With the way we eat today there is a troublesome gap between the nutrients we need and those we actually consume. In fact, most diets today are lacking in many essential vitamins and minerals.

The typical diet exceeds recommendations for things like refined grains, sodium (salt), saturated fats and calories and falls short of

health promoting benefit. Beets, red peppers, spinach, corn and broccoli are vegetables with good potential.

In terms of its benefits for the human body,

• **Carotene** acts as an antioxidant and enhances immune system function.

• **Flavonoids** act as antioxidants, have a direct antitumor effect and enhance immunity (citrus fruits). **Dr. Mehmet Oz, MD. Cardiology (Cardiovascular Disease),** advises us to fill half our plate, every meal, with food that contains protective, inflammation stopping **phytonutrients.**

Berries are rich **in flavonoids,** powerful antioxidants;

Zucchini contains s**alicylates**, an aspirin-like compound; and

Red grapes are ripe with **quercetin**, which inhibits the flow of histamines, the chemicals that cause tissue to become inflamed.

important nutrients such as fiber, potassium, vitamin D, and calcium leading to what we call the **"nutrition gap"**. So, while we may get plenty of calories and look well fed, over time the absence of essential nutrients may ultimately lead to negative consequences. Nutritional deficiencies can also occur due to lifestyle behaviors or the presence of a chronic disease or condition.

Some call this lack of nutrition in our diets the "nutrition gap"; others call it "hidden hunger" or "micronutrient deficiency". Whatever the name, the nutrition gap is a public health concern because it occurs across all age groups, and can negatively affect health.

Are We Getting Enough Essential Nutrients to?

1. Balance calories with physical activity to manage weight

2. Consume more of certain foods and nutrients such as fruits, vegetables, whole grains, low-fat dairy products, and seafood.

3. Consume fewer foods with sodium, saturated fats, trans fats, cholesterol, added sugars, and refined grains

If we could follow the dietary guidelines perfectly, we would get closer to the kind of nutritional intake needed for optimal health. But the reality is that most of us eat differently every day, meaning that we might eat a well-balanced diet one day but not the next.

What are we missing?

There are four particular nutrients that are lacking in the typical diet. These include potassium, vitamin D, calcium and dietary fiber. The absence of these nutrients is directly related to people not eating the recommended amounts of foods such as whole grains, fruits, vegetables, seafood, and dairy. Here's why these nutrients are so important:

 Potassium The diet is high in sodium and low in potassium—an unhealthy balance since high sodium levels can be unhealthy for blood pressure. Potassium can reduce the negative effects of sodium. High potassium foods from natural food sources include beans, dark leafy greens, potatoes, squash, white beans, yogurt, bananas, and fish such as halibut, yellow fin tuna, cod, rockfish and rainbow trout.

 Vitamin D is thought to have a role in many vital health systems, most notably with bone, muscle, and immune health. While vitamin D can actually be made by your body, sunlight on the skin is needed to make it, and several factors can impact our ability to produce it in sufficient amounts to meet the body's needs. Such factors include use of sunscreen, age, and environmental factors such as time of day for sun exposure, cloud cover, and amount of smog. For example, as we age, the ability to produce vitamin D on the skin decreases. To further complicate the issue, vitamin D is found in very few foods naturally (certain types of fish and egg yolks) and hence 90% of us do not get enough of this nutrient through diet even if it might include fortified and enriched foods. Look at it this way; a cup of milk contains about 100 IU of vitamin D—adults would have to drink 6-8 cups of milk daily to meet the Recommended Dietary needs of 600-800 IU. Thus, considering a multivitamin containing vitamin D or other supplement may be a good way to be sure to get adequate vitamin D.

 Calcium is needed for bone health and plays an important role in the function of nerves, blood vessels, and muscles. It can be found in milk and milk products, and foods fortified with calcium. Many plant foods, such as green leafy vegetables also contain calcium, but consumption of enough plant foods to get the recommended amount of calcium may be difficult to do.

 Dietary fiber is an important substance for keeping digestion and bowel movements regular. Fiber is the non-digestible part of the food plants we eat, and can be found in fruits and vegetables. Other good sources of

fiber include beans, peas, nuts, and whole grains.

Getting the right nutrients for your body is a very individual formula. It is based on your dietary habits, health, age and medical history. To find out more about your own nutritional needs and how well your body absorbs the nutrients, speak to a nutritionist or registered dietitian who can help. These are qualified healthcare professionals who will understand your specific situation, medical history and background, and guide you through the nutrition gap.

Dietary Supplements

Whether you're visiting the drug store, grocery or natural food shop you'll likely find an aisle where there are jars and bottles of things for you to put in your body that are neither foods nor medicines. Ranging from vitamins and minerals to fiber and herbal remedies, these supplements are not regulated in the same way as either food or medicine. Some of them are backed by solid research; others are folk remedies or proprietary cures. If your diet does not include enough of certain vitamins or minerals, a supplement may be a good idea. Dietary supplements, such as vitamins, and fortified foods, should not be used as a substitute for eating a balanced diet but may be a good way to make sure you are consistently getting all the nutrients you need. Dietary supplements are not intended to treat, diagnose, mitigate, prevent, or cure disease. Natural treatment for conditions like constipation may be effective. But because these substances are unregulated, it is always a good idea to educate yourself about the products and to use common sense when taking them. This is even truer if you are pregnant or taking a medicine that may be affected by supplements.

Protein In Food

It's important that we all eat enough protein each day. If we know how much protein we need,---------- which is 1 gram per body kilogram weight-------this list will help us figure out which foods will help us achieve that goal, including plant and animal sources of protein. An ounce of meat or fish has approximately 7 grams of protein when cooked and about 6 grams before cooking. Fish has slightly less than beef or poultry.

Protein Powders

Obviously, the protein powder label will tell you how much protein the powder contains. The amount of protein and carbohydrate in a powder varies a fair amount depending on the source of the powder. Protein powder can be made from whey (milk) protein, egg, soy, rice, peas, and others. There are also protein powders especially designed for body building that supposedly have special helpful characteristics.

It is to be noted that not all protein is equally digestible.

Protein Digestibility Corrected Amino Acid Score (PDCAAS) is a method of evaluating the protein quality based on the amino acid requirements of humans.

Check this vital information when you buy your next Protein Supplement.

Dr. Michael T. Murray, ND , Naturopathic Medicine, says, Proteins are composed of building blocks known as **amino acids**. Amino acids are compounds containing carbon, hydrogen, oxygen, nitrogen, and in some cases sulfur. All amino acids have an acid group and an amino group attached to a carbon atom.

The human body can manufacture most of the amino acids required for making body proteins. However, there are nine essential amino acids, which cannot be manufactured by the human body**. (i.e. F V T W M L I K H).**

An essential amino acid or indispensable amino acid is an amino acid that cannot be synthesized de novo (from scratch) by the organism, but must be supplied in its diet. The nine amino acids humans cannot synthesize are phenylalanine, valine, threonine, tryptophan, methionine, leucine, isoleucine, lysine, and histidine **(i.e. F V T W M L I K H).**

The quality of a protein source is based on its level of these essential amino acids along with its digestibility, and ability to be utilized by the body. The amino group of one amino acid can link with the acid group or carboxyl end of another amino acid to form a chain. This link is called a peptide bond. Two amino acids join together to form a **dipeptide,** while many amino acids join together to form a **polypeptide.**

Dr. Vonda Wright, MD, Orthopedic Surgery, says the most complete sources of amino acids are meat, dairy foods, and eggs. Many other foods contain amino acids and protein, but only these three contain all the essential amino acids. Everywhere you look there are bottles and bars packed with amino acid supplements and protein. The current data supporting use of amino acid supplement remains inconclusive, so protein from whole foods remains the best source.

Non essential amino acids are amino acids that can be produced in our body. Their uses and functions in our body are equally as important as the limiting amino acids. The difference is that those kinds of amino acids can be found in our food.

Functions of non-essential amino acids

The following list includes the 12 non-essential amino acids. Included is some of the functions and benefits and side effects (if any) of the amino acids.

Alanine: Removes toxic substances released from breakdown of muscle protein during intensive exercise. Side effects: Excessive alanine level in the body is associated with chronic fatigue.

Cysteine: Component of protein type abundant in nails, skin and hair. It acts as antioxidant (free radical scavenger), and has synergetic effect when taken with other antioxidants such as vitamin E and selenium.

Cystine: The same as cysteine, it aids in removal of toxins and formation of skin.

Glutamine: Promotes healthy brain function. It is also necessary for the synthesis of RNA and DNA molecules.

Glutathione: Is antioxidant and has anti-aging effect. It is useful in removal of toxins.

Glycine: Component of skin and is beneficial for wound healing. It acts as

neurotransmitter. The side effect of high level glycine in the body is that it may cause fatigue.

Histidine: Important for the synthesis of red and white blood cells. It is a precursor for histamine which is good for sexual arousal. Improve blood flow. Side effects of high dosage of histidine include stress and anxiety.

Serine: Constituent of brain proteins and aids in the synthesis of immune system proteins. It is also good for muscle growth. Serine is one of the non-essential amino acids that make up protein. It is synthesized in the body. It exits in L-serine and D-serine forms. Serine, even though a non-essential amino acid, provides crucial health benefits. It plays roles in protein, fatty acid, genetic code carriers (DNA and RNA) synthesis, and muscle build-up. Serine is a constituent in the brain and protective covers of nerves. Therefore, serine is an important amino acid for the proper functioning of the brain and nervous system. Furthermore, serine boosts healthy immune system by aiding the production of antibodies. Serine is also a component of all cell membranes. Additional serine's health benefits come indirectly through its effect on other biochemicals. For example, serine is a precursor for the production of amino acids such as glycine, cysteine, and tryptophan . Tryptophan, necessary for the synthesis of serotonin and functioning of neurotransmitters, is known to help relieve stress, anxiety and depression. Serine deficiency symptoms include slow or delayed cognitive and physical skills (psychomotor retardation), seizures and microcephaly. Microcephaly refers to health condition in which the head size is smaller than normal and is caused by underdevelopment of the brain.

Taurine: Necessary for proper brain function and synthesis of amino acids. It is important in the assimilation of mineral nutrients such as magnesium, calcium and potassium.

Threonine: Balances protein level in the body. It promotes immune system. It is also beneficial for the synthesis of tooth enamel and collagen.

Asparagine: It helps promote equilibrium in the central nervous system—aids in balancing state of emotion.

Aspartic acid: Enhances stamina, aids in removal of toxins and ammonia from the body, and beneficial in the synthesis of proteins involved in the immune system. Aspartic acid is one of the non-essential amino acids, meaning it is synthesized in the body, that constitute protein. Aspartic acid exists in two forms: namely, as L-aspartic acid and D-aspartic acid. Aspartic acid has acidic property. D-aspartic (d-asp) acid acts as a neurotrasmitter or neuromodulator. Aspartic acid is important in the development of nervous system. It is also a component of synaptic vesicles, which transmit nerve impulses between nerve cells. Aspartic acid increases cAMP levels (a secondary messenger, signal transporter between the cell surface to inside the cell). Aspartic acid also plays a role in the neuroendocrine system, as a regulator in the synthesis and release of hormones. In the pituitary gland, aspartic amino acid stimulates the secretion of the following hormones:

Prolactin: a hormone known to stimulate mammary glands and milk production, among other functions.

Luteinizing: a hormone which is involved in the reproductive system. In males it plays role in testosterone synthesis; where as in females, it plays role in ovulation and the menstrual cycle growth hormone (GH).

Aspartic acid aids the functioning of all cells and RNA and DNA (carriers of the genetic code). Additional benefit of aspartic amino acid is protection of the liver from damages that can be caused by excess ammonia in the bloodstream, by helping in the removal of excess ammonia. Ammonia is toxic when in high levels in the bloodstream. Aspartic acid is involved in the urea cycle, conversion of ammonia into urea (less toxic) and its excretion. This is very important for athletes. Removal of excess ammonia also protects the central nervous system from damage. Aspartic acid also participates in gluconeogenesis, the synthesis of glucose. The d-aspartic acid form also plays a role in the development of dentin, a tissue that is an important component of teeth. Although aspartic acid is considered a non-essential amino acid, it is essential for the productions of other essential and non-essential amino acids and other biochemicals. Among the biochemicals that are synthesized from aspartic acid are asparagine, arginine, lysine, methionine, threonine, isoleucine, and several nucleotides. Aspartic acid deficiency decreases cellular energy. So, the cardinal symptoms of aspartic acid deficiency are chronic fatigue and reduced stamina. This could lead to depression. As this amino acid helps remove excess ammonia from the body, its deficiency can lead to increase in ammonia levels in the blood, which may cause damage to brain, nervous system and liver.

Proline: plays role in intracellular signaling.

L-arginine: plays role in blood vessel relaxation, stimulating and maintaining erection in men, production of ejaculate, and removal of excess ammonia from the body. What is arginine? Arginine is one of the 20 amino acids that constitute protein. It exists as L-arginine and D-arginine form. However, the L-arginine is the more compatible form to human body. Since L-arginine can be synthesized in the body, it is called non-essential amino acid. The exception is that newborn infants are unable to produce L-arginine; therefore their only source for it is from their diet. L-arginine can be synthesized in the body from the amino acid citrulline. L-arginine is a precursor of nitric oxide and other metabolites, a component of collagen, enzymes and hormones (e.g. vasopressin), ejaculate (seminal fluid and sperm), skin and connective tissues. L-arginine plays important roles in the synthesis of various protein molecules (e.g. creatine and insulin). Other L-arginine benefits include regulation of platelet aggregation and lowering of blood pressure. It may also have antioxidant property. L-arginine is converted to nitric oxide, which aids in the relaxation of blood vessels. Thus, an indirect benefit of L-arginine is improved blood circulation in the body, especially in the extremities (e.g. genitalia). And as a result of that L-arginine helps in stimulating and maintaining penile erection. Research suggests that men with erectile dysfunction may benefit from intake of l-arginine rich foods or L-arginine

supplement. L-arginine is a major component of ejaculate (seminal fluid and sperm). Therefore, it is important for maintaining healthy ejaculate volume. Additional L-arginine benefits include removal of excess ammonia and maintenance of nitrogen balance. It reduces accumulation of compounds such as ammonia and plasma lactate, byproducts of physical exercise. It helps in liver detoxification, reduction of alcohol toxicity effects, and wound healing. A known side effect of L-arginine is that it undermines the effect of lysine in suppression of viral infection. Therefore, for a person infected with viruses (e.g. herpes virus), it is recommended to reduce L-arginine supplement dosage or not to eat foods high in L-arginine. Pregnant and lactating women are advised to be cautious with their arginine intake and dosage. Other side effects of l-arginine (when taken in high dosage and for long term) are thickening and coarsening of skin. According to some human studies, arginine-HCL consumed at high doses (> 9 g/d) has been associated with side effects such as nausea, gastrointestinal discomfort, and diarrhea. Deficiency of arginine could result delay in sexual maturity, impairment of the production of insulin, glucose tolerance, and liver lipid metabolism. L-arginine is found in high content in protein rich foods such as peanuts, walnuts, brazil nuts, coconut, animal products (milk and milk products, pork, beef, chicken, turkey), seafood's, cereals (oats and wheat), and chocolate. Legumes such as soybean and chickpea are also rich natural sources of L-arginine.

Good Fats and Bad Fats in our Food

We hear about omega fatty acids all the time. Omega-3, omega-6, yeah, whatever that means…they're a good thing, right? Well, yes and no. Our bodies' need both of these building blocks and they can only be derived from food, however, the key is how much of which for a healthy balance.

The balance is significant because some omega-6 tends to cause inflammation while omega-3 reduces it. Chronic Inflammation in the body leads to all kinds of adverse reactions besides simply pain: heart disease, stroke, arthritis, diabetes, cancer, and more.

Omegas are critical for the brain, skin hair growth and development.

The answer to balance is not simply to eat more fats that contain Omega 3 but to be mindful of what we are eating to reduce Omega 6 and make sure you are getting enough Omega 3 and meet in the middle.

How to Adjust

Cut down, better still, be out of processed and fast foods. Better sources are olive oil, black currants, hemp oil, avocados, leafy vegetables, raw nuts and seeds.

Uses

Omega-6 fatty acids may be useful for the following health conditions:

Diabetic neuropathy

Some studies show that taking gamma linolenic acid (GLA) for 6 months or more may reduce symptoms of nerve pain in people with diabetic neuropathy. People who have good blood sugar control may find GLA more effective than those with poor blood sugar control.

Rheumatoid arthritis (RA)

Studies are mixed as to whether evening primrose oil (EPO) helps reduce symptoms of RA. Preliminary evidence suggests EPO may reduce pain, swelling, and morning stiffness, but other studies have found no effect. When using GLA for symptoms of arthritis, it may take 1 to 3 months for benefits to appear. It is unlikely that EPO would help stop progression of the disease. So joint damage would still occur.

Allergies

Omega-6 fatty acids from food or supplements, such as GLA from EPO or other sources, have a longstanding history of folk use for allergies. Women who are prone to allergies appear to have lower levels of GLA in breast milk and blood. However, there is no good scientific evidence that taking GLA helps reduce allergy symptoms. Well-conducted research studies are needed.

Before you try GLA for allergies, work with your doctor to determine if it is safe for you. Then follow your allergy symptoms closely for any signs of improvement.

Attention deficit/hyperactivity disorder (ADHD)

Clinical studies suggest that children with ADHD have lower levels of EFAs, both omega-6s and omega-3s. EFAs are important to normal brain and behavioral function. Some studies indicate that taking fish oil (containing omega-3 fatty acids) may help reduce ADHD symptoms, though the studies have not been well designed. Studies that used EPO have found it was no better than placebo at reducing symptoms.

Breast cancer

One study found that women with breast cancer who took GLA had a better response to tamoxifen (a drug used to treat estrogen-sensitive breast cancer) than those who took only tamoxifen. Other studies suggest that GLA inhibits tumor activity among breast cancer cell lines. There is some research suggesting that a diet rich in omega-6 fatty acids may promote breast cancer development. Add fatty acid supplements, or any supplements, to breast cancer treatment only after your doctor's approval.

Eczema

Evidence is mixed as to whether EPO can help reduce symptoms of eczema. Preliminary studies showed some benefit, but they were not well designed. Later studies that examined people who took EPO for 16 to 24 weeks found no improvement in symptoms. If you want to try EPO, talk to your doctor about whether it is safe for you.

High blood pressure (hypertension)

Preliminary evidence suggests that GLA may help reduce high blood pressure, either alone or in combination with omega-3 fatty acids found in fish oil, namely eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). In one study, men with borderline high blood pressure who took 6g of blackcurrant oil had a reduction in diastolic blood pressure compared to those who took placebo.

Another study examined people with intermittent claudication, which is pain in the legs while walking that is caused by blockages in the blood vessels. Those who took GLA combined with EPA had a reduction in systolic blood pressure compared to those who took placebo.

Menopausal symptoms

EPO has gained popularity as a way to treat hot flashes associated with menopause. So far studies have been inconclusive. If you want to try EPO for hot flashes and night sweats, ask your doctor- Is it safe?

Breast pain (mastalgia)

Some evidence suggests that EPO may reduce breast pain and tenderness in people with cyclic mastalgia. It may also help reduce symptoms to a lesser extent in people with noncyclic mastalgia. However, it does not seem to be effective for severe breast pain.

Multiple sclerosis (MS)

EPO has been suggested as an additional treatment (along with standard therapy) for MS, although there is no scientific evidence that it works. People with MS who want to add EPO to their treatment regimens should talk with a health care provider.

Osteoporosis

Some studies suggest that people who do not get enough essential fatty acids (particularly EPA and GLA) are more likely to have bone loss than those with normal levels of these fatty acids. In a study of women over 65 with osteoporosis, those who took EPA and GLA supplements had less bone loss over 3 years than those who took placebo. Many of these women also experienced an increase in bone density.

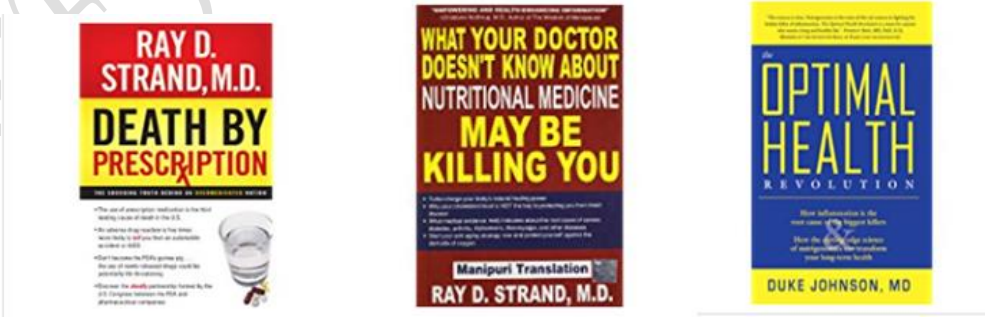
Premenstrual syndrome (PMS)

Although most studies have found no effect, some women report relief of PMS symptoms when using GLA. The symptoms that seem to improve the most are breast tenderness and feelings of depression, as well as irritability and swelling and bloating from fluid retention.

Dietary Sources

For general health, there should be a balance between omega-6 and omega-3 fatty acids. The ratio should be in the range of 2:1 to 4:1, omega-6 to omega-3, and some health educators advocate even lower ratios. Omega-6 fatty acids can be found in sunflower, safflower, soy, sesame, and corn oils. The average diet provides plenty of omega-6 fatty acids, so supplements are usually not necessary. People with specific conditions, such as eczema, psoriasis, arthritis, diabetes, or breast tenderness (mastalgia) may want to ask their doctors about taking omega-6 supplements.

Few Good Books for Essential Reading



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