

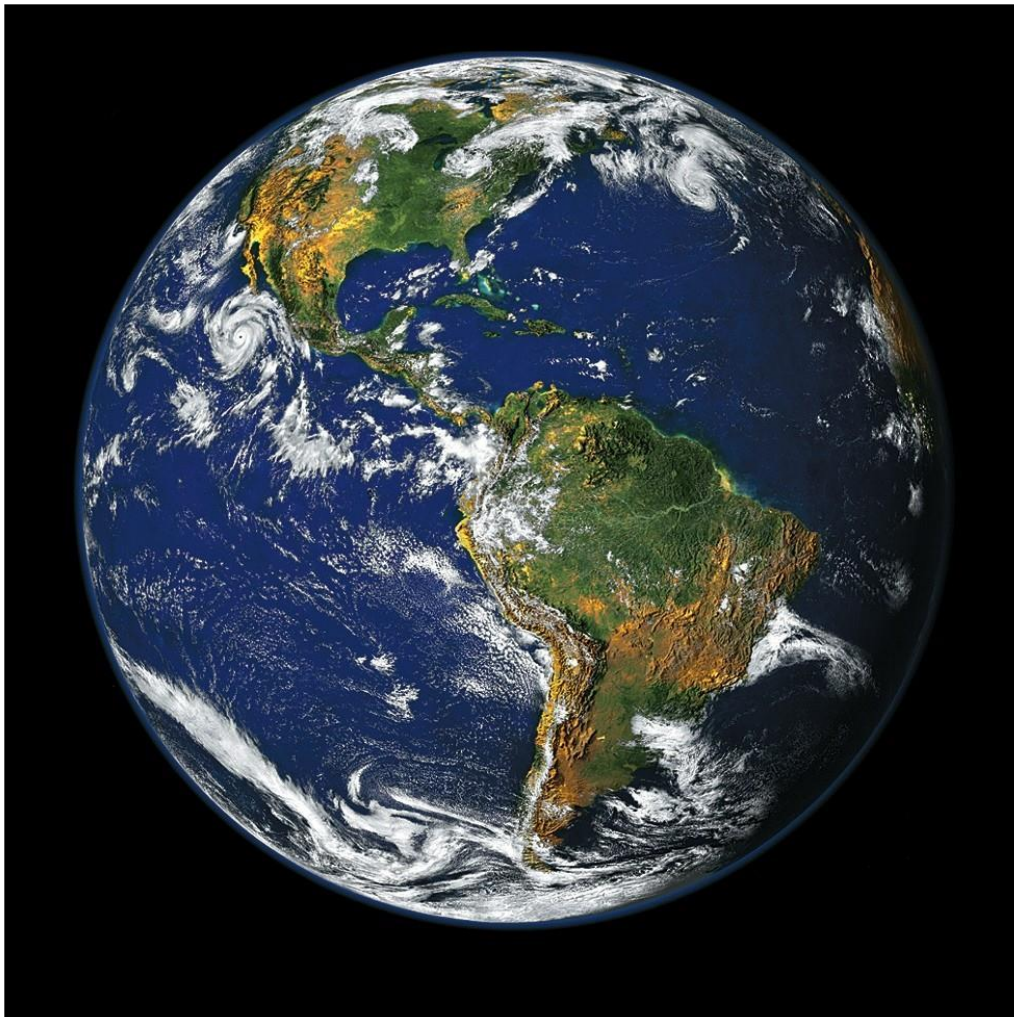


Primitius International

# Natural Health and Nutrition

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# Introduction

**“In the beginning, God created the heavens and the earth...”  
Genesis 1:1**

The Creator of life should not only be revered and worshipped but also be listened to when it comes to health and nutrition.

The Bible holds the keys to health and longevity.

Every Word of God has knowledge, wisdom, power, and direction. As we begin to explore the first chapter of Genesis we will see *God's Plan* for health and nutrition in our lives. We will see the divine order of eating. We will understand what nourishment takes priority over others.

As we understand and implement God's truth concerning our Physical body and its natural and dietary needs, we will experience new physical vitality and strength. This vitality and strength are needed if we are to be all that God has intended us to be. We need strength to carry out our purpose on the earth.

# Chapter 1: Air

**“In the beginning, God created the heavens and the earth...”  
Genesis 1:1**

The word “heavens” can be also translated “expanse” or “sky. In other words, the atmosphere. The atmosphere contains the air which we breathe. Without air, we would begin to die within minutes. Air, therefore, is the most important element in our natural body.

Some of the elements air contains are nitrogen and oxygen, oxygen being the most important to the body.

Of the air, we breathe 20% is oxygen. Oxygen is vital to every process in the body. It is needed to burn food as energy. It is needed by every cell in order to thrive and function. It is difficult for disease to thrive in an oxygen-rich environment.

The problem in the world today is that our air is contaminated with so many toxins that we get the bad chemicals along with the good oxygen we need.

There are at least six main undesirable pollutants in the air:

- Ozone
- Particle Matter
- CarbonMonoxide
- Nitrogen Oxides
- Sulfur Dioxide
- Lead

## Ozone

**Ozone** (O<sub>3</sub>) is a gas composed of three oxygen atoms. It is not usually emitted directly into the air, but at ground level, it is created by a chemical reaction between oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOC) in the presence of sunlight. Ozone has the same chemical structure, whether it occurs miles above the earth or at ground level and can be "good" or "bad" depending on its location in the atmosphere.

In the earth's lower atmosphere, ground-level ozone is considered "bad". Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents, as well as natural sources, emit NO<sub>x</sub> and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form in harmful concentrations in the air. As a result, it is known as a summertime air pollutant. Many urban areas tend to have high levels of "bad" ozone, but even rural areas are also subject to increased ozone levels because the wind carries ozone and pollutants that form it hundreds of miles away from their original sources.

"Good" ozone occurs naturally in the stratosphere, approximately 10 to 30 miles above the earth's surface and forms a layer that protects life on earth from the sun's harmful rays.

Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue.

The Clean Air Act requires the EPA to set air quality standards to protect both public health and public welfare (e.g. Crops and vegetation). Ground-level ozone affects both.

## Health Effects of Ozone

People with lung disease, children, older adults, and people who are active can be affected when ozone levels are unhealthy. Numerous scientific studies have linked ground-level ozone exposure to a variety of problems, including:

- Airway irritation, coughing, and pain when taking a deep breath.
- Wheezing and breathing difficulties during exercise or outdoor activities.
- Inflammation, which is much like a sunburn on the skin.
- Aggravation of asthma and increased susceptibility to respiratory illnesses like pneumonia and bronchitis.
- Permanent lung damage with repeated exposures.

## Particle Matter

The size of particle matter is directly linked to its potential for causing health problems. Small particles less than 10 micrometers in diameter pose the greatest problems because they can get deep into your lungs, and some may even get into your bloodstream.

Exposure to such particles can affect both your lungs and your heart. Small particles of concern include "inhalable coarse particles" (such as those found near roadways and dusty industries), which are larger than 2.5 micrometers and smaller than 10 micrometers in diameter and "fine particles" (such as those found in smoke and haze), which are 2.5 micrometers in diameter and smaller.

The Clean Air Act requires the EPA to set air quality standards to protect both public health and public welfare (e.g. Crops and vegetation). Particle pollution affects both.

## Health Effects of Particle Matter

Particle pollution, especially fine particles, contain microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including:

- Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing, for example.
- Decreased lung function.
- Aggravated asthma.
- Development of chronic bronchitis.
- Irregular heartbeat.
- Nonfatal heart attacks.
- Premature death in people with heart or lung disease.

People with heart or lung diseases, children and older adults are the most likely to be affected by particle pollution exposure. However, even if you are healthy you may experience temporary symptoms from exposure to elevated levels of particle pollution.

## Carbon Monoxide

**Carbon monoxide**, or CO, is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Wood stoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air.

Carbon monoxide can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues.

**Cardiovascular Effects:** The health threat from lower levels of CO is most serious for those who suffer from heart diseases, like angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise. Repeated exposures may contribute to other cardiovascular effects.

**Central Nervous System Effects:** Even healthy people can be affected by high levels of CO. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

**Smog:** CO contributes to the formation of smog, ground-level ozone, which can trigger serious respiratory problems.

## Nitrogen Oxides

Individuals who spend time on or near major roadways can experience short-term NO<sub>2</sub> exposures considerably higher than measured by the current network. Approximately 16% of U.S. housing units are located within 300 ft of a major highway, railroad, or airport (approximately 48 million people). This population likely includes a higher proportion of non-white and economically disadvantaged people.

NO<sub>2</sub> exposure concentrations near roadways are of particular concern for susceptible individuals, including people with asthma, children, and the elderly.

The sum of nitric oxide (NO) and NO<sub>2</sub> is commonly called nitrogen oxides or NO<sub>x</sub>. Other oxides of nitrogen including nitrous acid and nitric acid, which are part of the nitrogen oxide family.

While the EPA's National Ambient Air Quality Standard (NAAQS) covers this entire family, NO<sub>2</sub> is the component of greatest interest and the indicator for the larger group of nitrogen oxides.

NO<sub>x</sub> reacts with ammonia, moisture, and other compounds to form small particles. These small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory diseases such as emphysema and bronchitis, and can aggravate existing heart disease, leading to increased hospital admissions and premature death.

## Sulfur Dioxide

Current scientific evidence links short-term exposures to SO<sub>2</sub>, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects are particularly important for asthmatics at elevated ventilation rates (e.g., while exercising or playing.).

Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics.

## Lead

Once taken into the body, lead distributes throughout the body in the blood and is accumulated in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The lead effects most commonly encountered in current populations are neurological effects in children and cardiovascular effects (e.g., high blood pressure and heart disease) in adults. Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits and lowered IQ.

Lead is persistent in the environment and accumulates in soils and sediments through deposition from air sources, direct discharge of waste streams to water bodies, mining, and erosion. Ecosystems near point sources of lead demonstrate a wide range of adverse effects including losses in biodiversity, changes in community composition, decreased growth and reproductive rates in plants and animals, and neurological effects in vertebrates.

## Positive Steps

There are several steps that can be taken to eliminate or reduce pollution breathed in by bad air.

1. Reduce the amount of time you spend in polluted environments and in traffic. If possible, move away from highly polluted areas.
2. Fill your home and work environments with houseplants that absorb toxic gases from the air. Spider plants, Boston ferns, English Ivy, and Dracaena are easy to grow and provide natural air pollution control.
3. Purchase an air cleaning system, such as an air ionizer, for your home, car, and workplace.
4. Every spring and fall use a tablespoon of bentonite clay in 12 Oz of pure water daily for 2-3 weeks to detox your body of environmental pollutants, especially lead. Liquid chlorophyll is



very good for this purpose also. Zinc supplementation has also been shown to remove lead from your body.

5. Get a hair analysis done to determine heavy metal contamination. This can be ordered through a natural health practitioner.
6. Do deep breathing exercises outside, early in the morning, to get fresh air as well as clear the lower parts of your lungs where stagnation can happen.

These above six steps will go a long way to keep you healthy and sound, the way God intended you to be.

# Chapter 2: Water

“..... And the Spirit of God was hovering over the waters.”

Genesis 1:2

God mentions water after the air. This is the second most important element in the body. Like oxygen, water is essential for every process in the body. Note these facts about water: Water is a colorless and odorless liquid made up of molecules containing two atoms of hydrogen and one atom of oxygen. Water is essential for all life to exist, as it makes up more than 70 percent of most living things. While a human can survive more than a week without food, a person will die within a few days without water.

Water serves as a solvent for nutrients and delivers nutrients to cells, while it also helps the body eliminate waste products from the cells. Both the spaces between cells (intercellular spaces) and the spaces inside cells (intracellular spaces) are filled with water. Water lubricates joints and acts as shock absorbers inside the eyes and spinal cord. Amniotic fluid, which is largely water, protects the fetus from bumps and knocks.

Water also helps the body maintain a constant temperature by acting as a thermostat. When a person is too hot, whether from being in a hot environment or from intense physical activity, the body sweats. When sweat evaporates, it lowers the body temperature and restores homeostasis (balance).

About 70% of the earth's surface is covered with water. The amount of water in a human body depends on age, gender, body type, and level of physical activity. It ranges from 78% for a newborn baby, 65% for an adult male, and 55% for an adult female. Adult females carry less water since adipose tissue makes up more of their body.

## Consumption

It varies how much water one should drink. Some say a gallon a day, others say more or even way less. Most experts agree that it is somewhere between six to eight 8oz cups or glasses a day unless one is working strenuously or out in the heat.

## Symptoms of Dehydration

The degree of dehydration is graded according to signs and symptoms that reflect the amount of fluid loss. In the very early stages of dehydration, there are no signs or symptoms. Early features are difficult to detect but include dryness of mouth and thirst. As dehydration increases, signs and symptoms develop. These include thirst, restless or irritable behavior, decreased skin turgor, dry mucous membranes, sunken eyes, sunken fontanelle (in infants), and absence of tears when crying vigorously.

### Symptoms of early or mild dehydration include:

- Flushed face
- Extreme thirst, more than normal or unable to drink
- Dry, warm skin

- Cannot pass urine or reduced amounts, dark, yellow
- Dizziness made worse when you are standing
- Weakness
- Cramping in the arms and legs
- Crying with few or no tears
- Sleepy or irritable
- Unwell
- Headaches
- Dry mouth, dry tongue with thick saliva.

*In severe dehydration*, these effects become more pronounced and the patient may develop evidence of hypovolemic shock, including diminished consciousness, lack of urine output, cool, moist extremities, a rapid and feeble pulse (the radial pulse may be undetectable), low or undetectable blood pressure, and peripheral cyanosis. Death follows soon if re-hydration is not started quickly.

**Symptoms of moderate to severe dehydration include:**

- Low blood pressure
- Fainting
- Severe muscle contractions in the arms, legs, stomach, and back
- Convulsions
- A bloated stomach
- Heart failure
- Sunken fontanelle - soft spot on an infant's head
- Sunken dry eyes, with few or no tears
- Skin loses its firmness and looks wrinkled
- Lack of elasticity of the skin (when a bit of skin lifted up stays folded and takes a long time to go back to its normal position)
- Rapid and deep breathing - faster than normal
- Fast, weak pulse

We must prevent any form of dehydration by drinking plenty of water daily and carrying water with us in case of an emergency.

## Which water is best to drink?

We have learned the importance of water and also the signs and symptoms of its deficiency. We realize we need to drink plenty of it so everything may function properly, and our body may stay healthy. The very fact that water has no calories is proof that we ought to drink generous amounts of it. But which water is best to drink? Distilled, reverse osmosis, carbon filtered water, water generated by an ionizer that works by electrolysis, glacier water, spring water, artesian water, filtered water or tap water? This question can be answered in two parts. The first is that water must be clean and pure. Most tap water is not clean, especially city water. If you look at water, it is clear. This is how it should be, clear and clean, so it can clear toxins from your body, but is it?

Tap water, especially city water, has many known toxins and many cancer-causing ones also. Would you want to put this in your body? There are at least *90 contaminants* that the EPA (Environmental Protection Agency) recognizes and sets standards for. Five of the main ones

are:

Microbes - coliform bacteria, fecal coliform, and E coli, turbidity, cryptosporidium, and giardia

Radionuclides – Alpha emitters, photon emitters, radium, and radon

Inorganic contaminants – antimony, asbestos, barium, beryllium, copper, cadmium, chromium, cyanide, mercury, nitrate, selenium, thallium, arsenic, fluoride, lead.

Synthetic Organic Contaminants, including pesticides and herbicides – dioxin, PCB's, etc.

Volatile Organic Contaminants – like benzene and carbon tetrachloride, etc.

Not to mention disinfectants like chlorine and disinfection by-products like bromate and chlorite. You see, we need to drink water that is void of these, otherwise, we are defeating the purpose of God-given water.

There are very good water purification systems of which reverse osmosis, distillation, ten-stage carbon filter, and sub-micron carbon block filters are some of the best. These will help remove most, if not all, the pollutants in your water. They are worth the money because they are an investment in health. By the way, only distillation or reverse osmosis removes fluoride.

Now we come to the second part of the answer to the question, “Which water is best to drink?”. It should be alkaline and antioxidant, as well as rich in available hydrogen. It may be a shock to some people, but you can have clean water, even pure spring water, and be drinking oxidized, dead water. Let me explain. I have tested tap water, bottled water of many kinds, including reverse osmosis and distilled water. Most are not alkaline enough and none are antioxidant. I used a pH meter to measure the alkalinity and an ORP (oxidation-reduction potential) meter to find out the antioxidant ability. I had found alkaline water but no water that read to be antioxidant. Some waters were +100, others +300, still others + 650 (this is oxidation).

Would you like to drink oxidized water? How about rust water? Water with antioxidant properties should read -50 to -450 and even lower. So where can we find this kind of water?

The best water to drink is running water from a spring. Drink it fresh before it is bottled, or Glacier water. For example, Eklutna Glacier in Alaska has stored its water for thousands of years. Freshwater from there is alkaline and antioxidant, but once it is stored long enough in bottles, it loses its wonderful properties.

### **So what is the solution?**

Several years ago a scientist from Japan by the name of Dr. Hidemitsu Hayashi, MD discovered the answer. I am convinced that the best water to drink is hydrogen-rich water. Dr. Hayashi from the Water Institute of Japan says,

“According to my concept, water can be classified into two kinds, i.e., hydrogen-poor and hydrogen-rich water. Natural water or 99.9 % of water found on the earth can be defined to be hydrogen-poor water because of hydrogen bond energy connecting hydrogen with oxygen to make H<sub>2</sub>O. It is a logic of mine that natural water, hydrogen-poor water, can't be enough to reduce or scavenge active oxygen species, which should have compelled us mankind to develop a procedure with which we can fight against sickness being brought as the result of oxidative damage by active oxygen. In other words, human medicine should be a kind of fiction based and developed on our inevitable intake of natural water or hydrogen-poor water. On the

contrary, we could easily be free from sickness when we depend on hydrogen-rich water, which can be enough to scavenge active oxygen species.”

His fifteen-year, research from 1985 to 2000 has proven that hydrogen-rich water shows:

- Improvement of blood glucose and HbA1C levels in diabetes mellitus
- Improvement of peripheral circulation in diabetic gangrene.
- Improvement of uric acid levels in gout.
- Improvement of liver function in hepatic disease, cirrhosis of the liver, hepatitis
- Improvement of gastric duodenal ulcers and prevention of recurrences.
- Improvement of cholesterol level; hypertension, angina, myocardial infarction
- Improvement of hypersensitive disorders; atopic dermatitis, asthma, urticaria.
- Improvement of autoimmune disorders; rheumatism, collagen disease, SLE (systemic lupus erythematosus).
- Improvement of so-called specific diseases: Behcet’ syndrome, Crohn’s disease, ulcerative colitis, Kawasaki’s disease.
- Improvement of malignant tumors of liver; hepatoma, metastatic tumors.
- Improvement of general malaise, chronic constipation, and diarrhea as well as persistent diarrhea occurring after gastric resection.
- Improvement of dehydration in infants with vomiting and diarrhea caused by a viral infection
- Improvement of hyperbilirubinemia in newborns
- Experiences of pregnant women who took reduced water during their pregnancy; almost no emesis, smooth delivery, slight jaundice, enough lactation, smooth and satisfactory growth of newborns.

A hydrogen-producing water stick that is 99.9% magnesium stone is the solution to constant alkaline and antioxidant-rich water. These are the reasons why:

- Magnesium oxide reacts with H<sub>2</sub>O and produces reduced water that is six times more hydrating than tap or bottled water.
- This reaction causes the pH to rise (alkaline) a full point to a point and a half.
- The reaction produces dissolved hydrogen that can be measured in parts per million. Hydrogen is the greatest antioxidant known to man.
- As long as the stick is kept in your water jug, hydrogen continues to form. No other water has this ability. Of course, the cap on the bottle must be sealed so hydrogen cannot escape.
- Antioxidant water is the most effective antioxidant for the body because of its low molecular weight. It is utilized throughout the body, better than vitamin C.

There you have it. The best water to drink is clean, filtered water with a hydrogen-producing stick that keeps the water alkaline and antioxidant in nature. This is just like the fresh glacier water the people of Hunza drink, which helps them live to be 120 years of age.

People who drink hydrogen-rich water have plenty of energy because hydrogen is also great energizer. In my Naturopathic practice, I consider drinking the right kind of water and the best kind of water foundational to beginning a sound natural health program that will lead to optimal health

## **Water Ionizers**

The best answer to producing much alkaline and antioxidant water for multiple uses is to purchase a water ionization system that works by electrolysis. They are worth the investment. They produce ORP (oxygen reduction potential) water below -750. That is fantastic! Water ionization and hydrogen-producing sticks are the two best methods available for producing alkaline, antioxidant-rich water to drink.

Note: For economy, look into the *EHM Original Alkaline Water Pitcher*.

## **The Many Uses of Water**

Hydrotherapy is a term used to mean healing or giving therapy with water. From cold and hot baths to alternate hot and cold foot bathing, water can be very therapeutic and healing. God has blessed us with this wonderful liquid. There are many books on hydrotherapy. It would be worthwhile to invest in one. [The Complete Book of Water Healing](#) by Dian B. Buchman, Ph.D. is an excellent one.

# Chapter 3: Light

**“And God said, ‘Let there be light’, and there was light.”  
Genesis 1:3**

God created light for the earth after air and water. Light is extremely important for the earth and for human beings. Without it, plant, animal and human life would cease to exist. It is amazing what just twenty minutes a day of sunlight would do for us.

## **Some important effects of natural sunlight on your body**

- It activates the vitamins in your food. The process of digestion is incomplete without sunshine. The more light and heat we receive from the sun, the less heavy food we require. It activates enzyme activity in your food.
- Sunlight warms your body and energizes it. Sunshine helps and encourages every important function of the body. When the sun shines on your skin, it stores up a large amount of energy in your body. Your nerves absorb the energy and send this energy to your nervous system. Natural sunlight contains the full spectrum of colors, which are essential for eye acuity. Sunlight is very disinfecting, killing many kinds of bacteria. Eating in sunlight enhances digestion and encourages a natural diet. Sun rays convert the cholesterol in your skin to Vitamin D. Vitamin D is an important nutrient for bone health and immune function.
- Sunshine contributes to the experience of peace, joy, happiness, and freedom and many other positive effects, for instance:

A two-year study of Canadian elementary schools found that classrooms exposed to natural light showed better attendance, better dental records, taller children, increased concentration and improved test scores.

Natural light helps keep children calmer, which is important for moderately to severely disabled children. Autistic children, in particular, are bothered by the buzz from fluorescent lights, which assaults their sensitive hearing and upsets their mood, according to the survey.

In southern California’s Veterans’ hospital, patients exposed to daylight suffered less depression and recovered faster than those who did not. We all know that we feel better when we get our daily dose of sunshine.

The nervousness and melancholy connected with Seasonal Affective Disorder or SAD can be attributed to a lack of exposure to natural light. People who tend to stay indoors and out of the sun at all costs are much more likely to develop this condition, possibly progressing on to a full-blown panic disorder or depression. Fifteen or twenty minutes spent in natural light each day can make a huge difference.

## **Home Lighting**

I always recommend people get plenty of sunlight daily and when it comes to purchasing a house, I advise one with plenty of light.

For those who work in an office without light or live in a house with little sunlight coming in, purchasing full spectrum light bulbs and tubes would help quite a bit. Research shows that

people are more productive, less depressed and generally healthier if they live or work in a place which receives adequate natural sunlight.

## Tubular Skylights

In rooms without windows, tubular skylights can provide natural light through your roof, via a relatively small, long tube.

Tubular skylights have a roof-mounted light collector that reflects light through a metal or plastic tube with a highly reflective interior coating. The reflective tube guides the sunlight to a diffuser lens mounted on the interior ceiling surface that spreads light evenly throughout the room.

The skylights are frequently used in windowless bathrooms and closets, where natural light is desirable and where skylights aren't possible because of attic space above the ceiling. They are also often installed in other dark spots throughout the house, such as hallways and stairwells. In single-story homes, they can direct natural light to basements. This may be a great solution for some.

In the Bible, light represents life and revelation. Jesus Christ said,

**“I am the light of the world.”**

Just as the Savior brought the light of God’s word and truth to a dying world, natural light brings warmth, growth, life, and vision to the natural world we live in.



# Chapter 4: Vegetables

**“Then God said, ‘Let the land produce vegetation’...”  
Genesis 1:11**

Vegetables are the first solid foods mentioned in the Bible and they should be consumed in greater quantities than other solid foods. They are very low in calories compared to other foods, except for the root vegetables. I recommend at least six types of vegetables be consumed daily, raw if possible. An easy way to eat vegetables is to make a salad out of them. Have two salads a day.

Vegetables can be divided into two groups: land vegetation and water vegetation.

**Some of the best land vegetables and greens to consume are:** Arugula, Broccoli, Brussel sprouts, Cabbage, Cauliflower, Chinese cabbage, Collard greens, Kale, Kohlrabi, Mustard greens, Radishes, Rutabaga, Turnips, Watercress.

They are a special group of vegetables called cruciferous vegetables that have excellent cancer-fighting properties. Research suggests that these cruciferous vegetables contain a kind of phytochemical known as isothiocyanates, which stimulate our bodies to break down potential carcinogens. They work by preventing the transformation of normal, healthy cells into cancerous cells.

Broccoli is rich in I3C, Indole-3-Carbinol, a plant chemical that helps the body eliminate excess estrogens. Broccoli contains sulforaphane, which is a natural chemical that stimulates our body to produce enzymes and destroy carcinogens. This substance is particularly rich in broccoli sprouts and about 20 to 50 times richer in mature broccoli.

At the Harbor UCLA Medical Center in Torrance, California, a study was conducted to document the effects of eating broccoli among men and women ages 50 to 74. The results showed that those who consumed more broccoli (average: 3.7 half-cup cooked servings weekly) were 50 percent less likely to develop colorectal cancer than those who never ate broccoli. Other vegetables that should be consumed frequently, if not daily, are carrots, cucumbers, onions, garlic, tomato, romaine lettuce, celery, and spinach.

I cannot overemphasize the daily consumption of vegetables. Here are the reasons why:

- They are a source of fiber the body needs. (The body needs 25-35g of fiber per 2000 calories.)
- They contain vitamins and minerals in the generous amounts that the body needs.
- Eaten raw they supply precious enzymes and plant chemicals that aid in digestion.
- They are usually rich in chlorophyll, which detoxifies the body of heavy-metal pollutants such as lead and mercury.
- They contain naturally-distilled water to hydrate our tissues.
- Vegetables have an alkaline pH to protect us from over-acidity. Disease thrives in an acid medium.

No other group of foods has as many benefits as vegetables.

**Some of the sea or freshwater plants are** kelp, spirulina, Chlorella, red marine algae, and hydrilla. They are super greens, like wheatgrass and barley grass, only richer in nutrients. You have to understand that our topsoil is depleted and does not contain the 72+ minerals it needs to keep you healthy. It only has about 30-35 of them, but you will find them all in freshwater plants and in saltwater plants. Spirulina is rich in vitamin B12 and protein, making it wonderful for vegetarians. Hydrilla is the king of the greens because, gram per gram, it is the richest plant with nutrients on earth, especially calcium, and B12.

Everyone should consume some of these daily for optimal health. For optimal health, our diet should contain somewhere between sixty to eighty percent of raw foods. Vegetables are the main component of the raw diet. One of the reasons there is so much sickness in Western culture, especially in America, is the lack of raw, natural foods. Fresh raw fruits and vegetables relieve the digestive organs and the liver of the unnecessary burden that cooked foods give them. This is mostly due to the enzymes present in fruits and vegetables.

If you mainly consume a cooked diet with lots of meat, you might as well take digestive enzymes with your meals to relieve the burden put on the pancreas and liver.

Of particular benefit are fresh raw vegetable juices made with a good juicer machine. Carrot, celery, and beet or spinach juice together make a fast-absorbing nutritious drink for the morning or midday. There is a book by Norman Walker called Raw Fresh Vegetable Juices. I recommend you buy the book. He has a juice formula for every health problem.

If possible, it is highly recommended to buy organic produce, especially vegetables. The extra money is worth it many times over. The pesticides and toxins in commercially grown produce work against your health. You see, the Bible says that the time would come when the earth would be polluted by its' inhabitants.

**“The earth is also polluted by its inhabitants, for they transgressed laws, violated statutes, broke the everlasting covenant.”**

**Isaiah 24:5 (New American Standard Bible)**

So we have to do what is necessary so that we do not partake of that pollution and displease God, as well as protect our health.

## **Root Vegetables**

Root vegetables are those vegetables that are starchy and therefore caloric. Diabetics would have to use these sparingly. They are Parsnip, turnips, carrots, potato, sweet potato, and beets to name a few. They tend to be high in minerals, which is a good thing.

The dust of the ground consists of mineral elements. Man has been physically created from mineral dust. The German chemist Koenig analyzed the body of a deceased 156 lb man and found the chemical mineral makeup to be: 41 kg of Oxygen, 112 g Sulfur, 16.4 kg Carbon, 98 g Potassium, 6.4 kg Hydrogen, 84 g Sodium, 1.7 kg Nitrogen, 70 g Fluorine, 1.6 kg Phosphorus, 56 g Magnesium, 1.5 kg Chlorine, 42 g Silicon, 1.4 kg Calcium, 35 g Iron, 4.7 g Iodine and traces of manganese, zinc, copper, selenium, chromium, cobalt, etc. About 70 minerals altogether.

## Special Vegetables

Asparagus is a special vegetable that should be eaten often. It is rich in Vitamin A and Vitamin C and has blood cleansing properties. It is also a natural diuretic, just like celery is. It cleanses the bladder and the kidneys.

Asparagus, along with avocados and watermelons, are particularly rich dietary sources of glutathione. Glutathione is a small protein composed of three amino acids: cysteine, glutamic acid, and glycine. Nutrition researchers have regarded it as the most valuable detoxifying agent in the human body. Glutathione has also been called the "master antioxidant" that regulates the actions of lesser antioxidants such as vitamin A and vitamin E within the body. Dietary glutathione intake from food sources such as asparagus has been associated with protection against certain forms of cancer in addition to potent anti-viral properties. Glutathione is also a regenerator of immune cells.

Rutin is a bioflavonoid that is highly concentrated in asparagus. Research has proven rutin to be vital in its ability to increase the strength of capillaries and regulate their permeability. Rutin's real value is its ability to increase circulation to the lower limbs, by increasing the oxygen-carrying capacity of the blood. Asparagus helps prevent the formation of cancerous tumors since it has anti-cancer agents.

Dandelion leaf in salads would be an awesome addition. Most people kill their dandelions in the spring, but God has ordained them to give you life and health. The next time you see them in your lawn, remove them and use the leaves in your salad and the flowers and roots to drink as tea or make an herbal liquid extract for the year. It is God's way of telling you to cleanse and get healthy.

Benefits and uses of Dandelion:

- Dandelions help to dissipate gallstones and are believed to improve kidney function, thereby improving overall health and clearing [skin](#) problems.
- This makes dandelion a great tonic for people with sluggish liver function due to alcohol abuse or poor [diet](#).
- The dandelion is an effective treatment for liver disease, even in extreme cases such as [cirrhosis](#). It can also benefit the pancreas, kidneys, stomach, and spleen.
- Dandelion leaf has been used for stimulating the appetite, and for promoting water loss and blood circulation. It has also been used for gallstones and arthritis.
- This treatment helps to make the liver and the gall bladder normal, and it has a beneficial effect on the nervous system.

That little weed is actually an incredible source of vitamins and other substances that can be greatly beneficial to your health.

## VEGETARIANISM

It is obvious from scripture that Adam and Eve were vegetarians, maybe fruitarians.

It was only after the flood that God allowed them to eat flesh foods since all the vegetation was destroyed in the flood. In God's kingdom to come, believers will be vegetarians again. There are

tremendous health benefits to being vegetarian. I believe we should all be at least 80% vegetarian when it comes to diet.

Look at these facts:

A large body of scientific literature suggests that the consumption of a diet of whole grains, legumes, vegetables, nuts, and fruits, with the avoidance of meat and high-fat animal products, along with a regular exercise program is consistently associated with lower blood cholesterol levels, lower blood pressure, less obesity and consequently less heart disease, stroke, diabetes, cancer, and mortality. In African Americans, the frequent consumption of nuts, fruits, and green salads was associated with 35-44 percent lower risk of overall mortality.

In another study, lifelong vegetarians had a 24 percent lower incidence and lifelong vegans (those who eat no eggs or dairy products) had a 57 percent lower incidence of coronary heart disease compared to meat-eaters. Healthy volunteers who consumed a vegetarian diet that was rich in green, leafy vegetables and other low-calorie vegetables (tomatoes, cucumbers, carrots, bell peppers, celery, green beans, etc.), fruits, nuts, sweet corn and peas, and who consumed 25% of their calories from fat, experienced decreases of 25, 33, 20 and 21 percent in total cholesterol, LDL cholesterol, triglycerides, and total/HDL cholesterol ratio, respectively, after two weeks.

## Pigments

Pigments are what give vegetables its color. Research has found that pigments may cleanse and/or protect our body from potential sickness and disease.

Three pigments to discuss: Carotenoids, Lycopene, and Chlorophyll

### Carotenoids

There are 600 known carotenoids. They come in red, orange, and yellow pigment colors. Carotenoids are **antioxidants** that react with free radicals. Molecules called free radicals are formed during normal cell **metabolism** and with exposure to ultraviolet light or toxins such as cigarette smoke. Free radicals cause damage by reacting with **fats** and proteins in cell membranes and genetic material. This process is called oxidation. Antioxidants are compounds that attach themselves to free radicals so that it is impossible for the free radical to react with, or oxidize, other molecules. In this way, antioxidants may protect cells from damage. They may help prevent some forms of cancer.

One subgroup of carotenoids that includes alpha-carotene, beta-carotene, and beta-cryptoxanthin are converted into **vitamin A** (retinol) by the body. Vitamin A is important for maintaining good vision, a healthy immune system, and strong bones.

Vegetables rich in beta-carotene are: Broccoli, Cantaloupe, Carrot juice, Carrots, Dandelion greens, Kale, Pumpkin, Spinach, Turnip greens, Sweet potatoes.

The carotenoids lutein and zeaxanthin are very powerful antioxidants that protect the eyes from free radical damage. They are found in the macula and lens of the human eye. The following vegetables are rich in them: Broccoli, Brussels sprouts, Collard greens, Yellow corn, Dandelion greens, Kale, Mustard greens, Peas, Pumpkin, Spinach, Summer squash, Turnip

greens, Winter squash.

## **Lycopene**

Lycopene is a red plant pigment found in these vegetables: Sweet red peppers, Tomato juice, Tomato paste and puree, Tomato soup, Raw tomatoes, Vegetable juice cocktail. Also found in watermelon, grapefruit and in beans.

Lycopene is the carotenoid that gives tomatoes, watermelons, and guavas their reddish color. In the American diet, almost all dietary lycopene comes from tomato products.

The relationship between dietary intake of lycopene and the risk of men developing prostate cancer is of great interest to researchers. One large study of 58,000 Dutchmen found no relationship between the two. However, an analysis of 21 studies examining the relationship between lycopene intake and prostate cancer found that men with the highest dietary intake of lycopene were less likely to develop prostate cancer. The reduction appeared real but modest, 11–19%.

Many men take 20-40mg of lycopene daily as a supplement. God gave us lycopene in vegetables to safeguard our health.

## **The Benefits of Chlorophyll**

**“I have given every green plant for food, and it was so.”  
Genesis 1:29**

Chlorophyll is the green pigment of plants. It is what gives spinach and lettuce their green color. Chlorophyll is more than color. It absorbs energy from the sun through a process called photosynthesis. The energy absorbed by chlorophyll transforms carbon dioxide and water into carbohydrates (energy) and oxygen. Carbohydrates and oxygen are vital nutrients we human beings need to survive.

So what does chlorophyll do for our body? In the body, chlorophyll acts as a cleanser and a body deodorant. Ancient Egypt used it as an antibiotic to clean and deodorize wounds. Internally, chlorophyll-containing plants have been used to benefit conditions such as ulcers, colitis, liver conditions, respiratory ailments, and gastrointestinal problems.

Because of its oxygen enhancing ability and its detoxifying properties, chlorophyll has been reported in numerous studies in the last decade to inhibit the ability of carcinogens to cause genetic mutations of cell DNA that lead to cancer. Chlorophyll also promoted bowel regularity and reduced intestinal gas when given to nursing home residents. It helps the growth of friendly bowel bacteria such as acidophilus. Chlorophyll is well known for reducing mucous congestion and liver congestion. This wonder pigment has the ability to detoxify the liver and blood of heavy metals such as mercury and lead, cadmium and arsenic.

Chlorophyll improves overall health and vitality due to its oxygen- enhancing the property. Users of liquid chlorophyll and chlorophyll-containing products have reported: reduction in bad breath, improved breathing, increased energy, mental clarity, and a stronger immune system. The highest sources of chlorophyll are hydrilla, alfalfa, chlorella, and spinach. These contain 1 to 5 mg of chlorophyll per serving.

Have you ever wondered why there is so much green around us in the natural world? It is not only because green plants give us oxygen but it is also as though God is saying, “You see plenty of green around you so that you may eat plenty of greens and stay healthy!”

## Enzymes

Enzymes are the protein molecules responsible for thousands of physiological reactions in the human body.

There are three categories of enzymes:

- Metabolic enzymes, which run the body processes, repair damage, and decay and heal disease
- Our own digestive enzymes, which break down carbohydrates, proteins, and fats in the small intestine, and
- Plant enzymes (food enzymes) found in raw foods. They start food digestion and aid the body's pancreatic digestive enzymes so they do not have to carry on all of the digestion.

I want to focus on food enzymes found in raw fruits and vegetables, raw nuts, seeds, and sprouts. As we become older our digestive system becomes less efficient at producing enough enzymes to break down food. This is why we need plenty of food enzymes from salads and other raw plant foods. Our overall health depends on it because we are what we digest of what we eat. Our immune system, as well as every other organ system, is affected by the incomplete digestion of foods. Cells need nutrition from the foods broken down by the enzymes.

Western cultures have diets that are typically low in enzymes and high in foods which require enzymes to digest. Enzymes speed up the chemical reactions of digestion, which saves the body an enormous amount of energy. Digestion requires a huge amount of energy, which could explain why many of us become sleepy after a meal.

Food enzymes found in plant life are wonderful because they can function at a pH range of 2-12 in the digestive tract. However, digestive enzymes, produced by the pancreas, work in the narrow alkaline pH range of the small intestines into which they are secreted. This means that plant enzymes found only in raw foods begin to work immediately in the stomach, preparing the food for further digestion by pancreatic enzymes later in the small intestines.

The symptoms of digestive enzyme insufficiency are belching, bowel problems, fatigue after a meal, gas, bloating, abdominal cramps, heartburn, constipation, food allergies, headaches, and mood swings.

An insufficiency causes much toxin formation due to undigested foods putrefying and fermenting. This, in turn, predisposes one to disease. If one consumes a predominately cooked diet, then supplemental plant enzymes should be taken just before meals.

The seven categories of food enzymes and their activities are:

- Amylase - Breaks down starch
- Maltase - Breaks down grains

- Cellulase - Breaks down fibers
- Protease - Breaks down protein
- Lactase - Breaks down dairy
- Sucrase - Breaks down sugars
- Lipase - Breaks down fats

# Chapter 5: Grains, Beans, and Sprouts

**Then God said, "Let the land produce vegetation..."  
Genesis 1:11**

We are still in the category of vegetation. After grasses, greens, and pretty-colored vegetables, we have the grains and beans.

Grains are those starchy foods that contain complex carbohydrates which are the preferred source of calorie or energy for the body. These carbohydrates are broken down slowly to glucose for energy. They are caloric so one cannot eat all they want. Sixty to eighty percent of our calories should come from complex carbohydrates found in beans and grains.

## **The different kinds of grains are:**

Wheat, oat, barley, and rye are a few. These have gluten, a grain protein that many are allergic to or have difficulty digesting. Then there is corn, rice, millet, and buckwheat. These are easier to digest.

## **Other grains that are worth noting:**

- Amaranth: Similar to corn, but very rich in nutrition
- Faro: An Italian grain similar to spelt, which is in the wheat family.
- Spelt: The grain of the Romans, wheat-like grain
- Kamut: An easy to digest Egyptian wheat.
- Quinoa: An easy to digest grain
- Triticale: A product of crossbreeding between wheat and rye that is high in protein.

## **Grains are valuable for the following reasons:**

1. They satisfy the appetite because of their caloric value.
2. They supply vast amounts of energy because of their carbohydrate content.
3. They are rich in B vitamins and minerals like chromium and silica.
4. They are extremely rich in the two kinds of fiber, soluble and insoluble.

The above is true for whole grains and not for refined flours like white flour, white rice, or white bread. These are man-altered, void of fiber and rich nutrition.

Where refined grains are consumed there is typically a deficiency of chromium, silica, magnesium, and B vitamins, all found in what is removed, the bran or the husk. This is why brown rice polishings and wheat germ are so nutritious. Much of the nutrition is in the bran.

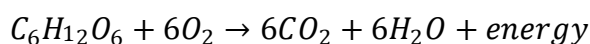
The law only requires that small amounts of B vitamins be added back. Diabetes, obesity, constipation, and toxicity can be partly attributed to the continual consumption of refined carbohydrates.



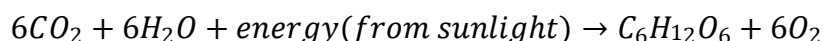
## Carbohydrates

Our bodies can be thought of as chemical processing plants. Chemicals are taken in, processed through various types of reactions, and then distributed throughout the body to be used immediately or stored for later use. The chemicals used by the body can be divided into two broad categories: macronutrients, (those substances that we need to eat regularly in fairly large quantities), and micronutrients, those substances that we need only in small amounts. Three major classes of macronutrients are essential to live organisms: carbohydrates, fats, and proteins.

Carbohydrates are the main energy source for the human body. Chemically, carbohydrates are organic molecules in which carbon, hydrogen, and oxygen bond together in the ratio  $C_x(H_2O)_y$ , where x and y are whole numbers that differ depending on the specific carbohydrate to which we are referring. Animals (including humans) break down carbohydrates during the process of metabolism to release energy. For example, the chemical metabolism of the sugar glucose is shown below:



Animals obtain carbohydrates by eating foods that contain them, for example, potatoes, rice, bread, and so on. These carbohydrates are manufactured by plants during the process of photosynthesis. Plants harvest energy from sunlight to run the reaction just described in reverse:



A potato, for example, is primarily a chemical storage system containing glucose molecules manufactured during photosynthesis. In a potato, however, those glucose molecules are bound together in a long chain. As it turns out, there are two types of carbohydrates, the simple sugars and those carbohydrates that are made of long chains of sugars --- the complex carbohydrates.

### Simple Sugars

All carbohydrates are made up of units of sugar (also called saccharide units). Carbohydrates that contain only one sugar unit (monosaccharides) or two sugar units (disaccharides) are referred to as simple sugars. Simple sugars are sweet in taste and are broken down quickly in the body to release energy. Two of the most common monosaccharides are glucose and fructose. Glucose is the primary form of sugar stored in the human body for energy. Fructose is the main sugar found in most fruits. Both glucose and fructose have the same chemical formula ( $C_6H_{12}O_6$ ).

Disaccharides have two sugar units bonded together. For example, common table sugar is sucrose, a disaccharide that consists of a glucose unit bonded to a fructose unit.

## Complex Carbohydrates

Complex carbohydrates are polymers of the simple sugars. In other words, the complex carbohydrates are long chains of simple sugar units bonded together. For this reason, the

complex carbohydrates are often referred to as polysaccharides. The potato we discussed earlier actually contains the complex carbohydrate starch. Starch is a polymer of the monosaccharide glucose.

Starch is the principal polysaccharide used by plants to store glucose for later use as energy. Plants often store starch in seeds or other specialized organs. For example, common sources of starch include rice, beans, wheat, corn, potatoes, and so on. When humans eat starch, an enzyme that occurs in saliva and in the intestines called amylase breaks the bonds between the repeating glucose units, thus allowing the sugar to be absorbed into the bloodstream. Once absorbed into the bloodstream, the human body distributes glucose to the areas where it is needed for energy or stores it as its own special polymer, glycogen. Glycogen, another polymer of glucose, is the polysaccharide used by animals to store energy. Excess glucose is bonded together to form glycogen molecules, which the animal stores in the liver and muscle tissue as an "instant" source of energy. Both starch and glycogen are polymers of glucose. However, starch is a long, straight chain of glucose units, whereas glycogen is a branched chain of glucose units, as seen in the illustrations linked below.

Another important polysaccharide is cellulose. Cellulose is yet a third polymer of the monosaccharide glucose. Cellulose differs from starch and glycogen because the glucose units form a two-dimensional structure, with hydrogen bonds holding together nearby polymers, thus giving the molecule added stability. Cellulose, also known as plant fiber, cannot be digested by human beings, therefore cellulose passes through the digestive tract without being absorbed into the body. Some animals, such as cows and termites, contain bacteria in their digestive tract that help them to digest cellulose. Cellulose is a relatively stiff material, and in plants, it is used as a structural molecule to add support to the leaves, stem, and other plant parts. Despite the fact that it cannot be used as an energy source in most animals, cellulose fiber is essential in the diet because it helps exercise the digestive tract and keep it clean and healthy.

## **Chromium**

Chromium is needed for energy and maintains stable blood sugar levels. In cooperation with other substances, it controls insulin as well as certain enzymes. It works with GTF (Glucose Tolerance Factor) when this hormone-affiliated agent enters the bloodstream because of an increase of insulin in the bloodstream.

GTF (containing niacin, vitamin B3, glycine, cysteine, glutamic acid, etc.) enhances insulin, which results in the sugars passing quicker into the cells and in that way they are removed from the bloodstream. By stabilizing the blood sugar level, it also assists in regulating the cholesterol in the blood. The daily need is 200 mcg unless otherwise indicated.

## **Silica**

Modern research of this mineral has shown that silica regulates how calcium is deposited. Silica is involved in the cross-linking of Glucosamine and galactosamine into chains called glycosaminoglycans (GAGs) to form joint cartilage.

In the form of silanulates, silica connects chondroitin sulfates, which make up joint and connective tissue. Silica activates the enzymes that produce collagen, elastin, and cartilage. Silica's function in the human body is to promote thick, strong hair as well as strong, hard nails,

not to mention healthy skin. Modern-day processing of foods eliminates most of the silica in our foods by removing the bran, which contains the fibrous, high silicon part of the plant.

Alfalfa sprouts, brown rice, whole grains, whole cucumbers are some of the richest sources of silica. If you care to supplement the mineral silica, 40-80 mg daily would be a sufficient dose for an adult. Most silica supplements are derived from the herb horsetail.

## The Six Forms of Fiber

Fiber is the material that gives plants texture and support. Dietary fiber is found in many plant foods such as fruits, vegetables, beans, nuts, seeds, and whole grains. Although it is primarily made up of carbohydrates, it does not have a lot of calories and usually is not broken down by the body for energy.

There are two types of fiber, soluble and insoluble. Soluble fiber is the type that dissolves in water. It can be found in fruits, grains, and vegetables such as apples, oatmeal, oat bran, rye flour, and dried beans. Soluble fibers have been shown to lower cholesterol levels. This type of fiber works by attaching itself to the cholesterol so that it can be eliminated from the body. This action happens in the digestive tract.

The three forms of soluble fibers are pectin, gums, and mucilage. Pectin, rich in citrus fruits and apples, help remove unwanted metals and toxins from the body. Gums and mucilage, as pectin do, help regulate blood glucose levels, lower cholesterol and remove toxins. Soluble fibers breakdown to form a gel in the small intestines that retards absorption of glucose. This action benefits diabetic. Gums and mucilage are found in oatmeal, oat bran, sesame seeds, and dried beans.

The insoluble fiber speeds up the movement of foods through the digestive system and adds bulk to the stools. It is helpful in constipation and known to help prevent colon cancer. This fiber helps prevent colon cancer because it prevents the accumulation of toxic substances that cause cancer in the colon.

The three forms of insoluble fiber are Cellulose, hemicellulose, and lignin. Insoluble fibers are found in grain brans, fruit pulp, and vegetable peels and skins. The American Dietetic Association recommends 25-35 grams of dietary fiber daily for adults. A 50:50 percent ratio of soluble to insoluble fiber is recommended daily.

According to *Science News*, November 10, 1990, people with low fiber and high sugar diets are more prone to cancer. A person can meet the required amount of daily fiber by consuming two to three servings of fruit and three to five servings of vegetables every day.

There are several supplemental fiber products in the market:

Psyllium Seed Husk Powder: contains soluble and insoluble fiber

Flax Seeds: contain both soluble and insoluble fiber

Rice Bran: contains insoluble fiber

Apple, Citrus, or Grapefruit Pectin: contains soluble fiber

Guar or Xanthan Gum: contains soluble fiber

Oat Bran: contains both soluble and insoluble fiber.

## Beans

Beans are nutritious in themselves but combined with whole grains at the same meal, you get complete protein comparable to meat. Beans lack the amino acid methionine (protein) that grains have and grains lack the lysine (protein) that beans have. Put together they complement each other and form a complete protein.

Eating a cup of cooked beans a day can lower your total cholesterol by up to 10% in 6 weeks. A study conducted at the University of Kentucky has shown that only three weeks of increased bean intake (3/4 cup of navy and pinto beans) lowered the men's cholesterol by an average of 19%. This reduces the risk of heart attack by almost 40%.

Red beans are as beneficial as other foods known for their antioxidant properties such as green tea, wine, and berries. Besides, they load the body with protein and dietary fiber, which helps to curb your appetite for fatty foods. Mexican red beans, Alava pinto or kidney beans also make a great source of natural minerals like iron, magnesium, potassium, copper, and phosphorus.

According to research performed by Michigan State University, kidney beans, lima beans, pinto beans, and navy beans are the healthiest.

It is recommended that you get about three cups of beans per week into your diet to achieve the best health results, but even as little as a cup per week can help you achieve impressive results.

## Protein

Protein is needed by every living organism, and next to the water, makes up the largest portion of our body weight since it is contained in muscles, organs, hair, etc. The protein used in making up the body is not directly derived from diet, but the dietary protein is broken down into amino acids, and the body then re-constitutes these amino acids into the specific proteins needed.

Enzymes and hormones that regulate body functions are also proteins. Amino acids are used in most body processes from regulating the way the body works to how the brain functions. They activate and utilize vitamins and other nutrients.

Proteins are chains of amino acids linked together, bound together by peptide bonds. There are about 28 amino acids commonly referred to in human health. The liver manufactures about 80% of these amino acids, but the remaining 20% of such amino acids must be supplied directly by diet. These amino acids are referred to as the essential amino acids.

These **essential amino acids** are: Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan, Valine

The 80% or so others that are manufactured by the liver, and which are classed as **"nonessential" amino acids** are: Alanine, Arginine, Asparagine, Aspartic acid, Citrulline, Cysteine, Cystine, Glutamic acid, Glutamine, Glycine, Ornithine, Proline, Serine, Taurine, Tyrosine

The functioning of amino acids is interrelated, and a balanced and steady supply of these nutrients is needed to maintain proper body functioning. A dietary shortage of amino acids can impact negatively on your health, just as other stressors such as trauma, drug use, age, infections, etc.

When the body synthesizes protein, ammonia is formed in the liver as a waste product. Too large of an amount of protein in the diet can result in too much ammonia being formed. This places extra stress on the liver and kidneys to flush it out of the body.

Amino acid supplements come in various forms but can essentially be divided into three types of products: derived from animal protein, yeast or vegetable protein. Most amino acids can be produced in two forms, except for glycine, that is either a D or L form. These letters stand for the way in which the amino acid spiral is wound up. D is for the right-wound type and L for the mirror left winding amino acid. The human amino acid is the L type and for this reason, many people prefer to use supplements containing the L type amino acid.

### **Amino acid supplementation information**

Free form amino acids are the ones immediately absorbed into the body and need no digestion at all. When taking an amino acid supplement it is best to have vitamin C (ascorbic acid) as well as vitamin B6 present at the same time for best absorption.

But like all things, use common sense, as very high doses of aspartic acid, glutamic acid, homocysteine, serine, and tryptophan could form toxic levels in the body, and in so doing cause damage.

### **RDA of amino acids**

The figures below are an estimate of the required dietary allowance (RDA) of **essential** amino acids, meaning those amino acids which cannot be synthesized by the body.

### **Nitrogen balance and protein intake**

When consuming an adequate amount of essential amino acids, the person will be classed as being in "nitrogen equilibrium" since nitrogen balance studies are conducted to determine the amounts of these essential amino acids required by various people. This balance is reached when the intake of nitrogen from protein is approximately equal to the nitrogen loss in the feces and urine.

Requirement - mg. per kg. of body weight			
	<b>Infant</b>	<b>Child</b>	<b>Adults</b>
<b>Amino acid</b>	<b>3 - 6 mo.</b>	<b>10 - 12 yr.</b>	
Histidine	33	not known	not known
Isoleucine	80	28	12
Leucine	128	42	16
Lysine	97	44	12
S-containing amino acids	45	22	10
Aromatic amino acids	132	22	16
Threonine	63	28	8

Tryptophan	19	4	3
Valine	89	25	14

## Amino Acids

Amino acids are the chemical units or "building blocks" of the body that makeup proteins. Protein substances make up the muscles, tendons, organs, glands, nails, and hair. Growth, repair, and maintenance of all cells are dependent upon them. Next, to water, protein makes up the greatest portion of our body weight. Amino acids that must be obtained from the diet are called "essential amino acids". Other amino acids that the body can manufacture from other sources are called "non-essential amino acids".

### Essential Amino Acids

#### Histidine

Is found abundantly in hemoglobin; has been used in the treatment of rheumatoid arthritis, allergies, ulcers and anemia; is essential for the growth and repair of tissues; important for the maintenance of the myelin sheaths, which protect nerve cells; is needed for the production of both red & white blood cells; protects the body from radiation damage; lowers blood pressure, aids in the removal of heavy metals from the body; aids in sexual arousal.

#### Isoleucine

Is needed for hemoglobin formation; stabilizes and regulates blood sugar and energy levels; is valuable to athletes because it aids in the healing and repair of muscle tissue, skin, and bones; has been found to be deficient in people suffering from certain mental and physical disorders.

#### Leucine

Works with isoleucine and valine to promote the healing of muscle tissue, skin, and bones; is recommended for those recovering from surgery; lowers blood sugar levels; aids in increasing growth hormone production

#### Lysine

Ensures adequate calcium absorption and maintains a proper nitrogen balance in adults; helps form collagen (which makes up cartilage and connective tissue); aids in the production of antibodies which have the ability to fight cold sores and herpes outbreaks; lowers high serum triglyceride levels.

#### Methionine

A powerful anti-oxidant and a good source of sulfur, which prevents disorders of the hair, skin, and nails; assists the breakdown of fats, thus helping to prevent a buildup of fat in the liver and arteries, that might obstruct blood flow to the brain, heart, and kidneys; helps to detoxify harmful agents such as lead and other heavy metals; helps diminish muscle weakness; prevents brittle hair; protects against the effects of radiation; beneficial for women who take oral contraceptives because it promotes the excretion of estrogen; reduces the level of histamine in the body which can cause the brain to relay wrong messages; helpful to individuals suffering from schizophrenia.

## **Phenylalanine**

Used by the brain to produce norepinephrine, a chemical that transmits signals between nerve cells in the brain; promotes alertness and vitality; elevates mood; decreases pain; aids memory and learning; used to treat arthritis, depression, menstrual cramps, migraines, obesity, Parkinson's disease, and schizophrenia.

## **Threonine**

Helps maintain proper protein balance in the body; is important for the formation of collagen, elastin and tooth enamel; aids liver and lipotropic function when combined with aspartic acid and methionine; prevents the buildup of fat in the liver; assists metabolism and assimilation.

## **Tryptophan**

A natural relaxant helps alleviate insomnia by inducing normal sleep; reduces anxiety and depression and stabilizes mood; helps in the treatment of migraine headaches helps the immune system function properly; aids in weight control by reducing appetite; enhances the release of growth hormones; helps control hyperactivity in children.

## **Valine**

Is needed for muscle metabolism and coordination, tissue repair, and for the maintenance of proper nitrogen balance in the body; used as an energy source by muscle tissue; helpful in treating liver and gallbladder disease; promotes mental vigor and calm emotions.

## **Non-essential Amino Acids**

### **Alanine**

Plays a major role in the transfer of nitrogen from peripheral tissue to the liver; aids in the metabolism of glucose, a simple carbohydrate that the body uses for energy; guards against the buildup of toxic substances that are released into muscle cells when muscle protein is broken down quickly to meet energy needs, such as what happens with aerobic exercise; strengthens the immune system by producing antibodies.

### **Arginine**

Considered "The Natural Viagra" by increasing blood flow to the penis; retards the growth of tumors and cancer by enhancing the immune system; increases the size and activity of the thymus gland, which manufactures T cells, crucial components of the immune system; aids in liver detoxification by neutralizing ammonia; reduces the effects of chronic alcohol toxicity; used in treating sterility in men by increasing sperm count; aids in weight loss because it facilitates an increase in muscle mass and a reduction of body fat; assists the release of growth hormones, which is crucial for "optimal" muscle growth and tissue repair; is a major component of collagen which is good for arthritis and connective tissue disorders; aids in stimulating the pancreas to release insulin.

### **Asparagine**

Asparagine structurally is a beta-amide derivative of another amino acid, aspartic acid and is mostly not required in the diet. The body biochemically synthesizes asparagine from aspartic acid if dietary sources of this amino acid are lacking. Chemically, the amino acid asparagine is similar in structure to aspartic acid.



Central nervous system balance is maintained by the presence of sufficient amounts of asparagine in the body. The presence of sufficient amounts of asparagine in the body prevents a person from suffering increased nervousness or too much sedation in daily life.

In the liver, one important function of asparagine is in the promotion of the process by which certain amino acids are transformed into another form. Asparagine tends to be found in large amounts in meat and meat products. One of the most important functions that asparagine performs in the human body is to boost the liver's ability to transform one individual amino acid from one type to another type.

#### **Aspartic Acid**

Increases stamina and is good for chronic fatigue and depression; rejuvenates cellular activity, cell formation and metabolism, which gives you a younger-looking appearance; protects the liver by aiding the expulsion of ammonia; combines with other amino acids to form molecules that absorb toxins and remove them from the bloodstream; helps facilitate the movement of certain minerals across the intestinal lining and into the blood and cells; aids the function of RNA and DNA, which are carriers of genetic information.

#### **Citrulline**

Citrulline belongs to the group of nonessential amino acids -- the building blocks of protein. Your body produces it through the urea cycle, a process in which carbon dioxide and ammonia are added to ornithine to create citrulline, which is then converted into arginine. Uses for citrulline supplements include treatment for urea cycle disorders, rare conditions that occur primarily in children. Additional uses currently being studied include the treatment of heart failure, arterial stiffness, and erectile dysfunction.

#### **Cysteine & Cystine**

Functions as a powerful antioxidant in detoxifying harmful toxins; protects the body from radiation damage; protects the liver and brain from damage due to alcohol, drugs, and toxic compounds found in cigarette smoke; has been used to treat rheumatoid arthritis and hardening of the arteries; promotes the recovery from severe burns and surgery; promotes the burning of fat and the building of muscle; slows down the aging process. Skin and hair are made up of 10-14% cystine.

#### **Glutamic Acid**

Is an excitatory neurotransmitter for the central nervous system, the brain and spinal cord; important in the metabolism of sugars and fats; aids in the transportation of potassium into the spinal fluid; acts as fuel for the brain; helps correct personality disorders, and is used in the treatment of epilepsy, mental retardation, muscular dystrophy, and ulcers.

#### **Glutamine**

The most abundant amino acid found in muscles; helps build and maintain muscle tissue; helps prevent muscle wasting that can accompany prolonged bed rest or diseases such as cancer and AIDS; a "brain fuel" that increases brain function and mental activity; assists in maintaining the proper acid/alkaline balance in the body; promotes a healthy digestive tract; shortens the healing time of ulcers and alleviates fatigue, depression and impotence; decreases sugar cravings and the desire for alcohol; recently used in the treatment of schizophrenia and senility.



## **Glycine**

Retards muscle degeneration; improves glycogen storage, thus freeing up glucose for energy needs; promotes a healthy prostate, central nervous system, and immune system; useful for repairing damaged tissue and promotes healing.

## **Ornithine**

Helps to prompt the release of growth hormones, which promotes the metabolism of excess body fat (this effect is enhanced if combined with arginine and carnitine); is necessary for a healthy immune system; detoxifies ammonia and aids in liver regeneration; stimulates insulin secretion and helps insulin work as an anabolic(muscle building) hormone.

## **Proline**

Improves skin texture by aiding the production of collagen and reducing the loss of collagen through the aging process; helps in the healing of cartilage and the strengthening of joints, tendons, and heart muscle; works with Vitamin C to promote healthy connective tissues.

## **Serine**

Needed for the proper metabolism of fats and fatty acids, the growth of muscle, and the maintenance of a healthy immune system; is a component of the protective myelin sheaths that cover nerve fibers; is important in RNA & DNA function and cell formation; aids in the production of immunoglobulins and antibodies.

## **Taurine**

Strengthens the heart muscle, boosts vision, and helps prevent macular degeneration; is the key component of bile, which is needed for the digestion of fats; useful for people with atherosclerosis, edema, heart disorders, hypertension, or hypoglycemia; is vital for the proper utilization of sodium, potassium, calcium and magnesium; helps prevent the development of potentially dangerous cardiac arrhythmias; has been used to treat anxiety, epilepsy, hyperactivity, poor brain function, and seizures.

## **Tyrosine**

Is important to overall metabolism; is a precursor of adrenaline, norepinephrine, and dopamine, which regulates mood and stimulates metabolism and the nervous system; acts as a mood elevator, suppresses the appetite, and helps reduce body fat; aids in the production of melanin (the pigment responsible for hair and skin color) and in the functions of the adrenal, thyroid, and pituitary glands; has been used to help chronic fatigue, narcolepsy, anxiety, depression, low sex drive, allergies and headaches.

## **Glycemic Index**

Beans are wonderful in that they have a low glycemic index. Low is below 55. Medium is 56 to 69 and high is 70 and above.

The glycemic index measures how fast a food is likely to raise your blood sugar. This can be helpful. For example, if your blood sugar is low and continuing to drop during exercise, you would prefer to eat a carb that will raise your blood sugar quickly. On the other hand, if you would like to keep your blood sugar from dropping during a few hours of mild activity you may prefer to eat a carb that has a lower glycemic index and longer action time. If your blood sugar tends to spike after breakfast you may want to select a cereal that has a lower glycemic index.

The numbers below give that food's glycemic index based on glucose, which is one of the fastest carbohydrates available. **Glucose is given an arbitrary value of 100 and other carbs are given a number relative to glucose.** Faster carbs (higher numbers) are great for raising low blood sugars and for covering brief periods of intense exercise. Slower carbs (lower numbers) are helpful for preventing overnight drops in the blood sugar and for long periods of exercise.

Classification	GI range	Examples
Low GI	55 or less	most fruits and vegetables (except potatoes and watermelon), whole-grain bread, pasta, beans /pulses, milk, yogurt, products extremely low in carbohydrates (some cheeses, nuts), fructose
Medium GI	56–69	whole wheat products, basmati rice, sweet potato, table sugar
High GI	70 and above	corn flakes, rice krispies, baked potatoes, watermelon, croissants, white bread, extruded breakfast cereals, most white rice (e.g. jasmine), straight glucose (100)

## Sprouts

There are three types of sprouts: seed, grain, and bean.

Alfalfa, clover, millet, radish, and sesame sprouts belong to the seed family, taste sweet and are rich in vitamins C, K, and minerals.

Barley, oat, rye and wheat sprouts are usually sweet and may be used in baking. All may be dried and ground, are rich in vitamin E and protein. These are the grain sprouts.

Bean sprouts are divided into three classes: tender beans (including green lentils and mung beans), tough beans and the soy family.

Sprouts can be added to appetizers, salads, sandwiches, even desserts as they take on the flavor of the foods in the mix, giving a new texture and dimension. They are raw, very nutritious, full of enzymes and easy to digest. They really should be in every salad. Every natural health regime should include these life-producing alkaline sprouts.

# Chapter 6: Nuts and Seeds

**“The earth brought forth vegetation, plants yielding seed after their kind...”  
Genesis 1:12**

God mentions nuts and seeds almost at the end of the vegetarian list because we do not need much of them to satisfy or fill us. Nuts and seeds are full of protein and fat, they can easily be a meal replacement. Raw nuts and seeds are full of life, that is, full of all kinds of minerals our bodies need to stay healthy.

Here is the list of some top nuts and seeds in the order of their importance to the diet:

- Almonds: The king of the nuts. Rich in calcium, magnesium, and other minerals. Rich in good fats and alkaline in pH.
- Walnuts: Rich in omega-3 fatty acids. Very good for the heart and blood.
- Flaxseed: Extremely rich in fiber, minerals like zinc, and omega 3 fats. Grind them up and put them in cereals, salads, and soups.
- Sunflower seeds: Rich in zinc and protein.
- Hazelnuts: Rich in protein and vitamin E and lower in fat than other nuts.
- Pumpkin seeds: Rich in magnesium and potassium. Excellent to eat in order to rid yourself of some kinds of intestinal parasites.

An ounce or so of nuts and seeds daily for breakfast or snack would give you brain power and inner strength. You can have them with fresh or dried fruits.

## The Chemistry of Fats

Like most organic materials, oils and fats are made up of three elements: carbon, oxygen, and hydrogen.

These elements combine to form chains known as fatty acids. Three of these chains then join to form a molecule known as a triglyceride. The triglyceride molecule is the basis of all oils and fats. Oils and fats vary in both their appearance and functionality due to differences in the types of fatty acid chains which join to form the triglyceride molecule.

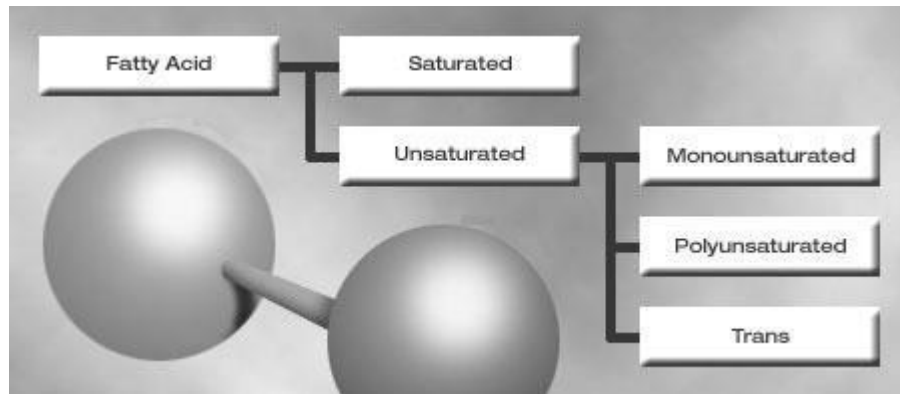
### What Is the Difference Between an Oil and a Fat?

Individual fatty acids can be either saturated or unsaturated and the latter being further subdivided into mono and polyunsaturated. All oils contain a proportion of all three types, and it is this combination in any one oil which determines whether it will be a solid fat or liquid oil at ambient temperature. The functionality of liquid oils and solid fats varies considerably and which to choose will depend on the intended application.

Generally speaking, oils containing a greater proportion of unsaturated fatty acids are liquid at room temperature, whereas those with higher amounts of saturated fatty acids will be solid.

## The Chemical Structure of Fatty Acids

Fatty acids are either saturated or unsaturated.



### Saturated Fats

Certain fatty acids are already 'naturally saturated' in that they cannot be made 'harder' than they are in nature. As previously noted, the levels of saturates are generally higher in those fats, which are solid at ambient temperatures.

Saturated fatty acids are extremely stable, i.e. they do not easily become rancid, meaning they have good keeping properties (shelf life). However, government recommendations advise consumers to limit their intake of saturated fats as they can increase blood cholesterol levels, one of the major factors in heart disease.

Most animal fats such as meat, butter, cheese, and cream contain relatively high levels of saturated fat and as such should be eaten in moderation. Many baked goods such as cakes, biscuits, and pastries can also be high in saturated fat.

### Unsaturated Fats

There are three types of unsaturated fatty acids:

#### 1. Monounsaturated Fatty Acids (MUFA)

Fatty acids in this category have what is known as one double bond in their chemical makeup. They are relatively stable to oxidation and the development of rancidity and are now considered, in nutritional terms, as being the best type of fat to eat.

The most common sources of monounsaturates are olive oil and rapeseed oils.

#### 2. Polyunsaturated Fatty Acids (PUFA)

Polyunsaturated fatty acids contain two or more double bonds in their chemical make up. They are the least stable fatty acids to oxidize and as such are best used in cold applications. The most common source of polyunsaturates is sunflower seed oil.

#### 3. Trans Fatty Acids (TFA)

Trans fatty acids typically come from two sources, hydrogenated vegetable oils, and animal fats. Recent scientific research suggests trans fats, although consumed in relatively small proportions, should be avoided due to their negative effect on blood cholesterol levels.

## What Does Fat Provide in the Diet?

Fat has many important functions as a nutrient. It provides a concentrated source of energy. 1g of fat provides 37kJ (9kcal), more than double that provided by either protein or carbohydrate which provide 17kJ/g (4kcal) and 16kJ/g (3.75kcal), respectively.

It is a carrier for fat-soluble vitamins A, D, E and K.

Some fats are essential to our well-being. These are known as the essential fatty acids (EFAs), often referred to as the omega fatty acids. Linoleic acid (omega 6) and alpha-linolenic acid (omega 3) are the most common essential fatty acids found in vegetable oils. The most prolific sources of essential fatty acids are fish oils such as cod liver oil. It is recommended that 1-2% of our energy intake should come from essential fatty acids.

## Nut and Seed Oils

The best oils should be cold-pressed or expeller-pressed. These are methods that involve little or no heat. In the cold-pressed method, the temperature should not exceed 122 degrees F. In expeller pressed, temperatures range from 130 to 180 degrees F.

## Pressing Oil with Minimum Heat

Oils should be pressed with minimum heat for two reasons.

First, as temperature increases, chemical reactions speed up. For every 10°C (18°F), the speed of chemical reactions more than doubles. The higher the temperature of the oil, the faster it is destroyed by light, oxygen, and other chemical reactions. This can be minimized by excluding light and air from the pressing process. Pressing facilities usually run without this protection.

Second, internal changes take place in the oil molecules at high temperatures. Unsaturated fatty acids may twist into unnatural trans-configurations or fatty acids may crosslink, oxidize, dimerize, or polymerize, changing the shape and properties of the fatty acid molecules, destroying their nutritional and biological value, and making them toxic.

These processes begin to take place measurably when oil temperature reaches about 160°C (320°F) and become really serious above 200°C (392°F). Oil pressing temperatures rarely exceed 100°C (212°F). Thus, the heat produced during pressing is not a major problem if light and air are excluded from contact with oils.

## Too Much Heat

Deodorization carried out for about an hour at high temperature (245°C, 473°F), destroys the nutritive value of the oils, and produces trans- fatty acids and chemical changes.

Hydrogenation used to turn liquid oils into semi-solid or solid fats, is carried out at a temperature of 250°C (482°F) for several hours. Hydrogenation purposely creates trans-fatty acids, because trans- fatty acids have higher melting points and are more solid than cis- fatty acids, and give products made from oils (such as margarine and shortenings) body, consistency, texture, and shelf life. Hydrogenated fats should be avoided. The body does not recognize this foreign matter.

Frying and deep-frying with oils, especially if the oil is allowed to sizzle or boil for hours or even days, occurs at temperatures between 160 and 220°C (320 to 428°F), depending on the kind of oil used, and produces trans-fatty acids, as well as light-, oxygen-, and heat-induced chemical destruction of fatty acids.

## Oils to Use and Their Composition

### Canola Oil

**Canola oil** is low in saturated fats, (the dangerous fats that cause heart disease), and high in healthy monounsaturated fats. It is also high in the omega-3 fat, alpha-linolenic acid, an extremely healthy fat that the body can't make on its own. The balance of good fats in canola oil has led it to be promoted by organizations such as the American Diabetes Association and the American Dietetic Association as a heart-healthy dietary oil that also helps improve insulin tolerance and liver function, but it must be purchased organic and non-GMO.

### Soybean Oil and Vegetable Oil for Cooking

Vegetable oil is an extremely common edible oil with a bland flavor and middle-of-the-road nutritional profile. Many vegetable oils that don't specify their contents are a mixture of oils containing primarily soybean oil with corn, palm, and sunflower oils as common additional ingredients. They may contain trans fats, which are one of the unhealthiest fats in the diet.

A better choice is purely organic (non-GMO) soybean oil, which has a similar taste and heat tolerance of mixed vegetable oil. Soybean oil contains more omega-3 fatty acids and vitamin E than vegetable oil. However, consumers should avoid soybean oil that has been hydrogenated, as this alters the fats into a less healthy configuration.

### Corn Oil in a Healthy Diet

Another popular option for stir-frying and sautéing, corn oil is low in saturated fat, mild-tasting and one of the most inexpensive edible oils. Corn oil contains fairly high levels of omega-6 oils, which most people get more than enough of in their daily diet. Choosing an oil with more omega-3s, such as canola oil, is usually a better choice for health than corn oil, but corn oil's low cost keeps it popular among consumers. Purchase organic corn oil.

### Sunflower Oil as a Healthy Oil Option that Lowers Cholesterol

Low in saturated fat and high in vitamin E, sunflower oil is good for stir-fries, salad dressings and sautéing. It doesn't have much omega 3, so anyone using this oil often should find other dietary sources of that kind of healthy fat. Because of the mix of fats in sunflower oil, there are indications that it might help lower cholesterol levels. Sunflower oil comes in three varieties with different amounts of monounsaturated and polyunsaturated fats, but all are low in saturated fats, the unhealthiest kind of fats.

### Butter

This golden delicacy is one of the most nutritive foods available *if* it has been made from the best quality cream. Cows grazing on green grass and living the “good life” produce much more nutrient-dense cream than do cows raised conventionally. For example, pasture-grazed cows have 500% more conjugated linoleic acid (CLA) in their milk than those who were fed corn and soy. This special fatty acid has strong anticancer properties, supports immune function, and inhibits weight gain. Butter is also a valuable source of the fat-soluble vitamins A, D, E, and K.

Its lower melting point allows it to bestow wonderful texture to baked goods, but also makes it more likely to burn, so keep it for spreads, flavoring vegetable dishes, baking, and low-temperature sautéing.

### **Clarified Butter/Ghee**

Ghee is butter that has had the milk solids removed. This is why those with an intolerance to milk protein (casein) often do well with ghee. This also creates a higher butterfat content. Ghee has a longer shelf life and higher smoke point than butter, which means it can be used in higher temperature cooking.

### **Coconut**

This is one of the oldest of dietary fats and was extensively used in the late 1800s. It contains unique *medium-chain fatty acids* (MCFAs) that are digested and handled by the body differently than other fats. Once eaten, the body transforms MCFAs into powerful antimicrobial agents capable of defending the body against bacteria and viruses. They also speed up the body's metabolism (up to 50%) and thus help burn more calories and promote weight loss. Coconut has good stability and is best used for baking, pan-frying, sautéing, and making popcorn.

### **Palm oil**

This tropical oil is extracted from the fruit of the palm, which is up to 70% oil. Because of this high oil content, solvent extraction is unnecessary, resulting in a cleaner, healthier end-product. Palm oil has high levels of carotenoids, along with the vitamin E family of nutrients called tocopherols and tocotrienols. This oil is mostly saturated, which makes it naturally solid at room temperature and offers strong stability, which means that it does not easily turn rancid when the heat is applied, such as with frying. This oil is commonly found in natural trans-fat-free, shelf-stable shortenings. Purchase organic.

### **Olive oil**

Studies indicate that olive oil can inhibit LDL cholesterol oxidation and platelet aggregation. It is rich in omega-9 fatty acids, two factors involved in heart disease. Olive oil may also lessen the risk of some cancers. These protective actions of olive oil are partly due to its antioxidant nutrients, such as chlorophyll and carotenoids. There are different grades of olive oil, starting with extra virgin, which is derived from the first pressing of the olives. It tends to have a stronger flavor and more nutritional value. Virgin, or fine virgin, is from the second or third pressing and usually has a milder flavor and varies in quality. The best approach is to favor unrefined, cold-pressed extra virgin olive oil and use it in no- or low-heat situations, such as adding it to a dish already cooked or to salads.

### **Nut oils**

These flavorful choices have much to offer the palate. **Macadamia oil** is high in monounsaturated fatty acids, reaching 85%, while olive oil hovers around 73%. The lower polyunsaturated fat content helps make this oil more stable when exposed to the elements. Macadamia, as well as several other nut oils, including walnut, almond, and hazelnut, possess high concentrations of powerful nutrients, namely tocopherols, squalene, and phytosterols. It is a combination of the nutrients and fatty acids that makes these nuts and nut oils heart protective. Omega-3-rich **walnut oil** helps inhibit LDL cholesterol oxidation. **Almond oil** is being noticed for its ability to lower triglyceride levels while increasing HDL (good) cholesterol. Bear in mind, most nut oils are polyunsaturated dominant, which makes them more easily damaged



by cooking. Thus, store these oils carefully and use them on salads and unheated dishes, or jazz up a meal with these stronger flavored oils after having cooked with a more stable fat.

## Seed Oils

**Flaxseed oil, hemp seed oil, and pumpkin seed oil** are all rich in the omega-3 fat, linolenic acid. Their use may help improve the omega-3-to-6 imbalance so prevalent in America today.

**Pumpkin seed** oil is also chock-full of nutrients, many of which are prostate-supportive. These oils should be kept refrigerated, never heated, and consumed in small amounts in salad dressings and spreads. Unlike most other seed oils, **sesame oil** is appropriate for higher temperature cooking because it contains unique antioxidants, particularly Sesamin, that give it an extra level of heat protection.

Sesame oil can also be added to other oils to enhance their stability during heating. Research shows that sesame oil also contains cancer-preventing and heart-healthy compounds.

## Vegetable/Polyunsaturated Oils

Safflower, corn, canola, sunflower, soybean, etc. These are the grouping of polyunsaturated oils that should be used with caution because of their delicate structural nature. *High oleic* safflower and sunflower oils are produced from hybrid plants and have a composition similar to that of olive oil. They are thus more stable than traditional varieties.

## Peanut oil

This oil is fairly stable and has good antioxidant content. Therefore, it is appropriate for stir-frying and the occasional fried dish. However, it still does not provide as desirable a nutrient profile as other oils and therefore should not be used exclusively. Cold-pressed and organic is recommended.

Oils represent the Holy Spirit in the Bible. As the Holy Spirit is important in the life of the Christian, so is natural oil to the body.

Here are the basic functions of oils and fats in the body:

**Fats provide energy.** Gram for gram fats is the most efficient source of food energy. Each gram of fat provides nine calories of energy for the body, compared with four calories per gram of carbohydrates and proteins.

**Fats build healthy cells.** Fats are a vital part of the membrane that surrounds each cell of the body. Without a healthy cell membrane, the rest of the cell couldn't function.

**Fats build brains.** Fat provides the structural components not only of cell membranes in the brain but also of myelin, the fatty insulating sheath that surrounds each nerve fiber, enabling it to carry messages faster.

**Fats help the body use vitamins.** Vitamins A, D, E, and K are fat-soluble vitamins, meaning that the fat in foods helps the intestines absorb these vitamins into the body.

**Fats make hormones.** Fats are structural components of some of the most important substances in the body, including prostaglandins, hormone-like substances that regulate many of the body's functions. Fats regulate the production of sex hormones, which explains why



some teenage girls who are too lean experience delayed pubertal development and amenorrhea.

**Fat provides healthier skin.** One of the more obvious signs of fatty acid deficiency is dry, flaky skin. In addition to giving skin its rounded appeal, the layer of fat just beneath the skin (called subcutaneous fat) acts as the body's own insulation to help regulate body temperature. Lean people tend to be more sensitive to cold; obese people tend to be more sensitive to warm weather.

**Fat forms a protective cushion for your organs.** Many of the vital organs, especially the kidneys, heart, and intestines are cushioned by fat that helps protect them from injury and hold them in place. (True, some of us "overprotect" our bodies.) As a tribute to the body's own protective wisdom, this protective fat is the last to be used up when the body's energy reserves are being tapped into.

***How much fat should we consume daily?***

Many experts say 30% of our calories should come from fats, but 10-20% is a better percentage. No more than 10% should come from saturated fats. A diet high in saturated fats is linked to heart and arterial disease.

**Note:** I believe that it is healthier to obtain your daily fat from food rather than free oils (manufactured oils).

# Chapter 7: Fruit

**“And the earth brought forth.....the tree yielding fruit...”  
Genesis 1:12**

The fruit is the last of the vegetarian foods created in the book of Genesis. One would say, “the best for last”, but the reason it is in this order of creation is that we are not to eat too much of it. Remember, the fruit has sugar, even though it is natural.

Two fruits a day should be eaten in the morning or for a snack. It is not wise to have them late in the evening because they can keep you up.

***The fruit is beneficial for the following reasons:***

- Provides quick, soothing and refreshing taste and good nutrition to the body.
- Provides plenty of naturally distilled water along with alkalinity the body needs
- A quick source of energy.
- Rich in antioxidants that protect against degenerative disease
- A good source of fiber and live enzymes.

## Best Nine Fruits

### Coconut

- Lauric acid, the major fatty acid from coconut fat, has antiviral, antibacterial and antiprotozoal functions.
- May help to normalize body lipids, thereby protecting against alcohol damage to the liver and improving the immune system's anti-inflammatory response.
- Coconut oil is the healthiest oil you can consume.
- Best for protein types if consumed as raw fruit.

### Berries

- Contain powerful phytochemicals that provide antioxidant protection.
- Excellent source of vitamin C, carotenes, zinc, potassium, iron, calcium and magnesium.
- High in fiber.
- Low in sugar.

### Olives

- Contain polyphenols that help fight cancer and have an anti-inflammatory effect.
- Rich in monounsaturated fat.

### Papaya

- Rich in antioxidants like carotenes, vitamin C and flavonoids.
- Contains B vitamins, vitamin E, folate and fiber.

- Rich source of minerals, potassium, magnesium.
- Useful for digestion. (Papaya contains papain, an enzyme that helps with digestion.)
- May provide protection against cancer.
- Provides support for the immune system.
- Has an anti-inflammatory effect.

## **Avocado**

- Excellent source of raw fat, many Americans are deficient in.
- Rich in monounsaturated fat, which is easily burned for energy.
- An avocado has more than twice as much potassium as a banana.
- Good source of folate, dietary fiber, vitamin C, vitamin E, riboflavin and vitamin B6.

## **Mango**

- Rich source of carotenoids and vitamins B and C.
- Contains calcium, iron, and potassium.
- Good source of phosphorus, selenium, folate, and zinc.
- Contains some protein and amino acids.

## **Pineapple**

- Contains an enzyme, bromelain, which aids digestion, reduces inflammation and swelling and may have anti-cancer effects.
- Rich in antioxidants like vitamin C.
- Provides immune support.
- Excellent source of manganese, thiamin, and riboflavin, which are important for energy production.

## **Guava**

- Excellent source of vitamin C, lycopene, carotenoids, folate, potassium, fiber, calcium and iron.
- Consumption of guava fruit may reduce LDL (bad) cholesterol.
- Has anti-microbial properties that may fight bacteria such as Staphylococcus aureus and beta-streptococcus group A.
- Guava is sometimes used as a treatment for diarrhea by natural medicine workers in the tropics.

## **Kiwi**

- Excellent source of antioxidant vitamins C and E, and beta-carotene.
- Rich in phytonutrients that appear to protect human DNA from free-radical damage.
- Good source of fiber, potassium, magnesium, copper and phosphorus.

## What Are ORAC Units?

The ORAC (Oxygen Radical Absorbance Capacity) unit, ORAC value, or "ORAC score" is a method of measuring the antioxidant capacity of different foods and supplements. It was developed by scientists at the National Institutes of Health. While the exact relationship between the ORAC value of food and its health benefit has not been established, it is believed that foods higher on the ORAC scale will more effectively neutralize free radicals. According to the free-radical theory of aging, this will slow the oxidative processes and free radical damage that can contribute to age-related degeneration and disease.

The recommended antioxidant intake for the American diet is between 3,000 to 5,000 ORAC units per day. However, it is estimated that 10,000-12,000 units per day may be required to provide adequate protection from all sources of free radical damage.

### Fruits with some of the highest ORAC values are

Mangoni berry, acai berry, blueberry, pomegranates, raisins, grapes, Goji berry, cranberries, and elderberries.

### GI Index of Fruits

Diabetics and individuals with low blood sugar need to be careful about eating high-sugar or high-glycemic-index fruits, but most fruits are low on the GI index.

The high GI fruits are: dates (103) and watermelons (72).

### A Word on Food Combining and Fruit

The fruit is not good to eat after a meal. It is best for snacks. There are some exceptions:

- Nuts and seeds tend to combine well with most fruits.
- Some pineapple or papaya after a protein meal, especially meat, helps digestion because of its protein-digesting enzymes.

Do not mix and eat acid fruits with sweet fruit and always eat melons alone or leave them alone. Digestion is optimal this way.

# Chapter 8: Fish

**“Then God said, ‘Let the waters swarm with fish and other life.’”  
Genesis 1:20**

Vegetarian foods should make up most of our diet (80%). You can see that this is from a creation standpoint. God created flesh last, and He started with fish first. So, the best flesh food to eat is fish.

## Not All Fish Are Created Equal

God instructs his people, which fish they could eat and which they could not. This applies to us today. If we apply this we can experience better health.

**“Of all the marine animals, these are ones you may use for food. You may eat anything from the water if it has both fins and scales, whether taken from salt water or from streams. <sup>10</sup> But you must never eat animals from the sea or from rivers that do not have both fins and scales.”  
Leviticus 11:9-10**

Those fish that are on God’s no-no list, have more toxins and generally more cholesterol in them. It is good to avoid them if you want optimum health.

## Fish with Scales and Fins

Albacore, bass, carp, flounder, grouper, haddock, halibut, herring, mackerel, mahi-mahi, orange roughy, perch, pike, pollock, salmon, sardines, snapper, sole, tilapia, trout, tuna, walleye, whitefish, and whiting are just some of the most popular fish with both fins and scales. Cod, mackerel, and salmon are some of the best because of the omega 3 oils in them.

The fish to avoid are the scavenger ones which include shellfish and all crustaceans.

## Top 10 Fish and Shellfish in the United States Based on Consumption – Omega-3 and Mercury Levels:

	<b>Omega-3 fatty acids (grams per 3-oz. serving)</b>	<b>Mean mercury level in parts per million (ppm)</b>
Canned tuna (light)	0.17–0.24	0.12
Shrimp	0.29	ND*
Pollock	0.45	0.06
Salmon (fresh, frozen)	1.1–1.9	0.01
Cod	0.15–0.24	0.11
Catfish	0.22–0.3	0.05
Clams	0.25	ND*
Flounder or sole	0.48	0.05
Crabs	0.27–0.40	0.06
Scallops	0.18–0.34	0.05

ND – mercury concentration below the Level of Detection (LOD=0.01ppm)

### Fish with the Highest Levels of Mercury (about 1 ppm):

	Omega-3 fatty acids (grams per 3-oz. serving)	Mean mercury level in parts per million (ppm)
Tilefish (golden bass or golden snapper)	0.90	1.45
Shark	0.83	0.99
Swordfish	0.97	0.97
King mackerel	0.36	0.73

Five of the most commonly eaten fish or shellfish that are low in mercury are shrimp, canned light tuna, salmon, pollock, and catfish. Avoid eating shark, swordfish, king mackerel, or tilefish because they contain high levels of mercury. Fish is a good source of protein and, unlike fatty meat products, it's not high in saturated fat. Fish is also a good source of omega-3 fatty acids. Omega-3 fatty acids benefit the heart of healthy people and those at high risk of, or who have cardiovascular disease. Research has shown that omega-3 fatty acids decrease the risk of arrhythmias (abnormal heartbeats), which can lead to sudden cardiac death. Omega-3 fatty acids also decrease triglyceride levels, slow the growth rate of atherosclerotic plaque and lower blood pressure (slightly).

## EPA and DHA

DHA and EPA are essential fatty acids which stand for docosahexaenoic acid and eicosapentaenoic acid. These essential fatty acids are called omega-3 fats, which are found in cold-water fish. EPA and DHA are highly unsaturated fats because they contain 6 and 5 double bonds on their long structural chain. These polyunsaturated fats play a very important role in the function of our bodies.

EPA and DHA are vital nutrients and may be taken to maintain the healthy function of the brain and retina. DHA is a building block of tissue in the brain and retina of the eye. It helps with forming neural transmitters, such as phosphatidylserine, which is important for brain function. DHA is found in the retina of the eye and taking DHA may be necessary for maintaining healthy levels of DHA for normal eye function.

### Cardiovascular system

EPA and DHA are converted into hormone-like substances called prostaglandins, and they regulate cell activity and healthy cardiovascular function.

### Human growth and intellectual development

DHA plays a very important role during fetal development, early infancy, and old age. High concentrations of DHA are found in the brain and increases 300-500% in an infant's brain during the last trimester of pregnancy. Adding DHA to a pregnant mother's diet may be beneficial for the fetus' brain development. Elderly people should also take EPA and DHA because as we get older, our body forms less DHA and EPA, which may cause less mental focus and cognitive function. Taking EPA and DHA may also help with mental abnormalities, such as Alzheimer's disease and dementia.

There are other benefits to taking EPA and DHA because it also plays as a source of energy. It

insulates the body against heat loss, prevents skin from drying and flaking, and cushions tissues and organs.

## Proven Omega-3 Benefits

**Less Pain and Inflammation** - Omega-3 fatty acids, particularly EPA, have a very positive effect on your inflammatory response. Through several mechanisms, they regulate your body's inflammation cycle, which prevents and relieves painful conditions like arthritis, prostatitis, cystitis and anything else ending in "itis."

**Cardiovascular Health** - Omega 3 fatty acids have also been proven to work wonders for your heart and the miles and miles of arteries and veins that make up your cardiovascular system. They help to lower cholesterol, triglycerides, LDL and blood pressure, while at the same time increasing good HDL cholesterol. This adds years to your life expectancy.

**Protection from Stroke and Heart Attack** - When plaque builds up on arterial walls and then breaks loose, it causes what's known as a thrombosis, which is a fancy way of saying clot. If a clot gets stuck in the brain, it causes a stroke and when it plugs an artery, it causes a heart attack. Research shows omega 3 fatty acids break up clots before they can cause any damage.

**Better Brain Function and Higher Intelligence** - Pregnant and nursing mothers can have a great impact on the intelligence and happiness of their babies by supplementing with fish oil. For adults, omega-3 improves memory, recall, reasoning, and focus. You'll swear you're getting younger and smarter.

**Less Depression and Psychosis** - Making you smarter is not all omega 3 does for your brain. Psychiatry department researchers at the University of Sheffield, along with many other research studies, found that omega 3 fish oil supplements "alleviate" the symptoms of depression, bipolar and psychosis. (*Journal of Affective Disorder Vol. 48(2-3);149-55*)

**Lower Incidence of Childhood Disorders** - Just to show how fish oil fatty acids leave nobody out, studies show that children (and adults) with ADD and ADHD experience a greatly improved quality of life. And those with dyslexia, dyspraxia, and compulsive disorders have gotten a new lease on life thanks to omega-3 oils.

**Reduction of Breast, Colon and Prostate Cancer** - And finally, omega-3 fish oil has been shown to help prevent three of the most common forms of cancer - breast, colon, and prostate. Science tells us that omega-3s accomplish this in three ways. They stop the alteration from a normal healthy cell to a cancerous mass, inhibiting unwanted cellular growth and causing apoptosis, or cellular death, of cancer cells.

Jesus ate fish with the disciples. He knew the value of this flesh food.... easy to digest and plenty of brain minerals, protein, and good fats.

Fish can be eaten twice a week or more.

# Chapter 9: Fowl and Eggs

**“And God created..... every winged fowl after his kind:  
and God saw that it was good.”  
Genesis 1:21**

Fowl was created after fish. Leviticus 11 tells us which fowl are permissible to eat.

**“And these are they which ye shall have in abomination among the fowls; they shall not be eaten, they are an abomination: the eagle, and the suffrage, and the osprey, <sup>14</sup>And the vulture, and the kite after his kind; <sup>15</sup>Every raven after his kind; <sup>16</sup>And the owl, and the night hawk, and the cuckoo, and the hawk after his kind, <sup>17</sup>And the little owl, and the cormorant, and the great owl, <sup>18</sup>And the swan, and the pelican, and the giver eagle, <sup>19</sup>And the stork, the heron after her kind, and the lapwing, and the bat. <sup>20</sup>All fowls that creep, going upon all four, shall be an abomination unto you.”  
Genesis 1:13-21**

The permitted fowl would be chicken, dove, peafowl, pheasant, pigeon, quail and turkey. The most commonly eaten are chicken and their eggs.

Skinless chicken breast is high in protein, low in fat, and low in calories. Purchasing organic product would be best. Chicken or turkey may be eaten once or twice a week. Free-range chickens that roam are the best to consume. Chickens that are commercially raised never see the light of day, live bumper to bumper, and are given steroids and antibiotics. This is a horrible thing to do to the fowl.

Most chicken meat in America is genetically modified. That's why most countries refuse American meats. Chickens are given growth hormones so corporations can get the most bang for their buck per part. Chicken parts are very popular, and the cost is based on weight.

A lot of chickens sold in grocery chain stores are treated with a red/pink dye to give the appearance of fresh meat. Sick chickens also slide in our food chain. That's when people get salmonella and other things. Cloned chicken meats are also in the food chain meaning many people are eating finger-licking science experiments. Large dosage of genetically modified foods equals sickness. The closest you may get in America to authentic chicken is organic free-range chickens or chickens by local farmers.

## A Word about GMO'S

GMO means genetically modified organism. Scientists manipulate the DNA of crops and certain living creatures so they can produce super crops and animals that will produce their own internal pesticides and grow big and juicy. We do not fully know what the long term effects are in regards to consuming GMO products, but one group of people does react to them-- those with allergies and environmental sensitivities.

**Cultivated Genetically Modified Foods** - From bacteria (E. coli) and fungus, fruits, and vegetables to animals, genetic manipulation is becoming more and more common in our society. In the US market now, 60 to 70% of the processed foods are genetically modified. *In 2006, United States GMO crops reached just shy of 135 million acres, with the total global*



## ***area exceeding 250 million acres!***

This is a short list of the genetically modified food crops that are grown in the US today: sugar cane, sweet peppers, tomatoes, bananas, strawberries, soybeans, corn, potatoes, pineapples, cocoa beans, yellow squash, zucchini.

And each week more are being created at an alarming rate! Following is a short list of **processed foods** made with genetically modified organisms: popcorn, canola & cottonseed oil, soy sauce, frozen pizza, canned soups, baby formula, dry cereal, cookies, frozen dinners, aspartame sweetener.

## **Replacing Genetically Modified Foods**

Whenever possible, eat all-natural foods. Shop at your local farmers market for fresh foods which supports your local economy. Use only organically grown fruit and vegetables. Organic crops are grown using no genetic modification or toxic pesticides and herbicides. Your zucchini and yellow squash may be genetically modified. Use only locally grown or organic produce. Be careful to eat only organic varieties of popcorn and corn. They are very often genetically modified. Grow your own fruit and vegetables if you can. Be sure your location is not in close proximity to plants, industry or bioengineered farms. When you're shopping for meat and dairy products, be sure to look for the hormone and antibiotic-free, organic, range-fed information on the label. Avoid canola oil and cottonseed oil. Use instead, organic sources of grapeseed oil, virgin coconut oil, hemp seed oil and olive oil, which are available at organic and whole foods markets.

## **Eggs**

### **Are Free-Range Eggs Better for You?**

New research by *Mother Earth News* magazine reports that tests of eggs from four free-range flocks found that free-range chickens were up to twice as rich as vitamin E, up to six times richer in beta carotene (a form of vitamin A) and four times richer in essential omega-3 fatty acids than conventional eggs. The free-range eggs averaged only half as much cholesterol as the other eggs.

With free-range eggs, you do not get the antibiotic and steroid residues that you would with commercial eggs. The lesser the number of drugs coming into your body, the better it is for your liver and immune system. Eggs can be eaten once a week. The egg whites can be used as a protein.

### **Egg benefits**

Proteins from eggs contain all the essential amino acids. One large egg contains 7 grams of high-quality protein and all 9 essential amino acids. Eggs are one of the few foods which naturally contain vitamin D. Eggs are an excellent source of vitamin B12, which is essential for proper nerve function. Eggs are rich in choline, which is important in reducing the accumulation of fat in the liver as well as repairing some types of neurological damage. Eggs contain the right kind of fat. One egg contains just 5 grams of fat and only 1.5 grams of that is saturated fat. Eggs are excellent for the eyes.

According to one study, an egg a day may prevent macular degeneration due to the carotenoid content, specifically lutein and zeaxanthin. Both nutrients are more readily available to our bodies from eggs than from other sources. According to one study, regular consumption of eggs may help prevent blood clots, stroke, and heart attacks.

Eggs may prevent breast cancer. In one study, women who consumed at least 6 eggs per week lowered their risk of breast cancer by 44%. Eggs promote healthy hair and nails because of their high sulfur content and a wide array of vitamins and minerals. Many people find their hair growing faster after adding eggs to their diet, especially if they were previously deficient in foods containing sulfur.

### **Cholesterol issue**

New research shows that, contrary to the previous belief that eggs contain cholesterol that is bad for health, eggs may lower total LDL/ bad cholesterol, while raising HDL/good cholesterol. Some advocate the eating of raw eggs and egg yolks (only the yolks of eggs contain cholesterol) for this reason, as cholesterol in the yolk is healthier when uncooked. A large yolk contains more than 100 mg of cholesterol, but the human body does not absorb much cholesterol from eggs.

# Chapter 10: Meat and Dairy

**“And God said, ‘Let the earth bring forth living creatures after his kind, cattle, and creeping things, and beasts of the earth after his kind.’ And it was so.”**

**Genesis 1:24**

Animals were the last flesh food creatures created, meaning, you need the least of them as food. Leviticus 11 tells us which animals we can eat.

**26 " 'Every animal that has a split hoof not completely divided or that does not chew the cud, is unclean for you;... 29 " 'Of the animals that move about on the ground, these are unclean for you: the weasel, the rat, any kind of great lizard, 30 the gecko, the monitor lizard, the wall lizard, the skink, and the chameleon. 31 Of all those that move along the ground, these are unclean for you.”**

**Leviticus 11**

The animals permitted to eat are clean land animals such as antelope, deer(venison), goat, ox, bison(buffalo), elk, hart, reindeer, caribou, gazelle, ibex, sheep(lamb, mutton), cattle(beef, veal), giraffe, moose.

It is not necessary to eat animal products or by-products but the best of the meat and dairy to consume would be: Lamb, sheep, veal, and venison (deer).

Lamb is good red meat that digests much better than beef. Purchase organic lamb because commercial lamb is treated with drugs. Zeranol, a synthetic hormone, may be used to promote efficient growth in feedlot lambs. The hormone is implanted on the lamb's ear and is time-released for about 30 days. A withholding period of 40 days is required before slaughter.

Antibiotics may be given to prevent or treat disease in lambs. A recommended withholding period is required from the time antibiotics are administered until it is legal to slaughter the animal. This is so residues can exit the animal's system, but organic is much better.

## Blood Type Diet

According to the research that naturopathic physician, Dr. D'Adamo did on blood type diets, blood type O's do the best on meat products. In fact, blood type O individuals are meat eaters or do well with them, although they do not do well with wheat or dairy.

Blood type A and AB should be strictly vegetarian.

Blood type B individuals are in the middle.

He determined these findings through much research, using also indican tests to verify adequate or inadequate protein digestion.

## The Problem with Beef

The wholesale use of synthetic hormones in commercially raised cattle has been a common practice in this country for decades. In simple terms, hormone implants are used to increase

the size and weight of the animal. In the commercial cattle industry weight equates into dollars, which in turn translates into higher profitability for the producer. There are volumes of studies that cite both the pros and the cons of the practice of implanting livestock with growth hormones. From a common-sense standpoint, one should ask themselves the following question: "Would you allow your children or yourself to take synthetic growth hormones at any level?" Probably not, so why would anyone want to consume meat from livestock that has been implanted or injected with growth hormones?

Beef is the hardest of the meats to digest, but if you are going to eat it, purchase meat that comes from grass-fed cattle and that is hormone and antibiotic-free. It is also wise to take digestive enzymes when eating meat products. It is also very wise to follow the food combining rules when consuming meat. Proper food combining provides for optimum nutrient availability and ease of digestion. The rule of food combining concerning meat is that it should be eaten with non-starchy vegetables and that is all.

## Dairy

Dairy is not necessary to consume and this food group gives many people, if not most, problems. The protein and the sugar are hard to digest so many are intolerant to it.

The best dairy products to consume are goat milk and goat products like feta cheese, and goat yogurt. Buffalo mozzarella and some cottage cheese are okay to eat.

If you are going to consume cow's milk, purchase the hormone-free, antibiotic-free kind.

### **The Problem with Commercial Cow's Milk**

There are two main reasons why today's cow's milk is not appropriate for humans: First, cows' milk contains estrogens and progesterone in large quantities. Second, cow's milk contains too much calcium, amounting to 125 milligrams per 100 milliliters, which is about 4 times more than that of breast milk. This leads to stones, as well as hardening of the arteries.

Estrone sulfate is used on cows. It has a high oral, estrogenic activity. Once in the body, it is converted to estrone or estradiol. That estrone sulfate has a high oral activity can be understood by the fact that Premarin, which is marketed for hormone replacement therapy, contains naturally occurring conjugated estrogens derived from pregnant mares.

Drinking cow's milk, based on a recent Japanese study, is linked to testicular cancer in men. Why risk your health? Men and women who have been drinking commercial cow's milk ought to take I3C or DIM to deactivate those excess female hormones in their system. These are vegetarian derived products.

Just the fact that milk is pasteurized and homogenized has its own problems. Pasteurization destroys many of its nutrients and enzymes, and homogenization is linked to heart and arterial disease. Nut and seed milk are a superior choice.

# Chapter 11: Exercise and Rest

**“Thus, the heavens and the earth were completed in all their vast array. By the seventh day, God had finished the work He had been doing; so, on the seventh day, He rested from all his work. <sup>3</sup> And God blessed the seventh day and made it holy because on it He rested from all the work of creating that He had done.”**

**Genesis 2:1-3**

Exercise and rest are important for the whole person. God worked for six days in the creation and then rested. Work equates to movement. I want to talk about exercise movement. Here are some of the things that regular exercise can accomplish for you:

- Keeps you trim, help you lose fat and preserve muscle
- Improves sleep
- Improves your bone density and reduce your risk of falls and fractures.
- Lowers your risk of heart disease, diabetes, high blood pressure,
- Gallstone and colon cancer
- Raises self-esteem, improve mood and relaxation
- Decreases migraine headaches
- Reduces discomfort from arthritis
- Reverses the natural muscle loss that occurs with aging
- Improves detoxification and lymphatic flow
- Improves circulation

## Physical Activity Conditions Your Body

- Some activities improve flexibility, some build muscular strength and some increase endurance.
- Some forms of continuous activity involve using large muscles in your arms or legs. These are called endurance or aerobic exercises. They help the heart by making it work more efficiently during exercise and at rest.
- Brisk walking, jumping rope, jogging, bicycling, cross-country skiing and dancing are examples of aerobic activities that increase endurance.

## Risk Factors Reduced

Regular physical activity can also help reduce or eliminate some of these risk factors:

**High blood pressure** — Regular aerobic activities can lower blood pressure.

**Cigarette smoking** — Smokers who become physically active are more likely to cut down or stop smoking.

**Diabetes** — People at their ideal weight are less likely to develop diabetes. Physical activity may also decrease insulin requirements for people with diabetes.

**Obesity and overweight** — Regular physical activity can help people lose excess fat or stay at a reasonable weight.

**High levels of triglycerides** — Physical activity helps reduce triglyceride levels. High triglycerides are linked to developing coronary artery disease in some people.

**Low levels of HDL** — Low levels of HDL ("good") cholesterol (less than 40 mg/dL for men/less than 50 mg/dL for women) have been linked to a higher risk of coronary artery disease. Recent studies show that regular physical activity can significantly increase HDL cholesterol levels and thus reduce your risk.

In general, people who exercise will probably live a longer and healthier life.

## Earth's Electromagnetic Field

The Earth is a huge magnetic sphere. Living things have been tied to the Earth's natural magnetic field from the time that life began. This magnetic field permeates and contributes to all life on the planet by the generation of what we call the atmosphere. This field varies in strength and consistency through the ages and, with this variance, so too does life on the planet change. Our bodies own magnetic frequencies and bio-field patterns react to this variance of the Earth's field. All matter on Earth assists in creating this field and so becomes charged with this magnetic resonance, displaying different results, dependant on the substance. Each individual cell--as well as entire organisms--senses and derives timing information from the natural cycles of the geomagnetic field.

For the reason above, walking on sand or better yet walking on grass barefoot outside for 20-30 minutes several times a week when possible would produce vibrant, energizing effects to your whole being. Matter of fact, outdoor exercise is best because of the healing, balancing and rejuvenating effect of the earth's electromagnetic field.

Deep breathing exercises outdoors early in the morning would be a wonderful way to clear the lower lungs of toxins.

We have been created to move and be outdoors. Living in a metal building, spending long periods operating cell phones, computers, watching television, using microwaves-- takes us away from the natural earth balance, as well as creating electromagnetic pollution (unhealthy radiation or negative radio magnetic fields). The overexposure of these has been linked to cancer. There are two ways to help reduce this risk:

- Reduce or eliminate exposure
- Purchase bio-shield devices that deflect, filter, transform or reduce the pollution.

## Rest

God rested on the seventh day. We should rest also. Adequate rest provides:

- Adequate healing and restoration of the mind, body, and spirit
- Renewal and refreshing so one is ready for the new week
- Adequate time to be with your Creator

No matter how well you eat or how many supplements you take, if you do not sleep 7-8 hours a night and take at least one day off a week to rest your body and mind, you will break down or not function properly. Your immune system will suffer and you will be prone to disease.

No one is exempt.

### **Reasons to Get Enough Sleep:**

1. **Learning and memory:** Sleep helps the brain commit new information to memory through a process called memory consolidation. In studies, people who had slept after learning a task did better on tests later.
2. **Metabolism and weight:** Chronic sleep deprivation may cause weight gain by affecting the way our bodies process and store carbohydrates, and by altering levels of hormones that affect our appetite.
3. **Safety:** Sleep debt contributes to a greater tendency to fall asleep during the daytime. These lapses may cause falls and mistakes such as medical errors, air traffic mishaps, and road accidents.
4. **Mood:** Sleep loss may result in irritability, impatience, inability to concentrate, and moodiness. Too little sleep can also leave you too tired to do the things you like to do.
5. **Cardiovascular health:** Serious sleep disorders have been linked to hypertension, increased stress hormone levels, and irregular heartbeat.
6. **Disease:** Sleep deprivation alters immune function, including the activity of the body's killer cells. Keeping up with sleep may also help fight cancer.

### **Balance**

When we speak of balance we speak of self-control. Self-control in eating, in socializing, in exercising, in everything. Life is a balance of all good things, but it takes self-control to keep balance.

Two ways to stay balanced:

- Walk humbly before your God
- Fast once a week or live a fasted life

Humility before God keeps order and priority in life. We tend to not overdo things when God is in the right perspective in our life.

Fasting once a week, coupled with eating slowly and chewing our food well, helps us to not overeat. Fasting helps because it allows toxins to be removed from the body, as well as shrink the stomach. These two effects of fasting help us to desire healthy foods in balanced amounts.

# Chapter 12: The Use of Herbs

**“..and the fruit thereof shall be for meat, and the leaf thereof for medicine.”  
Ezekiel 47:12**

God has ordained herbs for the healing of mankind. Herbs contain the secrets of God concerning healing. The nutrients, fiber, enzymes, and plant actives are all important to their overall effect on the individual. Herbal therapy has been around much longer than allopathy, which is modern medicine. It has proven the test of time concerning safety and efficacy.

***The four classifications of herbs are:***

Culinary: cooking herbs

Aromatic: used for fragrance or aromatherapy

Ornamental: used for decoration

Medicinal: used for their curative powers

In the Bible, herbs like hyssop are spoken of for their detoxification abilities.

**“Purge me with hyssop, and I shall be clean: wash me, and I shall be whiter than snow.”  
Psalm 51:7**

Hyssop leaves and flowers promote sweating and reduce phlegm. The herb is used for bronchitis, colds, chills, flu, asthma, herpes, and rheumatism. Hyssop relaxes peripheral blood vessels which results in better circulation. Its anti-viral and anti-inflammatory properties make it an excellent choice for relieving flu and cold symptoms, especially when used in compresses and poultices. Hyssop can also be combined with figs to be used for constipation. Combining hyssop tea with licorice, anise, or mullein benefits bronchitis and other lung conditions.

Our Creator has placed an herb for every physical condition our body may go through. I particularly like Yarrow flower and peppermint leaf combined in equal parts as a tea drink. It is one of the best infusions for colds, fever, and flu. One must drink a little every half hour until sweating begins. It is then that it begins to really work. It usually works for me in one day. Be sure to buy organic herbs.

## Organic Herbs

Organic herbs come from plants that have been grown without the use of chemical pesticides, herbicides or fertilizers. This allows the true flavor of the herbs to shine through. All organic herbs are federally inspected by the government so you know you are getting the real thing.

Grow your own organic herbs. It does not take much space to grow a few herbs. There are many books on organic gardening. You can be like your forefathers, Adam and Eve. They cultivated and watched over a garden. The blessings for this are many. Here are a few herbs you can grow in your back yard:

Chamomile flowers: for relaxation and insomnia

Echinacea flowers: natural antibiotic, cuts, and scrapes

Lemon balm: Insomnia, spasm, anxiety, headaches from stomach cramps.



Yarrow flowers: colds, fever, flu

Peppermint: stomach ache, gas, headache, colds, and flu

## Category of Herbs

Herbal medicine is a field in itself and it is worth studying. Herbs are categorized as follows:

**Alterative**- These are blood cleansers and detoxifiers like red clover, plantain leaves, mullein leaves, yellow dock, aloe vera, dandelion root.

**Astringent**-They constrict the surface area of tissue and stop the flow of blood, fluid, and secretions. Witch hazel is one. It is used externally for hemorrhoids and varicose veins.

**Demulcent**- Substances that are soothing and provide a coating to irritated or inflamed internal areas. Such are slippery elm and marshmallow root. These are excellent for colitis, diverticulitis, and acid reflux.

**Diaphoretic**- Herbs that stimulate perspiration. Elderberry and yarrow have this property. These are beneficial in colds, flu, and fever.

**Diuretic**- Herbs that promote urine flow. Chickweed, horsetail, juniper berries, cranberry, fennel seeds. These herbs would be beneficial in urinary tract infections or water retention. Cranberry, goldenseal root and juniper berry are some of the best for this.

**Expectorant**- A substance that promotes the expulsion of mucus from the respiratory tract. Such herbs are wild cherry bark, mullein, angelica root, hyssop. These herbs aid in chest colds and bronchitis.

**Laxative**- stimulate bowel movement. Senna and cascara sagrada are some. These are used in constipation.

**Anti-parasitic**- Herbs that expel parasites. Wormwood, garlic, black walnut are some.

**Nervine**- Herbs that soothe or help the nervous system. Valerian root, hops, Catnip, peppermint are some. These are beneficial in anxiety, nervous tension, and insomnia.

**Tonic**- A substance that invigorates and stimulates tone and energy of the body. Such herbs are ginseng and sarsaparilla. They help with energy levels.

Most herbs are safe for everyone, but it would be wise to consult a natural health practitioner or a vitamin-herb-drug interaction handbook for information on contraindications or interactions before use. God gives us wisdom. The fact is that herbs are many times safer than drugs. The problem is really never with the herb, but with the drug. They cause interactions and have many side effects. It is amazing and horrible how many hundreds of thousands each year suffer or die because of medications used. We need to get back to herbs. They are God's way and they get to the root of the problem.

There are some favorite herbs that have really worked well for me, both personally and in practice.

Aloe vera has been of benefit for so many conditions. I have found that if you mix it with hydrogen peroxide and rinse your mouth twice or more a day, it helps heal inflamed gums. I have also noticed that in a gel form it soothes hemorrhoids, burns, and itches. When people take pure organic juice internally at 2 to 3 ounces twice or more times a day, it wonderfully detoxifies the colon and blood. It is a true wonder of nature. Aloe vera has multiple properties: Detoxification, anti-inflammatory, soothing and healing, immune-enhancing.

It is a true champion plant. It is used all over the world for liver conditions, digestive problems, intestinal ailments, allergies and asthma, immune problems like HIV and AIDS, skin conditions, arthritis.

The glyconutrient mannose in aloe exerts an immune balancing effect. The saponins in it give it some of its cleansing effects. Anthraquinones give aloe a powerful anti-microbial and analgesic effect. And there is so much more in this plant.

## Herbs and Cancer

Being that one in four Americans develop cancer, herbs ought to be looked at for answers. Cancer is a disease that can be prevented most of the time. Diet, rest, environment, stress, and genetics are some factors that determine one's risk for cancer. We have covered most of these in the prior chapters. In regards to herbs, the following are very immune-protective against cancer as well as aiding in the recovery of it:

### **Barberry extract**

Contains the active component, berberine, which may retard multiplication of cancer cells and stop tumor growth. Berberine is also an antioxidant, which may prevent the formation of new tumors.

### **Green Tea**

It is a powerful antioxidant which may prevent genetic cell damage caused by both cancers and chemotherapy. It is also thought to block estrogen receptors in estrogen-dependent tumors such as breast and uterine cancers and may reduce tumor blood supply in other cancers. It would be wise to drink 2 to 3 cups of organic green tea daily.

### **Eleuthero**

Has been used as an anticancer herb because it binds to estrogen and progesterone receptors, blocking tumor stimulating activity. It is also an immunostimulant which appears to stimulate T cell and natural killer (NK) cell production which then works to destroy cancer cells.

### **Astragalus root**

Researchers from the University of Texas Medical Center, Houston, suppose that such components as choline, bioflavonoids and a polysaccharide, Astragalan B, found in the astragalus extract, are those ingredients which play a key role in improving the immune response to the cancer development. Namely, they promote the increase in B-cells growth, T-cells (natural killer cells) activity, tumor necrosis factor, and antibody production. Astragalus preparations are also believed to raise the quantities of interferon and leukocytes in the bloodstream which fight against cancer.

## **Mushrooms**

Reishi mushroom has been rated the top medicinal herb in Traditional Chinese Medicine (TCM) for over 2000 years, with ginseng in second place, and so highly treasured it was traded for its own weight in gold and only available to emperors. It is still the most important herb in the Orient and the most thoroughly researched. The results of many hundreds of scientific and medical studies are supporting traditional health claims. Reishi mushrooms contain over 200 active ingredients and unique compounds that are the most biologically active obtainable from any plant source.

Medicinal mushrooms have latent cancer preventative properties. Studies in Japan and Brazil strongly suggest that regular consumption over prolonged periods significantly reduce the levels of cancer incidence. Cancer Research UK also found increasing experimental evidence that medicinal mushrooms can have a cancer preventative effect, demonstrating both high anti-tumor activity and restriction of tumor metastasis. A 14-year survey in Japan revealed cancer rates of workers at medicinal mushroom farms were 1 in 1000 compared to 1 in 600 for the general population.

## **Lemongrass oil**

The essential oil has been the subject of scientific studies regarding its effects on cancer cells. One of the features of cancer cells is the upset of natural cell death. Lemongrass appears to be effective as a form of chemotherapy, causing cell death to occur. Results indicate that the oil has a promising anticancer activity and causes a loss in tumor cell viability by activating the apoptotic (cell death) process. These studies indicate that lemongrass essential oil, with its low toxicity, has the potential of being an inexpensive 'alternative' treatment in the future.

# Chapter 13: Detoxification and Fasting

**"Do you not understand that everything that goes into the mouth passes into the stomach, and is eliminated?"  
Matthew 15:17 (NAS)**

In the last chapter, it was mentioned that some herbs are detoxifying, like hyssop. The Bible speaks of it in Psalm 51.

Detoxification is the process in which the body eliminates toxic wastes from metabolism, pollutants breathed in, toxins taken in by prescription, foods, water, or through the skin. It is important that more toxins are eliminated than the toxins that are taken in.

When wastes have accumulated faster than the body can rid itself of them, the cells can no longer utilize nutrients efficiently and become compromised in their ability to stay healthy. This is evidenced by such symptoms as fatigue, indigestion, sluggish bowels, diarrhea, headaches, menstrual problems, depression, skin disorders, musculoskeletal aches and pains, and eventually by degenerative diseases such as cancer, heart disease, diabetes, arthritis, colitis, allergies, etc.

An automobile is an example. We change the oil every two to three thousand miles otherwise the vehicle does not run as well. The body is the same. It cannot operate well and stay healthy when it is loaded with toxins.

Jesus said that what enters in the mouth does not pollute because it is eliminated, but what if it is not eliminated from the body? It will poison the system. Waste is not eliminated from the body if there is a sluggish liver, not enough fiber in the diet, inadequate water intake, or insufficient movement or exercise. These are some of the reasons there could be faulty elimination.

## How Detoxification Works in the Body

Your liver has two main detox pathways or routes called Phase One and Phase Two. In Phase One a complicated process of enzymes breaks down toxins into forms that can be either safely eliminated by your body or can go through Phase Two. Here they are attached to other molecules that escort them out of the body through the kidneys or bile, which carries them into the intestines and out of the body.

Excessive amounts of toxic chemicals such as pesticides can disrupt the enzymes system of Phase One by causing over-active. This will result in high levels of damaging free radicals being produced which damage the liver cells.

Substances that may cause overactivity during Phase One are caffeine, dioxin, saturated fats, organophosphorus pesticides, paint fumes, sulfonamides, exhaust fumes, and drugs. In order to get rid of or reduce these free radicals, you need foods that contain a lot of antioxidants and phytochemicals. The antioxidant vitamins A, C, E, selenium, and many different phytochemicals are found in fresh fruits, vegetables, and whole grains.

There has to be a balance between the functions of Phase One liver detox and Phase Two or a backlog of toxins can occur which also damage tissues. In some cases, the chemical toxins modified by Phase One are more dangerous than the original if not dealt with by Phase Two. Researchers have discovered that your diet has a strong effect on liver detox and certain foods can help to balance Phase One and Phase Two.

## Improving Liver Detoxification

- Eat plenty of fresh fruits and vegetables, especially cruciferous vegetables like broccoli, cabbage, Brussel sprouts kale, and cauliflower.
- Eat a variety of orange, yellow, purple, and red-colored fruits and vegetables. Asparagus, watermelon, broccoli are good sources of glutathione, an important substance involved in liver detox. Papayas and avocados help the body to produce glutathione. Other sources are Brussels sprouts, cauliflower, broccoli, cabbage, kale, bok choy, cress, mustard, horseradish, turnips, rutabagas (swede), kohlrabi, red beets.
- Including bitter foods like dandelion greens, mustard greens, bitter melon, romaine lettuce can help in cleansing the liver.
- Use dill, caraway seeds, turmeric, garlic and onions in cooking
- Drink at 6 – 8 x 8 oz glasses of filtered water a day.
- Avoid alcohol, and junk food like lunch meats, pop, fried foods, etc.
- Take the herb silymarin (milk thistle), a potent antioxidant that protects the liver by increasing its ability to detoxify numerous toxic substances, including pesticides and heavy metals (lead, mercury, cadmium, arsenic). It also helps to regenerate liver cells.
- Make sure your bowels move at least twice a day and do a colon cleanse if you have never done one. Toxins from the bowel make the liver work harder and use up the nutrients that are needed to detoxify chemicals.
- Get some exercise. Your liver depends on good circulation to function efficiently.

Proper functioning of the liver's detoxification systems is very important for the prevention of cancer. Up to 90% of all cancers are thought to be due to the effects of environmental pollutants from food, water, and air, combined with deficiencies of the nutrients the body needs for detoxifying and immune system function. High levels of exposure to cancer-causing substances, together with slow detoxification enzymes, significantly increases susceptibility to cancer.

## Internally Produced Toxins

Incomplete digestion and intestinal stagnation cause internal toxicity that must be corrected. Much of the internal toxicity comes from these two problems. Undigested food is unhealthy to your large intestines (colon) and when coupled with intestinal stagnation (constipation - less than two bowel movements a day), autointoxication sets in, that is, internally produced toxins.

Undigested food in the colon tends to putrefy or ferment, then bacteria is formed, toxins are released and the integrity of the colon is altered. In addition, these toxins are absorbed through the bowel wall and pollute the rest of your body.

Some of these toxins released are phenol, indole, indican, cadaverine, sepsin, muscarine, and histidine. The liver detoxifies the body of these poisons, but if the liver becomes sluggish because of the continual overburden of toxins and/or disease, it will not be able to handle

these toxins efficiently, thus, the individual's state of health worsens leaving an open door to greater health problems.

Some of the ways to reduce or eliminate internal toxicity:

- Eat healthily and eat slowly. Chew your food well
- Take digestive enzymes with your meals.
- Eat right for your blood type. (Wrong foods become poisons.)
- Take good friendly bacteria like acidophilus bifidus. They help reduce gas and putrefaction in the bowel.

## Colon Detoxification

Every detoxification program begins with a colon detox because this is the organ that accumulates debris over weeks, months or years like deposits that can accumulate in arteries. There can be ten years of compacted fecal matter in the large intestines. This creates an unhealthy environment where bacteria, parasites, and toxins live or are held. This interferes with the proper functioning of the colon and also pollutes the whole body. Cleansing must take place here first.

A great colon detoxification program consists of:

Changing your diet from junk foods to a 75 to 80% raw diet, meaning lots of vegetables, daily portions of whole grains and beans, an ounce of raw nuts and seeds, some fruit and no dairy or flesh foods for the time you are doing a colon cleanse. A colon cleanse can be two weeks or two to three months in length depending on the circumstance.

The two-week program is usually intensive possibly involving 3-5 day water or raw vegetable juice fast. In this regime, colon cleanse products are taken twice a day, upon rising and upon retiring, away from meals at least two hours. The products usually consist of bentonite clay and psyllium fiber which draws out toxins and heavy metals from the body.

An herbal blood cleanser and an herbal anti-parasite formula are also taken at the same time. A good regime will also include probiotics or good friendly bacteria, taken before meals. Bad bacteria in the bowel outnumber good bacteria when we are toxic and not in good health.

This regime can be done in conjunction with colonic irrigations administered by a trained colonic hygienist. Colonics will remove wastes from the colon more efficiently and more rapidly than any other method. It usually takes 10-16 colonics over a two-month period to effectively clean out the colon. It is almost a must for individuals with intestinal disorders.

Those individuals who have never detoxified and are taking medications and/or are very weak are usually put on a three-month regime with no fasting involved. There is no such thing as good health without adequate detoxification, Jesus implied it in the scripture of this chapter.

## Fasting

Fasting means abstaining from food except for pure water. The Bible speaks multiple times of spiritual fasts. Spiritual fasting benefits both the spirit and the body while physical fasting

benefits mostly the body. It is best to do both. Therefore, during fasting, we can draw near to God as well as benefit from physical cleansing. As spiritual fasting makes one more sensitive to God and the things of God, physical fasting renders one more sensitive to the body and what enters in. Fasting produces cleansing of cells. As cells, organs, and tissues become clean, the body begins to desire clean, healthier foods. This is why fasting helps an individual transition to healthy foods. Fasting also produces self-control when it comes to quantity of foods eaten, therefore, it is a good way to begin a weight loss program.

Addictions to drugs such as alcohol, cocaine, nicotine, and caffeine are examples where fasting can dramatically reduce the withdrawal symptoms that prevent many people from becoming drug-free. Most people are surprised at how easy it is to quit smoking or drinking with the help of fasting.

Fasting can often be especially important where drugs or surgery have been recommended. When uterine fibroid tumors contribute to pain and excess bleeding, a hysterectomy, removal of the uterus, is often recommended. A proper fast will often dramatically reduce the size and effect of these tumors.

Fasting has relieved pain and inflammation in sufferers of arthritis, as well as those suffering from neck and back pain. As a matter of fact, fasting benefits most of those with chronic degenerative diseases, especially diabetics. Only those who are too weak or on many medications should not fast.

### **What Happens During a Fast?**

In the first two days of fasting, the blood sugar drops below 70mg/dl. In response liver glycogen is converted to glucose and released in the blood. This lasts for half a day and then the body's metabolism slows down. Glycogen is pulled from the muscles causing some weakness. The first two days are usually the hardest - headaches, dizziness, nausea, bad breath, glazed eyes, coated tongue, are the signs of the first stage of cleansing.

On day three to day seven, fats are broken down to sugar for fuel. The skin may become oily as rancid oils are removed from the body. Some people may break out on their skin at this time. This is when good cleansing happens, as stored toxins are released from the breakdown of fat. The appetite disappears or is reduced. The body is now in fast mode. The white blood cells are active in this phase so the immune system activity increases. The lungs and the lymphatic system begins to excrete yellow-colored mucous. Sinuses clog and then clear. Impacted feces in the bowel begin to loosen. The tongue is still coated.

From day 8 to day 15, stage three begins in the fast and detoxification continues. Increased energy and clear-minded is felt. Many feel better than they have in years. Cankers are common in this stage. Sore or stiff muscles occur due to toxin release.

Stage 4 is from day 16 to 30. There is more energy. Clarity of mind is felt. Healing becomes complete in the organs. The body works in the highest capacity for healing and repair. The lymphatic system is nearly clean. Memory and concentration improve.

In this last stage, stage 5, mucus on the bowel wall is loosed and the gallbladder discharges its waste in a heavy discharge of bile. A colonic or enema may help. You can see that fasting is extremely cleansing and healing.

## Detoxification during fasting

Depending on where the toxins and morbid matter have been retained in the body, they will start to produce various signs and symptoms as this waste is eliminated and passed off:

**Head/Brain:** headaches, dizziness, vertigo, wooziness, lightheadedness

**Nose, Sinuses:** sneezing, runny nose, itching, stinging, postnasal drip

**Throat:** soreness or constriction, hoarseness, scratchiness

**Lungs:** chest congestion, wheezing, phlegm discharges, foul breath odors

**Skin:** rashes, acne, pustules, excessive or abnormal sweating, strange body odors

**Stomach:** sour or nervous stomach, stomach cramping, belching, bad breath

**Liver:** sore eyes, bitter taste in the mouth, sallow complexion, pain or distension under the ribs on the right side.

**Gall Bladder:** colic, spasm, tenderness or pain underneath the liver area

**Intestines:** foul-smelling gas, cramping, diarrhea, spastic colon or irritable bowel

**Kidneys:** low back pain and weakness, fatigue; frequent urination, often urgent; strongly colored or smelling urine.

Generally, the more recently acquired toxins and accumulations of morbid matter will be the first to be passed off, followed by older and more long-standing ones, backtracking in reverse order of how it came in.

## Types of Fasts

Lemon water fast is the most powerful. A three day lemon water fast is equivalent to seven-day water fast.

In lemon water fast, the juice of one or two lemons is placed in about 64 to 80 ounces of pure water and drunk throughout the day. Some honey can be added if dizziness occurs. After three days of fasting, you gradually add your foods back, taking about two days to get back to your normal eating. The lemon and the liver are two best friends. Lemons have nutrients and enzymes that contribute to liver cleansing and repair.

A water fast is the next most powerful kind of fast, then juice fasting is third and easiest to do.

## Juice Fasting

This is the usual modern method for handling fasts of longer duration, where a deeper and more thorough cleansing and detoxification is desired. Fruit and vegetable juices often diluted 50/50 with pure water, alkalize the system and speed up detoxification while providing a base level of calories and nutrients to sustain energy. On the other hand, **ketosis**, or the body's digging into its own fat and energy reserves, isn't as intense. In addition, fruit and vegetable juices, properly chosen, can be therapeutic in many chronic and degenerative conditions, and aid the healing process.

In conclusion, fasting is the greatest method given by God to cleanse our body, as well as benefit our whole being.



# Chapter 14: Dietary Supplements

**“... You have been weighed in the balance and found deficient.”**

**Daniel 5:27**

The topsoil of the American farming land is deficient in minerals because, in commercial agriculture, they are not replacing all the minerals back in the soil. This means we need to take nutritional supplements to get all our nourishment. Even if the soil were rich in all nutrients many of us still need, for one reason or another, supplementation.

Most people living in urban, industrialized areas like America generally are deficient in one or more of the following nutrients: chromium, magnesium, manganese, MSM, silica, zinc, selenium, vitamin C, vitamin E, and omega 3 fatty acids simply because they consume commercial food and do not take supplements. Junk food and other processed foods do not have these nutrients in sufficient amounts. They tend to be found in fresh organic fruits and vegetables, raw nuts and seeds, beans and whole grains, and clean fish. They are found in the bran and in the unpeeled part of vegetables.

Today's health killers in Western civilization, especially the United States, are cardiovascular disease, cancer, diabetes, obesity, arthritis, immune-related problems, just to mention a few. All these can be prevented, eliminated or reduced if only people would rest, detoxify, switch to a healthy diet and take some supplements. Simple but difficult for the unwilling, especially if they have been brought up hearing that none of these things will help. Well, it is time to change because there is continual growing evidence that good nutrition and supplementation really keep us healthy. The proof is in the pudding. When people with the previously mentioned diseases change their diet for the better and practice moderation and balance in diet and lifestyle, they begin to heal.

## Vitamins and Minerals

Vitamins	Functions	Sources
<b>A</b>	Helps to fight infection; keeps glands, skin, gums healthy and maintains the respiratory and GI tract	Dark green leafy vegetables, carrots, cabbage, kale, leeks, broccoli, parsley, watercress, turnip greens, fresh or dried apricots, red peppers, fish and dairy products. Cabbage and broccoli are cruciferous vegetables that contain compounds called isothiocyanates. These are important compounds in cancer prevention. Cabbage also contains indole-3-carbinol, another anti-carcinogen
<b>B1 (thiamin)</b>	Aids in the promotion of proper nerve functioning, and helps with the digestion of carbohydrates by turning them into biological energy	Whole grain cereals, legumes, and nuts

<b>B2 (riboflavin)</b>	Necessary for maintaining the upkeep of the body's energy level.	Green leafy vegetables, fruits and dairy products such as milk, cheese, and yogurt
<b>B3 (niacin)</b>	Lowers cholesterol levels in the blood when they are very high and possibly protects against cardiovascular disease. Helps lower triglycerides and improve the overall lipid profile. Improves circulation. Dosages of 1000 – 3000mg a day have been used for correcting the lipid profile. Flush-free version is very good. Sustained release form works best but more taxing on the liver.	Cereal, yeast, legumes, fish, meat. Eat meats sparingly because of their high fat and cholesterol content.
<b>B6</b>	Needed for the breakdown of protein, necessary for maintaining and building of muscle tissue.	Vegetables, whole grains, bananas, fish and poultry.
<b>B12</b>	Necessary in the functioning of cells and forming and maintaining healthy nerve tissue.	Fish, poultry, spirulina, hydrilla. Also in the higher fat content foods such as eggs, meats, and meat products.
<b>FOLIC ACID (part of the B complex)</b>	Supports the immune system and the nervous system. Used in the treatment of senility, coronary artery disease, and peripheral vascular disease, and brain vascular disease. Necessary for the formation of red blood cells and thus aids in the prevention of anemia. Can aid in cervical cancer prevention. Also, extremely important in preventing the malformation of the nervous system in fetuses. Involved in many metabolic reactions necessary for proper growth.	Dark green leafy vegetables (broccoli, spinach, and romaine), and oranges. Brewers yeast, rice, and beans.
<b>BIOTIN</b>	Necessary for the formation of fatty acids, essential for the proper functioning of many bodily functions.	Organic corn, nutritional yeast, and mushrooms
<b>C (ascorbic acid)</b>	Prevents gingivitis and the bleeding of gums. Keeps the blood vessels strong and protects the vascular system. Helps in the healing of cuts and bruises.	All citrus fruits. Green vegetables, kale, leeks, turnip greens, broccoli, watercress, Brussel sprouts, tomatoes, and cabbage. Broccoli and cabbage are cruciferous vegetables that contain compounds called isothiocyanates, which are important in cancer prevention. Cabbage also contains indole-3-carbinol, another anti-carcinogen. Turnips are high in chlorophyll and folic acid.
<b>D</b>	Needed for the building and maintaining the teeth and bones. For the body to absorb calcium, vitamin D is necessary.	Fish, cod liver oil, butter, egg yolks, and organic milk. These foods are high in fats and

		cholesterol and should be reduced in your diet. Use the low-fat variety where possible.
<b>E</b>	Can possibly protect against heart disease. Aids in forming of red blood cells. Vitamin E is also utilized in forming muscle tissue and other body tissues. May also decrease breast tenderness and swelling that can occur in premenstrual syndrome. Thins the blood and can aid in alleviating leg cramps. Prevents cholesterol from sticking to the inside of your arteries.	Vegetable oils, especially peanut and wheat oils. Green leafy vegetables. Nuts, seeds, and beans. Whole wheat and brown rice. Seafood and poultry are other sources.
<b>K</b>	Necessary for normal blood clotting. There may possibly be a decreased factor in the blood-thinning ability of medication being taken for the thinning of the blood.	Broccoli, spinach, kale, Brussel sprouts, turnip greens, and other green leafy vegetables. Individuals on drugs for the prevention of blood clotting should discuss the use of the above foods with their doctor. (Due to the high vitamin K content of these foods, there may be increased bleeding.) Also, there may be a decreased factor in the blood-thinning ability of their medication.

<b>Minerals</b>	<b>Functions</b>	<b>Sources</b>
<b>CALCIUM</b>	Builds strong bones. Strengthens the heart muscle and is necessary for proper nerve function in the heart. Activates the enzymes that are necessary to convert the food we eat into energy. Also required for the clotting of blood.	Green leafy vegetables, organic milk, cheese and yogurt, hydrilla, red marine algae, blackstrap molasses.
<b>CHROMIUM</b>	Acts in conjunction with insulin to maintain normal glucose levels. May help lower high blood sugar in some individuals, as well as, improve the lipid profile.	Organic potatoes, whole grain cereals, and seafood.
<b>IRON</b>	Manufactures hemoglobin in the red blood cells. Hemoglobin carries oxygen in the red blood cells.	Red meat, fish, whole grain bread and cereals, blackstrap molasses, dried apricots, legumes.
<b>MANGANESE</b>	Aids in converting protein and fat to energy. Promotes normal bone growth. Important in sugar metabolism. Essential for the reproductive system, immune system, and nervous system health.	Broccoli, beans and grains, nuts and seeds, raisins, blueberries.
<b>MAGNESIUM</b>	Aids in regulating proper heart function. Releases the enzymes that promote body energy. Needed for proper bone growth.	Green leafy vegetables, whole-grain cereal, and bread. Most nuts are good sources, like

	Manufactures cells and genetic material.	almonds.
<b>POTASSIUM</b>	Works in conjunction with sodium in regulating body fluid balances. Plays a very important function in regulating the heartbeat. Also needed for proper nerve conduction. The body requires potassium so that muscles can contract.	Bananas, citrus fruits, and dried fruits; deep yellow vegetables. Potatoes, avocados, legumes, and milk are also excellent potassium sources.
<b>SELENIUM</b>	Acts in conjunction with vitamin E and is important in preventing the breakdown of cells.	Eggs, cereals and grains, mushrooms, garlic, poultry, and seafood.
<b>SODIUM</b>	A necessary element in maintaining body fluids.	Sodium is found in a great many foods. It is difficult to avoid too high an amount in our daily diet. Foods which are extremely high in sodium are salt-cured meats, chips, salted crackers, soy sauce and foods that are pickled in brine,
<b>ZINC</b>	Fights disease by helping to boost the immune system. It is found in more than 100 enzymes and proteins. These enzymes and proteins are the necessary components for digestion.	Wheat germ, wheat bran, and whole grains. Flax meal, sunflower seeds, pumpkin seeds, red meat, and poultry.

## RDA (Recommended Daily Allowance of Vitamins and Minerals)

The RDA represents the establishment of a nutritional norm for planning and assessing dietary intake. These are the levels of intake of essential nutrients considered to be adequate to meet the known needs of practically all healthy people.

These figures were first published in 1943 and have been updated and expanded as data became available.

When introducing the new revision of the RDA in 1974, Dr. Alfred E. Harper, then chairman of the Committee on Dietary Allowances, Food and Nutrition Board said "...However, requirements differ with age and body size. Among individuals of the same body size requirements differ owing to differences in genetic makeup, the physiologic state of individuals' growth rate, pregnancy, lactation, and sex. ..."

With this in mind, here are the tables as they stand at the moment:

### Fat-Soluble Vitamins

	Age	Energy	Protein	Vitamin A		Vitamin D		Vitamin E		Vitamin K
				IU	*ug RE	IU	*ug g	IU	*mg TE	*ug
Children	4-6	1,800	30/24	2,500	500	400	5	9	7	-/20
	7-	2,400/	36/28	3,300	500	40	5	10	7	-/30

	10	2,000				0				
Males	15-18	3,000	54/59	5,000	1,000	400	5	15	10	-/65
	19-24	3,000/ 2,900	54/58	5,000	1,000	400	5	15	10	-/70
	25-50	2,700	56/63	5,000	1,000	-	5	15	10	-/80
	50+	2,400	56/63	5,000	1,000	-	10	15	10	-/80
Females	15-18	2,100	48/44	4,000	800	400	5	12	8	-/55
	19-24	2,100	46/46	4,000	800	400	5	12	8	-/60
	25-50	2,000	46/50	4,000	800	-	5	12	8	-/65
	50+	1,800	46/50	4,000	800	-	10	12	8	-/65

The first figure refers to the old RDA listing while the second figure refers to the newer DRI listing.

### Water-Soluble Vitamins

	Age	Ascorbic Acid	Folacin/ Folate	Niacin	Riboflavin	Thiamine	Vitamin B6	Vitamin B12
		mg	mcg	mg	mg	mg	mg	mcg
Children	4-6	40/45	200/75	12	1.1	0.9	0.9/1.1	1.5/ 1.0
	7-10	40/45	300/100	16/13	1.2	1.2/1.0	1.2	2.0/ 1.4
Males	15-18	45/60	400/200	20	1.8	1.5	2.0	3.0/ 2.0
	19-24	45/60	400/200	20/19	1.8/1.7	1.5	2.0	3.0/ 2.0
	25-50	45/60	400/200	18/19	1.6/1.7	1.4/1.5	2.0	3.0/ 2.0
	50+	45/60	400/200	16/15	1.5/1.4	1.2	2.0	3.0/ 2.0
Females	15-18	45/60	400/180	14/15	1.4/1.3	1.1	2.0/1.5	3.0/ 2.0
	19-24	45/60	400/180	14/15	1.4/1.3	1.1	2.0/1.6	3.0/ 2.0
	25-50	45/60	400/180	13/15	1.2/1.3	1.0/1.1	2.0/1.6	3.0/ 2.0
	50+	45/60	400/180	12/13	1.1/1.2	1.0	2.0/1.6	3.0/ 2.0

The first figure refers to the old RDA listing while the second figure refers to the newer DRI listing.

### Minerals and others

	Age	Calcium	Phosphorous	Iodine	Iron	Magnesium	Zinc	Selenium	Fluoride
		mg	mg	ug	mg	mg	mg	*ug	*mg
Children	4-6	800	800/	80/90	10	200/130	10	-/20	-/1.1

			500						
	7-10	800	800	110/1 20	10	250	10	-/30	-/3.2
Males	15- 18	1200/ 1300	1200/ 1250	150	18/ 12	400/410	15	-/50	-/3.8
	19- 24	800/ 1000	800/ 700	140/1 50	10	350/400	15	-/70	-/3.8
	25- 50	800/ 1000	800/ 700	130/1 50	10	350/420	15	-/70	-/3.8
	50+	800/ 1200	800/ 700	110/1 50	10	350/420	15	-/70	-/2.9
Females	15- 18	1200/ 1300	1200/ 1250	115/1 50	18/ 15	300/360	15/ 12	-/50	-/3.1
	19- 24	800/ 1000	800/ 700	100/1 50	18/ 15	300/310	15/ 12	-/55	-/3.1
	25- 50	800/ 1000	800/ 700	100/1 50	18/ 15	300/320	15/ 12	-/55	-/3.1
	50+	800/ 1200	800/ 700	80/15 0	10	300/320	15/ 12	-/55	-/3.1

The first figure refers to the old RDA listing while the second figure refers to the newer DRI listing – age groups have also been changed on certain nutrients to range from 9-13, 14-18, 19-30, 31-50, 51-70 and 71+ - figures above merely for illustration and information.

Please be advised that these tables must not be used to treat or diagnose. They are merely brought to you for information, in order to give you a better understanding of the dynamics involved, and the changing importance of vitamins and nutrition, as well as their importance in maintaining optimum health.

The World Health Organization (WHO) has a recommended daily allowance of calcium for healthy adults at 500mg. Our school is in agreement with this amount because in nature we do not see any foods having anywhere near 1000mg or 1200mg of calcium in a serving or even in a double serving.

## Vitamin Toxicity

Vitamin	Overdose Level	Symptoms
<b>Vitamin A</b>	100,000 units/day	Irritability, fatigue, insomnia, painful bones and joints, abnormal bone growth, loss of hair, itchy skin, anorexia, decreased blood clotting time, birth defects, abortions. In children: malaise and fatigue, desquamation of the skin and mucous membranes, abnormal growth, pain and tenderness in the long bones. Pseudotumour cerebri, manifesting as headache and irritability
<b>Vitamin E</b>	Toxicity has been seen with 1200 IU	Possible increase in blood pressure (increase in increments of 100 IU every week to build up), gas, diarrhea, palpitations, nausea
<b>Vitamin D</b>	4000-10,000IU /day	Anorexia, nausea, diarrhea, muscular weakness, joint pains, calcification of soft tissues, resorption of bone. In children: weakness, lethargy, anorexia and constipation, and chronic overdosage results in hypercalcemia, nephrocalcinosis and eventually azotemia
<b>Vitamin K3 (menadione)</b>	Not established	Possible thrombosis, vomiting, porphyria in pregnancy can cause jaundice in the newborn, block the effects of oral

		anticoagulants.
<b>Vitamin K1 (phytonadione)</b>	Not considered toxic	
<b>Vitamin K2 (menaquinone)</b>	Not considered toxic	

#### POSSIBLE TOXICITIES

<b>Vitamin C</b>	No known toxicity. Can take to bowel tolerance. Usually, 5000 mg can cause loose stools. Take buffered form if experiencing acidity.
<b>B Complex:</b>	
<b>Niacin</b>	A dosage of 2000 mg a day may affect the liver.
<b>B6</b>	2000 mg to 6000 mg a day can cause nervous system problems in some.
<b>PABA (para-aminobenzoic acid)</b>	8 to 48 grams daily can cause toxicity. Malaise, fever, liver disease, lowered white cell count.
<b>Choline/Inositol</b>	No specific dosage is given but has been reported to cause dizziness, nausea, diarrhea, depression, and a fishy odor.
<b>B1, B2, B5, Biotin, Bioflavonoids, B12, Folic Acid</b>	No known toxicity.

## Mineral Toxicity

### Calcium

Do not take if you have allergies to calcium or antacids, high blood calcium levels, or sarcoidosis.

Consult your doctor if you have kidney disease, chronic constipation, colitis, diarrhea, stomach or intestinal bleeding, irregular heartbeat, or heart problems or high blood pressure for which you are taking a calcium channel blocker.

Excessive high intakes of calcium can interfere with the absorption of zinc, magnesium, iron, phosphorus and other nutrients. When calcium in the body is too high compared to magnesium, excess calcium may be deposited in the soft tissues. This may result in calcium deposits in places such as the kidneys, the arteries, and the heart.

7.5 grams and over can cause stones.

Be sure to take calcium according to urine pH. A pH below 6.4 can use coral calcium. Above 6.5 can use calcium lactate. Neutral forms of calcium are calcium citrate, calcium phosphate, and calcium gluconate.

Signs of toxicity can also include confusion, slow or irregular heartbeat, bone or muscle pain, nausea, and vomiting.

### Iron

Toxicity is rare, but there is potential for iron toxicity because very little iron is excreted from

the body. Thus, iron can accumulate in body tissues and organs when normal storage sites are full. Do not exceed 75 mg.

Doses of iron prescribed for iron deficiency anemia in adults are associated with constipation, nausea, vomiting, and diarrhea, especially when the supplements are taken on an empty stomach.

### **Magnesium**

Magnesium toxicity is not a concern for most healthy people. However, people with kidney disease may develop toxicity. This is because the kidneys are responsible for regulating the level of magnesium in the blood. Symptoms of magnesium toxicity include weakness, nausea, and malaise (general discomfort and weakness or an "out-of-sorts" feeling).

Three to five grams can cause loose stools. Nine grams cause toxicity.

Very rarely symptoms of excess include flushing of the skin, low blood pressure, thirst and shallow breathing.

### **Zinc**

Zinc is considered to be non-toxic, although very high doses may cause nausea, vomiting, and diarrhea. 2000 mg can cause toxicity.

### **Boron**

Boron may be toxic in doses above 100 mg. Symptoms of toxicity include a red rash, vomiting, diarrhea, reduced circulation, shock and then coma.

### **Cobalt**

Excessive amounts of cobalt can cause nausea and damage the heart, kidneys, and nerves.

### **Chromium**

Toxicity is rare as less than 10% of the chromium taken into the body is actually absorbed. Some people experience troubling dreams when taking chromium supplements.

### **Copper**

Intake in excess of 10 mg can cause vomiting, diarrhea, muscular pain, depression, irritability, nervousness, and dementia. Toxicity is low and very rare.

Zinc and copper should not be taken at the same time (take them some hours apart) unless in the form of a well-balanced multivitamin and mineral supplement.

### **Germanium**

2.1 grams and above cause toxicity. Skin rash and loose stools are the symptoms.

### **Iodine**

Iodine is toxic in high doses and may aggravate or cause acne. Large doses may interfere with hormone functioning. 1000 mcg can be toxic.



## **Manganese**

Toxicity is rare, but its symptoms may include lethargy, involuntary movements, posture problems and eventually coma. Manganese is one of the least toxic trace minerals as it is readily excreted from the body.

## **Molybdenum**

Molybdenum is toxic in doses higher than 10 to 15 mg. It can cause gout-like symptoms. A high intake of copper or ferrous sulfate iron can decrease the absorption of molybdenum by the body.

## **Potassium**

Toxicity exceeds 18 grams a day. Symptoms of overdose are muscle fatigue, irregular heartbeat, and possible heart failure.

## **Phosphorus**

Toxicity may occur with dosages or food intake above 1g per day. It may cause diarrhea, calcification of the organs and soft tissues and prevent the absorption of calcium and magnesium. Long term imbalances between calcium and phosphorus can cause osteoporosis.

## **Selenium**

Selenium is toxic in small doses so beware of blackened fingernails and or a garlic-like odor on skin and breath. 2400 mcg to 3000 mcg can cause toxicity.

## **Vanadium**

Vanadium is very toxic and high quantities are linked to manic depression.

# **Special Dietary Supplements**

## **Alpha Lipoic Acid**

Alpha-lipoic acid is an antioxidant that is made by the body and is found in every cell, where it helps turn glucose into energy. Antioxidants are substances that attack "free radicals," waste products created when the body turns food into energy. Free radicals cause harmful chemical reactions that can damage cells in the body, making it harder for the body to fight off infections. They also damage organs and tissues.

Unlike other antioxidants, which work only in water (such as vitamin C) or fatty tissues (such as vitamin E), alpha-lipoic acid is both fat- and water-soluble. That means it can work throughout the body. In addition, antioxidants are depleted as they attack free radicals, but evidence suggests alpha-lipoic acid may help regenerate these other antioxidants and make them active again.

Alpha-lipoic acid can lower blood sugar levels, and its ability to kill free radicals may help reduce pain, burning, itching, tingling, and numbness in people who have nerve damage caused by diabetes (called peripheral neuropathy). Alpha-lipoic acid has been used for years for this purpose in Europe, and one study found that intravenous (IV) doses of alpha-lipoic acid helped reduce symptoms. In supplemental form, practitioners have recommended 300 to 600 mg daily

for diabetics.

This supplement, along with CoQ10 and milk thistle, have improved liver function in many with hepatitis and other liver conditions. Nature always has an answer.

## **CoEnzymeQ10**

Coenzyme Q10 is a fat-soluble nutrient also known as CoQ10, or ubiquinone. It is primarily found in the mitochondria, which are small bodies within cells that produce energy for the body. Apart from the important process that provides energy, CoQ10 also stabilizes cell membranes and acts as an antioxidant (a substance that reduces the damage that results from oxygen, such as is caused by free radicals).

This dietary supplement is one of the best to take. I take 100 mg each day and my gums are healthier from periodontal disease and my energy levels have picked up quite a bit.

I generally recommend anyone with a history of cardiovascular disease to take 200-300mg a day for healthy cardiovascular support. They generally begin to breathe better and have more energy. CoQ10 levels decrease with age.

Note: Ubiquinol is a better-absorbed form of CoQ10.

## **Lecithin**

Lecithin is derived from soy oil and contains phospholipids. It breaks up fats and cholesterol in the body. It is excellent for a healthy heart. It may help keep fat deposits from building in the arteries. It is a rich source of gamma-linolenic acid (GLA) and has the highest phosphatide concentrate available (98% or more). It helps the body utilize vitamins A, D, E, and K and is excellent for memory, concentration, and recall. It cleanses the liver and kidneys and helps the body absorb nutrients. Lecithin is an essential component in the cell membrane. One of the benefits of lecithin is to maintain the integrity of cell membranes, helping facilitate the movement of fluids inside and outside the cell.

The following are some of the many health benefits that lecithin is said to have:

- Improve memory
- Normalize reproductive health
- Enhance liver and heart health
- Cardiovascular health
- Fat transport and fat metabolism
- Lower risks of cancer
- Increase physical performance
- Healthy hair and skin
- Cell communication
- Treatment for gallstones
- Improvement in memory, learning and reaction time
- Relief of arthritis

## MSM

Methylsulfonylmethane is a chemical compound (an organic sulfur compound) that is required for the development and maintenance of connective and another type of tissues. MSM is found throughout our body in nails, skin, tissues, etc. (MSM is an important building block for hair and tissues.)

In past few years the dietary supplement methylsulfonylmethane (MSM) has become very popular among people suffering from various problems such as different types of allergies, inflammations, heartburn, fibromyalgia, arthritis rhinitis, hair problems (those with below-normal hair keratin levels), joint pain, parasitic infection, irritable bowel syndrome, carpal tunnel syndrome and also skin and nail-related issues. MSM is also believed to be useful in strengthening joints and balancing blood flow as it helps increase blood flow, decreases muscle contraction and mobility-related problems.

In many cases of arthritis, MSM, in combination with other herbs and medicines, have proven to be the best remedy available. Patients have found it more than effective for their condition.

MSM, in combination with glucosamine and other herbs, has worked for those suffering from joint pain. It also may have an important role to play in the treatment of cancer (it helps reduce the growth of some types of carcinogenetic cells) and with seasonal allergic rhinitis (SAR).

This is a wonderful detoxifier and the best supplement for healthy, vibrant skin. It should be taken by all. For adults, 1000 to 3000 mg is a good dose. Some take a lot more for their conditions.

It is naturally found in broccoli and other vegetables, but easily perishable when food is heated.

## Phosphatidylserine

Phosphatidylserine is a naturally-occurring molecule important for brain function. Although the body can make its own phosphatidylserine, most of the nutrient is obtained through the diet. Phosphatidylserine is also available in supplement form. Phosphatidylserine supplements are sometimes claimed to be beneficial for the following conditions:

- Age-related cognitive decline (problems in mental functioning, such as memory loss)
- Alzheimer's disease or other forms of dementia
- Attention deficit hyperactivity disorder (ADHD)
- Depression

Phosphatidylserine is also used for improving mental functioning in young people and improving athletic performance.

Very preliminary research suggests that phosphatidylserine may be beneficial for age-related cognitive decline and for Alzheimer's disease.

Phosphatidylserine is a phospholipid, a molecule that is used in cell membranes in the human body. Phosphatidylserine is abundant in the human brain and is important for a variety of different functions and processes in the brain.

It is not known exactly how phosphatidylserine supplementation works for Alzheimer's disease or other uses, although it is thought that phosphatidylserine levels may decline with age and with certain medical conditions (such as Alzheimer's).

Typically 100 mg for adults is taken once to twice a day. It is derived from soy.

## Weight Management

Maintaining weight comes much easier when we live a healthy and moderate lifestyle. I will discuss how this can be done, but first, we need to look at the Body Mass Index as a guide.

The medical criteria for obesity are determined by a formula called the **Body Mass Index (BMI)**, defined as your weight in kilograms divided by your height in meters squared ( $BMI = kg/m^2$ ). A BMI of 19 to 24.9 is considered a "normal" weight. A BMI of 25 to 29.9 is considered overweight and 30 or above is considered obese. The Body Mass Index is not perfect. Muscular individuals, especially those who are short in stature, will have a tendency to score higher than they should. We also normally tend to exchange muscle weight for fat as we get older. (See chart, adjusting for age, below). BMI is a very good indicator of where we are in relation to where we should be.

Note: 1 kilogram=2.2 lb and 1 meter is 36 inches

Below is the official classification of the Body Mass Index from the WHO	
Meaning	BMI
Normal weight	19–24.9
Overweight	25–29.9
Obesity I	30–34.9
Obesity II	35–39.9
Obesity III	40+

Below are the values for normal BMI adjusted for age	
Age	BMI
19-24	19-24
25-34	20-25
35-44	21-26
45-54	22-27
55-64	23-28
65+	24-29

Green = Underweight • Black = Normal • Orange = Overweight • Red = Obese

Height	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
Weight																									
100 lbs.	20	19	18	18	17	17	16	16	15	15	14	14	14	13	13	12	12	12	12	11	11	11	10	10	10
105 lbs.	21	20	19	19	18	17	17	16	16	16	15	15	14	14	13	13	13	12	12	12	12	11	11	11	10
110 lbs.	21	21	20	19	19	18	18	17	17	16	16	15	15	15	14	14	13	13	13	12	12	12	12	11	11

115 lbs.	22	22	21	20	20	19	19	18	17	17	17	16	16	15	15	14	14	14	13	13	13	12	12	12	11
120 lbs.	23	23	22	21	21	20	19	19	18	18	17	17	16	16	15	15	15	14	14	14	13	13	13	12	12
125 lbs.	24	24	23	22	21	21	20	20	19	18	18	17	17	16	16	16	15	15	14	14	14	13	13	13	12
130 lbs.	25	25	24	23	22	22	21	20	20	19	19	18	18	17	17	16	16	15	15	15	14	14	14	13	13
135 lbs.	26	26	25	24	23	22	22	21	21	20	19	19	18	18	17	17	16	16	16	15	15	14	14	14	13
140 lbs.	27	26	26	25	24	23	23	22	21	21	20	20	19	18	18	17	17	17	16	16	15	15	15	14	14
145 lbs.	28	27	27	26	25	24	23	23	22	21	21	20	20	19	19	18	18	17	17	16	16	16	15	15	14
150 lbs.	29	28	27	27	26	25	24	23	23	22	22	21	20	20	19	19	18	18	17	17	16	16	16	15	15
155 lbs.	30	29	28	27	27	26	25	24	24	23	22	22	21	20	20	19	19	18	18	17	17	17	16	16	15
160 lbs.	31	30	29	28	27	27	26	25	24	24	23	22	22	21	21	20	19	19	18	18	18	17	17	16	16
165 lbs.	32	31	30	29	28	27	27	26	25	24	24	23	22	22	21	21	20	20	19	19	18	18	17	17	16
170 lbs.	33	32	31	30	29	28	27	27	26	25	24	24	23	22	22	21	21	20	20	19	19	18	18	17	17
175 lbs.	34	33	32	31	30	29	28	27	27	26	25	24	24	23	22	22	21	21	20	20	19	19	18	18	17
180 lbs.	35	34	33	32	31	30	29	28	27	27	26	25	24	24	23	22	22	21	21	20	20	19	19	18	18
185 lbs.	36	35	34	33	32	31	30	29	28	27	27	26	25	24	24	23	23	22	21	21	20	20	19	19	18
190 lbs.	37	36	35	34	33	32	31	30	29	28	27	26	26	25	24	24	23	23	22	21	21	20	20	19	19
195 lbs.	38	37	36	35	33	32	31	31	30	29	28	27	26	26	25	24	24	23	23	22	21	21	20	20	19
200 lbs.	39	38	37	35	34	33	32	31	30	30	29	28	27	26	26	25	24	24	23	23	22	21	21	20	20
205 lbs.	40	39	37	36	35	34	33	32	31	30	29	29	28	27	26	26	25	24	24	23	23	22	21	21	20
210	41	40	38	37	36	35	34	33	32	31	30	29	28	28	27	26	26	25	24	24	23	23	22	21	21

<b>lbs.</b>																									
<b>215 lbs.</b>	42	41	39	38	37	36	35	34	33	32	31	30	29	28	28	27	26	25	25	24	24	23	22	22	21
<b>220 lbs.</b>	43	42	40	39	38	37	36	34	33	32	32	31	30	29	28	27	27	26	25	25	24	24	23	22	22
<b>225 lbs.</b>	44	43	41	40	39	37	36	35	34	33	32	31	31	30	29	28	27	27	26	25	25	24	24	23	22
<b>230 lbs.</b>	45	43	42	41	39	38	37	36	35	34	33	32	31	30	30	29	28	27	27	26	25	25	24	23	23
<b>235 lbs.</b>	46	44	43	42	40	39	38	37	36	35	34	33	32	31	30	29	29	28	27	26	26	25	25	24	23
<b>240 lbs.</b>	47	45	44	43	41	40	39	38	36	35	34	33	33	32	31	30	29	28	28	27	26	26	25	24	24
<b>245 lbs.</b>	48	46	45	43	42	41	40	38	37	36	35	34	33	32	31	31	30	29	28	28	27	26	26	25	24
<b>250 lbs.</b>	49	47	46	44	43	42	40	39	38	37	36	35	34	33	32	31	30	30	29	28	27	27	26	26	25
<b>255 lbs.</b>	50	48	47	45	44	42	41	40	39	38	37	36	35	34	33	32	31	30	29	29	28	27	27	26	25
<b>260 lbs.</b>	51	49	48	46	45	43	42	41	40	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26
<b>265 lbs.</b>	52	50	48	47	45	44	43	42	40	39	38	37	36	35	34	33	32	31	31	30	29	28	28	27	26
<b>270 lbs.</b>	53	51	49	48	46	45	44	42	41	40	39	38	37	36	35	34	33	32	31	30	30	29	28	28	27
<b>275 lbs.</b>	54	52	50	49	47	46	44	43	42	41	39	38	37	36	35	34	33	33	32	31	30	29	29	28	27

If you have figured out your BMI and need to optimize your weight, here is how to do it.

In order to lose weight the conventional way, you must create a calorie deficit. Every 3,500 calories are equivalent to one pound. So, if you cut back 500 calories a day you should lose about one pound per week. That said, if you exercise to burn off 500 calories a day you should lose approximately one pound per week. So conventionally, by cutting calories and burning calories through daily exercise, you can lose weight. This is practical for many individuals, but the best way to optimize your health and weight is to make long-lasting dietary and lifestyle changes.

## Keep in mind these facts when going on a reducing diet:

Daily Reference Values (DRV)

Food Component	DRV	Calculation
Fat	65g	30% of calories (10-20% is best)
Saturated fat	20g	10% of calories
Cholesterol	300mg	same regardless of calories
Total Carbohydrates	300g	60% of calories (70-80% for most is best)
Fiber	25g	11.5g per 1000 calories
Protein	50g	10% of calories
Sodium	2400mg	same regardless of cal.
Potassium	3500mg	same regardless of cal.

Note: 0.36 grams of protein per pound of bodyweight is the ideal way to calculate protein need.

**By following** the Genesis Chapter One Creation Health Protocol, as outlined from the beginning of this book, you can optimize your health and reach an optimal weight for your body height, age and build. Let's review it.

## Genesis Health Protocol Review

### Chapter One

Improve the quality of the air you breathe in each day by spending time outdoors in green areas. Purchase an air ionizer for your home, if necessary, in order to purify the air coming into your home. Do deep breathing exercises early in the morning or late at night, to clean your lungs and blood. Follow the other directions in chapter one.

### Chapter Two

Drink 6 to 8 glasses of pure filtered water, which has reacted with a hydrogen water stick for alkalinity, antioxidant potential, and hydrogen content. Units that transform water by electrolysis are also good. Drink in between meals and not with meals. This compromises digestion. Remember, water is foundational to health. It is a great detoxifier and transporter of nutrients.

Measure your urine pH often. It should be between 6.4 and 7.2 between the hours of 10:30 am and 1:30 pm. This is when urine pH is most alkaline. Water and fresh raw fruits and vegetables are the best way to keep the pH where it should be. Disease thrives in an acid medium.

### Chapter Three

Spend at least 20 to 30 minutes a day in natural sunlight. It is healthy for your glands and bones, your mental and emotional health. Purchase full spectrum lighting for your home, if necessary.

## Chapter Four

Eat plenty of green non-starchy vegetables daily, at least six types. This is the first category of solid food that you are to eat the most. Non-starchy vegetables are low in calories. Best raw.

## Chapter Five

Eat beans and grains daily. The rule to help avoid too many calories is to consume no more than your fist-size of starchy foods per meal. To keep your weight down, do not always have a starch food for dinner.

## Chapter Six

One ounce of raw nuts and seeds, preferably daily, with breakfast or snack will provide good fats, protein, and minerals that will sustain you.

## Chapter Seven

Have at least two fruits daily. They provide energy, water, and plenty of nutrients. Keep it to two fruits if you are trying to lose weight.

## Chapter Eight

If you are not vegetarian, eat white fish, wild salmon or other clean fish two to three times a week, preferably for dinner. Not after 6:00 or 7:00 pm.

## Chapter Nine

Consume chicken or turkey breast twice a week, preferably at dinner. Vegetarians use beans or other vegetarian proteins. Eggs once a week for breakfast. Eat for your blood type and body type. Blood type A and AB are vegetarian. Blood type B and O can eat flesh foods. Type O should avoid dairy and wheat.

## Chapter Ten

For blood type O and B individuals, you may have red meat once a week in the form of lamb, veal, venison, goat, or beef. Have any of these with vegetables, not with starches, in order to optimize digestion.

***Here are the food combining rules:***

<b>Food Groups</b>	<b>Proteins</b>	<b>Fats</b>	<b>Starches</b>	<b>Vegetables</b>	<b>Sweet Fruits</b>	<b>Acid Fruits</b>
<b>Proteins</b>	Good	Poor	Poor	Good	Poor	Fair
<b>Fats</b>	Poor	Good	Fair	Good	Fair	Fair
<b>Starches</b>	Poor	Good	Good	Fair	Fair	Poor
<b>Vegetables</b>	Good	Good	Good	Good	Poor	Poor
<b>Sweet Fruits</b>	Poor	Fair	Poor	Good	Good	Poor
<b>Acid Fruits</b>	Fair	Fair	Poor	Fair	Poor	Good



Proteins	Fats	Starches	Vegetables	Sweet Fruits	Acid-fruits
Nuts Seeds	Oils	Whole Cereals	Leafy Green Vegetables	Bananas	Grapes, Pineapple
Soya-Beans	Vanaspathi	Peas	Sprouted Seeds	Figs	Pears, Apples
Milk Yogurt	Butter	Beans	Cabbage, Cauliflower	Custard Apples	Peaches, Apricots
Cheese	Margarine	Lentils	Broccoli	Dry Fruits	Strawberries, Raspberries
Eggs Poultry	Ghee	Potatoes	Green Peas Celery	Dates	Limes, Lemons
Meat Fish	Paneer	Rice	Tomatoes	Prunes	Plums Guavas
Kidney-Beans	Cream	Noodles	Onions	Raisins	Grapefruit, Oranges

### Chapter 11

Spend time outside walking on grass without your shoes for ten minutes or more several times a week when possible. Purchase devices that reduce electromagnetic field pollution from cell phones, TV, computers, any electronics. This pollution is linked to cancer and other diseases. Exercise several times a week. Learn to get enough rest and relaxation. Do not go to sleep with a full stomach. Eat three hours before bedtime.

### Chapter 12

Use dandelion root herb to detoxify every spring.

### Chapter 13

Live a fasted life. Do a three-day or longer fast, once in the spring and once in the fall, to detoxify. Remember, toxins are held in fat. When toxins are released you lose the fat with them.

### Chapter 14

Dietary supplements are very useful. Those beneficial for weight loss and weight maintenance are:

Kelp: Nourishes the thyroid gland that regulates metabolism. This is an aquatic plant that provides trace minerals that land plants do not.

Spirulina: A super green that is high in protein and minerals. Helps sustain the dieter with strength and energy.

Whey Protein: Can be used to replace a meal or just supplement protein as needed. Helps maintain blood sugar and energy levels while dieting.

Citramax: Contains an herb constituent that helps curb appetite and minimize sugars from

converting to fat. Taken sixty minutes before a meal.

CLA: Conjugated linoleic acid is an omega-6 fatty acid that burns brown fat (stored fat). Usually taken one hour before meals. Three 800 mg softgels twice a day.

Relora: An herbal supplement that supports adrenal function and energy levels. It helps insomnia and aids in appetite suppression.

## Conclusion

After having read this book I hope that you, like many fellow readers, will apply the information so that you may experience a greater level of health than ever before. You can start making changes a little at a time. You do not have to do it all at once. Do it chapter by chapter and, by all means, investigate each topic of natural health and nutrition using other sources, if need be. It is time that we experience optimal health.

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