Comprehensive Wellness Solutions
865-226-9484
info@comprehensivewellnesssolutions.com

Client: Test Client
Session Date: 8/20/2018

Nature's Sunshine Wellness Assessment

This Nature's Sunshine Wellness assessment will cover the following items:

The enzyme, probiotic, and vitamin that your body is asking for.
Up to 5 Basic supplements your body is asking for.
The system pack your body is asking for.
Up to 2 weight management items your body is asking for.
Up to 2 Essential Oils your body is asking for.
Up to 3 Bach Flowers and 1 Flower essence from Nature's Sunshine that your body is asking for.

It will also include the following stressors:

Up to 5 Heavy Metals, Chemicals/Pesticides and Household Toxins
25 Food Stressors your body is saying to avoid.

Please See notes in each section for additional information.

Your Wellness Partner is:

_____

Contact Information is:

You do not have to have ever eaten or be eating any ingredient for it to appear on this list.
Please avoid as many items as possible for the next 30 days.

Pilsner Beer -25.88	Citrus Red No.2 -24.31	Soy Cheese -23.79
Mycoprotein -22.84	EDTA -22.70	Bulgur Wheat -21.68
Pine Nut -20.80	Psyllium Seed -18.73	Sheep Cheese -18.41
Pheasant -18.15	High Fructose Corn Syrup -17.97	Asparagus -17.68
Molasses -16.99	Rice, White -16.82	Pimento -16.61
Rabbit -16.53	Frozen Yogurt -16.29	Pecans -16.29
Black Olive -16.28	Pike -16.22	Coffee - Decaffeinated -16.15
Black Bass -16.04	Vanilla -15.72	Tarragon -15.72
Cottage Cheese -15.68		

Explanation of Food Stressors

This Food Biosurvey records your body's responses to 485 food VSIs (Virtual Stimulus Items). Each VSI is a computer signature that has been linked to, and represents a particular food. Your response to each food VSI is scored with a negative number and your most extreme responses will be shown on this report per section. Negative responses are referred to as biological aversion to the item.

Even though this is NOT a food allergy test, you may wish to avoid those foods whose VSIs you have a negative response to.

Please review the following list to see if you or your family including when you were younger and parents are being or are now being exposed to the item. Please make a note and let your Wellness Partner aware. If you are in contact with the item daily it is suggested to avoid or to take appropriate precautions when in contact with the item.

Heavy Metals

-33.16 **Tantalum**

Tantalum formerly tantalium is a chemical element in the periodic table that has the symbol Ta and atomic number 73. A rare, hard, blue-gray, lustrous, transition metal, tantalum is highly corrosion-resistant and occurs in the mineral tantalite.

Tantalum is dark, dense, ductile, very hard, easily fabricated, and highly conductive of heat and electricity. The metal is renowned for its resistance to corrosion by acids; in fact, at temperatures below 150 °C tantalum is almost completely immune to attack by the normally aggressive aqua regia. It can be dissolved with hydrofluoric acid or acidic solutions containing the fluoride ion and sulfur trioxide, as well as with a solution of potassium hydroxide. Tantalum's high melting point of 3017 °C (boiling point 5458 °C) is exceeded only by tungsten and rhenium for metals, and carbon.

The major use for tantalum, as the metal powder, is in the production of electronic components, mainly capacitors and some high-end audio-grade resistors. Tantalum electrolytic capacitors exploit the tendency of tantalum to form a protective oxide surface layer, using tantalum powder, pressed into a pellet shape, as one "plate" of the capacitor. Because the dielectric layer can be thinner than the similar layer in, i.e., an aluminium electrolytic capacitor, a high capacitance can be achieved in a small volume. Because of the size and weight advantages, tantalum capacitors are attractive for portable telephones, pagers, personal computers, and automotive electronics.

Tantalum is also used to produce a variety of alloys that have high melting points, are strong and have good ductility. Alloyed with other metals, it is used in making carbide tools for metalworking equipment and in the production of superalloys for jet engine components, chemical process equipment, nuclear reactors, and missile parts. Because of its ductility, tantalum can be drawn into fine wires or filaments, which are used for evaporating metals such as aluminium.

Because it resists attack by body fluids and is nonirritating, tantalum is widely used in making surgical instruments and implants. The oxide is used to make special high refractive index glass for camera lenses. The metal is also used to make vacuum furnace parts.

Tantalum ores are mined in Ethiopia, Australia, Brazil, Egypt, Canada, the Democratic Republic of the Congo, Mozambique, Nigeria, Portugal, Malaysia and Thailand. Tantalite is largely found mixed with columbite in an ore called coltan. Ethical questions have been raised about human rights and endangered wildlife, due to the exploitation of resources in the conflict regions of the Congo.

Compounds containing tantalum are rarely encountered, and the metal does not normally cause problems in the laboratory, but it should still be handled with care, taking the usual laboratory precautions. There is some evidence that tantalum compounds can cause tumors, and its metal dust is a fire and explosion hazard.

-29.52 **Thulium**

Thulium is a chemical element that has the symbol Tm and atomic number 69. A lanthanide element, thulium is the least abundant of the rare earths. It is an easily workable metal with a bright silvery-gray luster and can be cut by a knife. It has some corrosion resistance in dry air and good ductility. Naturally occurring thulium is made entirely of the stable isotope Tm-169.

Thulium has been used to create laser light but high production costs have prevented other commercial uses from being developed. Other applications, real and potential:
- When stable thulium (Tm-169) is bombarded in a nuclear reactor it can later serve as a radiation source in portable x-ray devices.
- The unstable isotope Tm-171 could possibly be used as an energy source.
- Tm-169 has potential use in ceramic magnetic materials called ferrites, which are used in microwave equipment.

Discovered in 1879, Thulium was so rare that only one of the early workers had enough of it to purify sufficiently to actually see its green color. The first researcher to obtain thulium nearly pure was Charles James about 1911.

The element is never found in nature in pure form, but it is found in small quantities in minerals with other rare earths. It is principally extracted from monazite (~0.007% thulium) ores found in river sands through ion-exchange. Newer ion-exchange and solvent extraction techniques have led to easier separation of the rare earths, which has yielded much lower costs for thulium production.

The principal source today are the ion adsorption clays of southern China. In the versions of these, where about two-thirds of the total rare earth content is yttrium, thulium is about 0.5% (or about tied with lutetium for rarity). None of thulium's compounds are commercially important.

Thulium has a low-to-moderate acute toxic rating and should be handled with care. Metallic thulium in dust form presents a fire and explosion hazard.

-22.63 Samarium

Samarium is a chemical element that has the symbol Sm and atomic number 62.

Samarium is a rare earth metal, with a bright silver luster, that is reasonably stable in air; igniting in air at 150 °C. Even with long-term storage under mineral oil, samarium is gradually oxidized, with a grayish-yellow powder of the oxide-hydroxide being formed. Three crystal modifications of the metal also exist, with transformations at 734 and 922 °C.

Uses of Samarium include:
- Carbon-arc lighting for the motion picture industry (together with other rare earth metals).
- Doping CaF2 crystals for use in optical masers or lasers.
- As a neutron absorber in nuclear reactors.
- For alloys and headphones.

Samarium-Cobalt magnets; SmCo5 and Sm2Co17 are used in making permanent magnet materials that have high resistance to demagnetization when compared to other permanent magnet materials. These materials have high coercivities and intrinsic coercivities. Samarium-cobalt combinations have recently found use in high-end magnetic pickups for guitars and related musical instruments.

- Samarium(II) iodide is used as a chemical reagent in organic synthesis, for example in the Barbier reaction.
- Samarium oxide is used in optical glass to absorb infrared light.
- Samarium compounds act as sensitizers for phosphors excited in the infrared.
- Samarium oxide is a catalyst for the dehydration and dehydrogenation of ethanol.
- Radioactive Samarium-153 is used in medicine to treat the severe pain associated with cancers that have spread to bone. The drug is called "Quadramet".

Samarium has no known biological role, but is said to stimulate the metabolism.

Samarium is never found free in nature, but, like other rare earth elements, is contained in many minerals, including monazite, bastnasite and samarskite; monazite (in which it occurs up to an extent of 2.8%) and bastnasite are also used as commercial sources. Misch metal containing about 1% of samarium has long been used, but it was not until recent years that relatively pure samarium has been isolated through ion exchange processes, solvent extraction techniques, and electrochemical deposition. The metal is often prepared by electrolysis of a molten mixture of samarium(III) chloride with sodium chloride or calcium chloride. Samarium can also be obtained by reducing its oxide with lanthanum.

Naturally occurring samarium is composed of 4 stable isotopes, 144Sm, 150Sm, 152Sm and 154Sm, and 3 extremely long-lived radioisotopes, 147Sm (1.06×1011y), 148Sm (7×1015y) and 149Sm (>2×1015y), with 152Sm being the most abundant (26.75% natural abundance).

151Sm has a halflife of 90 years, and 145Sm has a halflife of 340 days. All of the remaining radioisotopes have half-lives that are less than 2 days, and the majority of these have half-lives that are less than 48 seconds. This element also has 5 meta states with the most stable being 141mSm (t½ 22.6 minutes), 143m1Sm (t½ 66 seconds) and 139mSm (t½ 10.7 seconds).

As with the other lanthanides, samarium compounds are of low to moderate toxicity, although their toxicity has not been investigated in detail.

-22.58 Elemental Mercury

[No main description available]

-22.24 Cadmium

Cadmium is a chemical element with the symbol Cd and atomic number 48. It is a common impurity in zinc, and it is most often isolated during the production of zinc.

Zinc sulfide ores are roasted in the presence of oxygen, converting the zinc sulfide to the oxide. Zinc metal is produced either by smelting the oxide with carbon or by electroalysis in sulfuirc acid. Cadmium is isolated from the zinc metal by vacuum distillation. If the zinc is smelted, or cadmium sulfate is precipitated out of the electrolysis solution.

Characteristics

Cadmium is a soft, malleable, ductile, toxic, bluish-wite bivalent metal. It is similar in many respects to zinc, but reacts to form more complex compounds. The most common oxidation state of cadmium is +2, though rare examples of +1 can be found.

One particular isotope of cadmium, 113Cd, absorbs neutrons with very high probability if they have an energy below the cadmium cutoff and transmits them readily otherwise. The cadmium cutoff is about 0.5 eV.

Neutrons with energy below the cutoff are deemed slow neutrons, distinguishing them from intermediate and fast neutrons.

About three-quarters of cadmium is used in batteries (especially Ni-Cd batteries), and most of the remaining quarter is used mainly for pigments, coatings, and plating, and as stabilizers for plastics.

Other uses include:
- In some of the lowest-melting alloys
- In bearing alloys, due to a low coefficient of friction and very good fatigue resistance
- In electroplating (6% cadmium)
- In many kinds of solder
- As a barrier to control nuclear fission
- In black and white television phosphors and in the blue and green phosphors for color television picture tubes
- As a photoconductive surface coating for photocopier drums. (Cadmium Sulphide)

In paint pigments: Cadmium forms various salts, with cadmium sulfide being the most common. This sulfide is used as a yellow pigment. Cadmium selenide can be used as red pigment, commonly called cadmium red. To painters that work with the pigment, cadmium yellows, oranges, and reds are the most potent colors to use. In fact, during production, these colors are significantly toned down before they are ground with oils and binders, or blended into watercolors, gouaches, acrylics, and other paint and pigment formulations.

These pigments are toxic, and it is recommended to use a barrier cream on the hands to prevent absorption through the skin when working with them. Cadmium blue, green, and violet do not exist.

Uses
-In some semiconductors such as cadmium sulfide, cadmium selenide, and cadmium telluride, which can be used for light detection or solar cells. HgCdTe is sensitive to infrared.

-In PVC as stabilizers.

-In molecular biology, used to block voltage-dependent calcium channels from fluxing calcium ions.

-It is also used in combination with other metals, forming compounds.

-A role of cadmium in biology has been recently discovered. A cadmium-dependent carbonic anhydrase has been found in marine diatoms. Cadmium does the same job as zinc in other anhydrases, but the diatoms live in environments with very low zinc concentrations, thus biology has taken cadmium rather than zinc, and made it work. The discovery was made using X-ray absorption fluorescence spectroscopy (XAFS), and cadmium was characterized by noting the energy of the X-rays that were absorbed.

Naturally occurring cadmium is composed of 8 isotopes. For two of them, natural radioactivity was observed, and three others are predicted to be radioactive but their decays were never observed due to extremely long half-life times. The two natural radioactive isotopes are 113Cd (beta decay, half-life is 7.7 × 1015 years) and 116Cd (two-neutrino double beta decay, half-life is 2.9 × 1019 years). The other three are 106Cd, 108Cd (double electron capture), and 114Cd (double beta decay; only lower limits on their half-life times have been set.

At least three isotopes - 110Cd, 111Cd, and 112Cd - are absolutely stable. Among the isotopes absent in the natural cadmium, the most long-lived are 109Cd with a half-life of 462.6 days, and 115Cd with a half-life of 53.46 hours. All of the remaining radioactive isotopes have half-lives that are less than 2.5 hours, and the majority of these have half-lives that are less than 5 minutes. This element also has 8 known meta states, with the most stable being 113mCd (t½ 14.1 years), 115mCd (t½ 44.6 days), and 117mCd (t½ 3.36 hours).

The known isotopes of cadmium range in atomic mass from 94.950 (95Cd) to 131.946 u (132Cd). The primary decay mode before the second-most-abundant stable isotope, 112Cd, is electron capture, and the primary modes after are beta emission and electron capture. The primary decay product before 112Cd is element 47 (silver), and the primary product after is element 49 (indium).

Toxicity

Cadmium is an occupational hazard associated with industrial processes such as metal plating and the production of nickel-cadmium batteries, pigments, plastics, and other synthetics. The primary route of exposure in industrial settings is inhalation. Inhalation of cadmium-containing fumes can result initially in metal fume fever but may progress to chemical pneumonitis, pulmonary edema, and death.

Cadmium is also a potential environmental hazard. Human exposures to environmental cadmium are primarily the result of the burning of fossil fuels and municipal wastes. There have been notable instances of toxicity as the result of long-term exposure to cadmium in contaminated food and water.

In the decades following World War II, Japanese mining operations contaminated the Jinzu River with cadmium and traces of other toxic metals. As a consequence, cadmium accumulated in the rice crops growing along the riverbanks downstream of the mines. The local agricultural communities consuming the contaminated rice developed Itai-itai disease and renal abnormalities, including proteinuria and glucosuria.

Cadmium is one of six substances banned by the European Union's Restriction on Hazardous Substances (RoHS) directive, which bans carcinogens in computers.

Cadmium and several cadmium-containing compounds are known carcinogens and can induce many types of cancer.

Current research has found that cadmium toxicity may be carried into the body by zinc binding proteins; in particular, proteins that contain zinc finger protein structures. Zinc and cadmium are in the same group on the periodic table, contain the same common oxidation state (+2), and when ionized are almost the same size. Due to these similarities, cadmium can replace zinc in many biological systems, in particular, systems that contain softer ligands such as sulfur. Cadmium can bind up to ten times more strongly than zinc in certain biological systems, and is notoriously difficult to remove. In addition, cadmium can replace magnesium and calcium in certain biological systems, although these replacements are rare.

Tobacco smoking is the most important single source of cadmium exposure in the general population. It has been estimated that about 10% of the cadmium content of a cigarette is inhaled through smoking. The absorption of cadmium from the lungs is much more effective than that from the gut, and as much as 50% of the cadmium inhaled via cigarette smoke may be absorbed.

On average, smokers have 4-5 times higher blood cadmium concentrations and 2-3 times higher kidney cadmium concentrations than non-smokers. Despite the high cadmium content in cigarette smoke, there seems to be little exposure to cadmium from passive smoking. No significant effect on blood cadmium concentrations could be detected in children exposed to environmental tobacco smoke.

Please review the following list to see if you or your family including when you were younger and parents are being or are now being exposed to the item. Please make a note and let your Wellness Partner aware. If you are in contact with the item daily it is suggested to avoid or to take appropriate precautions when in contact with the item.

Chemicals/Pesticides

-28.75 **Potassium Carbonate**

Potassium carbonate is a white salt, soluble in water (insoluble in alcohol), which forms a strongly alkaline solution. It can be made as the product of potassium hydroxide's absorbent reaction with carbon dioxide. It is deliquescent, often appearing as a damp or wet solid. Potassium carbonate is used in the production of soap and glass.

Potassium carbonate was first identified in 1742 by Antonio Campanella and is the primary component of potash and the more refined pearlash or salts of tartar. Historically pearlash was created by baking potash in a kiln to remove impurities. The fine white powder remaining was the pearlash. The first patent issued by the U.S. Patent Office was awarded to Samuel Hopkins in 1790 for an improved method of making pearlash.

In late 18th century North America, before the development of baking powder, pearlash began to be used as a leavening agent in "quick breads".

Other terms for potassium carbonate: Carbonate of potash, Dipotassium carbonate, Dipotassium salt , Pearl ash, Potash, Salt of tartar, and Salt of wormwood.

Today potassium carbonate is prepared commercially by the electrolysis of potassium chloride. The resulting potassium hydroxide is then carbonated using carbon dioxide to form potassium carbonate, which is often used to produce other potassium compounds.

- Pearlash has been used for soap, glass, and china production.

- In the laboratory, it may be used as a mild drying agent where other drying agents such as calcium chloride may be incompatible. However, it is not suitable for acidic compounds.

- Mixed with water it causes an exothermic reaction that results in a temperature change, producing heat.

- Potassium carbonate, is being used as the electrolyte in many cold fusion experiments.

-21.67 **Hydrochloric Acid**

HCl

Hydrochloric acid is the aqueous solution of hydrogen chloride gas. It is a strong acid, the major component of gastric acid, and of wide industrial use. Hydrochloric acid must be handled with appropriate safety precautions because it is a highly-corrosive liquid.

Hydrochloric acid (historically muriatic acid) has been an important and frequently-used chemical from early history. It was used throughout the Middle Ages by alchemists in the quest for the philosopher's stone, and later by several European scientists to help establish modern chemical knowledge.

From the Industrial Revolution, it became an important industrial chemical for many applications, including the large-scale production of organic compounds, such as vinyl chloride for PVC plastic and MDI/TDI for polyurethane; smaller-scale applications such as production of gelatin and other ingredients in food; and leather processing. About 20 million metric tonnes of HCl gas are produced annually.

Hydrochloric acid is a strong inorganic acid that is used in many industrial processes. An important application is the regeneration of ion exchange resins. Cation exchange is widely used to remove ions such as Na+ and Ca2+ from aqueous solutions, producing demineralized water. Ion exchangers and demineralized water are used in all chemical industries, drinking water production, and many food industries.

In industry demanding purity (food, pharmaceutical, drinking water), high-quality hydrochloric acid is used to control the pH of process water streams. In less-demanding industry, technical-quality hydrochloric acid suffices for neutralizing waste streams and swimming pool treatment.

Pickling is an essential step in metal surface treatment, to remove rust or iron oxide scale from iron or steel before subsequent processing, such as extrusion, rolling, galvanizing, and other techniques. Technical-quality HCl at typically 18% concentration is the most commonly-used pickling agent for the pickling of carbon steel grades. HCl is not a common pickling agent for stainless steel grades.

The largest hydrochloric acid consumption is in the production of organic compounds such as vinyl chloride for PVC, and MDI and TDI for polyurethane. Other organic compounds produced with HCL include bisphenol A for polycarbonate, activated carbon, and ascorbic acid, as well as numerous pharmaceutical products.

HCL is a fundamental chemical, and as such it is used for a large number of small-scale applications, such as leather processing, household cleaning, and building construction. In addition, a way of stimulating oil production is by injecting hydrochloric acid into the rock formation of an oil well, dissolving a portion of the rock, and creating a large-pore structure. Oil-well acidizing is a common process in the North Sea oil production industry.

Many chemical reactions involving hydrochloric acid are applied in the production of food, food ingredients, and food additives. Typical products include aspartame, fructose, citric acid, lysine, hydrolyzed (vegetable) protein as food enhancer, and in gelatin production. Food-grade (extra-pure) hydrochloric acid can be applied when needed for the final product.

Physiology and pathology
Hydrochloric acid constitutes the majority of gastric acid, the human digestive fluid. In a complex process and at a large energy burden, it is secreted by parietal cells (also known as oxyntic cells). These cells contain an extensive secretory network (canaliculi) from which the HCl is secreted into the lumen of the stomach. They are part of the fundic glands (or oxyntic glands) in the stomach.

Safety mechanisms that prevent the damage of the epithelium of digestive tract include: Negative regulators of its release; A thick mucus layer covering the epithelium; Sodium bicarbonate secreted by gastric epithelial cells and pancreas; The structure of epithelium (tight junctions); Adequate blood supply; and Prostaglandins (many different effects: they stimulate mucus and bicarbonate secretion, maintain epithelial barrier integrity, enable adequate blood supply, stimulate the healing of the damaged mucous membrane)

In some instances, the stomach does not produce enough hydrochloric acid, leading to a potential for gastroenteritis. When these mechanisms fail, heartburn or peptic ulcers can develop.

Safety
Hydrochloric acid in high concentrations forms acidic mists. Both the mist and the solution have a corrosive effect on human tissue, with the potential to damage respiratory organs, eyes, skin, and intestines. When HCL is mixed with common oxidizing chemicals, such as bleach (NaClO) or permanganate ($KMnO_4$), the toxic gas chlorine is produced.

To minimize the risks while working with hydrochloric acid, appropriate precautions should be taken, including wearing rubber or PVC gloves, protective eye goggles, and chemical-resistant clothing.

-20.40 Mr. Clean

Mr. Clean is a brand name (Procter & Gamble) of popular cleaning products.

Chemical ingredients from MSDS/Label
Fragrance(s)/perfume(s); Surfactants (unspecified); Ammonia; Water; C9-11 Pareth-3; Colorant/Pigment/Dye(s); and Quality control agents.

The label contains a warning to use the product in a well-ventilated area, possibly due to the ammonia, and to keep out of reach of children.

Health Hazards (Acute and Chronic):
- Ingestion: Harmful if swallowed - may result in transient nervous system effects (ataxia and muscle weakness) and/or gastrointestinal irritation with nausea, vomiting, or diarrhea. This product contains alcohol ethoxylates.

Large ingestions (>2ml/kg) may also cause symptoms of alcohol-like intoxication, incoordination, drowsiness, inarticulateness or ataxia. Alcohol ethoxylates may contribute to central nervous system symptoms.

- Eye Contact: Mild eye irritant - may result in transient superficial effects similar to those produced by mild toilet soaps and detergents.

- Skin: Mild skin irritant - if used on extremely dry skin it may aggrivate the existing condition.

-19.87 Ethylene Oxide

Use: Fumigant for foodstuffs and textiles. To sterilize surgical instruments. Agricultural fungicide. In organic syntheses, especially in the production of ethylene glycol. Starting material for the manufacture of acrylonitrile and nonionic surfactant

-19.85 **Seprol**

[No main description available]

Please review the following list to see if you are using the item or a similar item by another brand. Please finish using the item and it is recommended to buy a cleaner safer item next time you purchase that type of item. Please ask your Wellness Partner for a listing of the "The Big 12" which is available for you.

Household Chemicals

-23.95 Triclosan

A synthetic “antibacterial” ingredient with a chemical structure similar to Agent Orange! The EPA registers it as a pesticide, giving it high scores as a risk to both human health and the environment. It is classified as a chlorophenol, a class of chemicals suspected of causing cancer in humans. Its manufacturing process may produce dioxin, a powerful hormone-disrupting chemical with toxic effects measured in the parts per trillion; that is only one drop in 300 Olympic-size swimming pools!

Hormone disruptors pose enormous long-term chronic health risks by interfering with the way hormones perform, such as changing genetic material, decreasing fertility and sexual function, and fostering birth defects. Tufts University School of Medicine says that triclosan is capable of forcing the emergence of “super bugs” that it cannot kill. Its widespread use in popular antibacterial cleansers, toothpastes and household products may have nightmare implications for our future.

-18.68 Polyethylene Glycol (PEG)

Made by ethoxylating Propylene Glycol. Dangerous levels of dioxin have been found as a manufacturing by-product of the ethoxylation process. PEG based ingredients are in a wide variety of personal care, baby care and sunscreen products.

-17.98 Arsenic

Arsenic is a chemical element that has the symbol As and atomic number 33. Arsenic was discovered by Albertus Magnus (Germany) in 1250. Its Atomic Mass is 74.92. Its Ionic Charge is (3-).

This is a notoriously poisonous metalloid that has many allotropic forms: yellow (molecular non-metallic) and several black and gray forms (metalloids) are a few that are seen.

Three metalloidal forms of arsenic with different crystal structures are found free in nature (the minerals arsenic sensu strictu and the much rarer arsenolamprite and pararsenolamprite), but it is more commonly found as arsenide and arsenate compounds. Several hundred such mineral species are known. Arsenic and its compounds are used as pesticides, herbicides, insecticides, and in various alloys.

Chemically similar to phosphorus, it forms colourless, odourless, crystalline oxides As2O3 and As2O5 which are hygroscopic and readily soluble in water to form acidic solutions. Arsenic (V) acid, like phosphoric acid, is a weak acid. Like phosphorus, arsenic forms an unstable, gaseous hydride: arsine (AsH3). The similarity is so great that arsenic will partly substitute for phosphorus in biochemical reactions and is thus poisonous. However, in subtoxic doses, soluble arsenic compounds act as stimulants, and were once popular in small doses as medicinals by people in the mid 18th century.

Arsenic and many of its compounds are especially potent poisons. Arsenic disrupts ATP production through several mechanisms. At the level of the citric acid cycle, arsenic inhibits pyruvate dehydrogenase and by competing with phosphate it uncouples oxidative phosphorylation, thus inhibiting energy-linked reduction of NAD+, mitochondrial respiration, and ATP synthesis. Hydrogen peroxide production is also increased, which might form reactive oxygen species and oxidative stress.

These metabolic interferences lead to death from multi-system organ failure (arsenic poisoning) probably from necrotic cell death, not apoptosis. A post mortem reveals brick red colored mucosa, due to severe hemorrhage. Although arsenic causes toxicity, it can also play a protective role.

-12.67 DMDM Hydantoin & Urea (Imidazolidinyl)

Just two of the preservatives that often release formaldehyde which may cause joint pain, skin reactions, allergies, depression, headaches, chest pains, ear infections, chronic fatigue, dizziness, and loss of sleep. Exposure may also irritate the respiratory system, trigger heart palpitations or asthma, and aggravate coughs and colds. Other possible side effects include weakening the immune system and cancer.

-12.08 Formaldehyde

Pure formaldehyde is a gas which has good solubility in water. A 37% solution of formaldehyde dissolved in water is called formalin or formaldehyde solution. Normally, various additives are put into the 37% solution of formaldehyde in order to stabilize it, such as methanol. Because of these additives, as well as other impurities, formalin is usually considered unsuitable for electron microscopy studies.

Unlike most anti-bacterial and germicidal agents which poison the bacteria and germ cells, formaldehyde kills cell tissue by dehydrating the tissue and bacteria cells and replacing the normal fluid in the cells with a gel-like rigid compound.

The latter effect exhibits the coagulation properties of formaldehyde. Tissue and bacterium cells are made of protoplasm and as such, contain large amounts of moisture. The introduction of formaldehyde into the tissue dries out the protoplasm and destroys the cell. In terms of embalming practices, this is a perfect situation as the formaldehyde not only disinfects the tissue but replaces the tissue cell moisture with a rigid gel thus allowing the embalmed tissue to maintain its contour. Additionally, the new cell structure will resist further bacterial attacks as its composition now contains a formaldehyde-based compound.

So, while the usual list of anti-bacterial agents, such as tetracycline, amikacin, baytril, and the like poison their respective bacterial enemies and are then flushed from the system by the kidneys and liver, formalin is retained in the now altered tissue structures of the living organism.

Acute Effects of Exposure:
Ingestion of formaldehyde solution cause severe irritation and inflammation to the mouth, throat, and stomach. Severe stomach pains will follow ingestion with possible loss of consciousness and death.

Inhalation: Formaldehyde is highly irritating to the upper respiratory tract and eyes of some individuals. Concentrations of 3 to 5 ppm cause tearing of the eyes and are intolerable to some persons. Concentrations of 10 to 20 ppm cause difficulty in breathing, burning of the nose and throat, cough, and heavy tearing of the eyes; 25 to 30 ppm causes severe respiratory tract injury leading to pulmonary edema and pneumonitis. A concentration of 100 ppm is immediately dangerous. Deaths from accidental exposure to high concentrations of formaldehyde have been reported.

Skin: Formalin is a severe skin irritant and a sensitizer. Contact with formalin causes white discoloration, smarting, drying, cracking, and scaling. Prolonged and repeated contact can cause numbness and a hardening or tanning of the skin. Previously exposed persons may react to future exposure with an allergic eczematous and dermatitis or hives.

Eye Contact: Formaldehyde solutions splashed in the eye can cause injuries ranging from transient discomfort to severe, permanent corneal clouding and loss of vision. The severity of the effect depends on the concentration of formaldehyde in the solution and whether or not the eyes are flushed with water immediately after the accident.

Chronic Effects of Exposure
Formaldehyde has the potential to cause cancer in humans. Repeated and prolonged exposure increases the risk. Exposure had been associated with cancers of the lung, nasopharynx and oropharynx, and nasal passages.

Toxicity: Prolonged or repeated exposure to formaldehyde may result in respiratory impairment. Structural changes in the epithelial cells in the human nose have been observed. Some persons have developed asthma or bronchitis following exposure to formaldehyde, most often as the result of an accidental spill involving a single exposure to a high concentration of formaldehyde.

The following are the balancers your body is asking for.

Following are the supplements for which your body showed the highest biological preference. Your foundational regimen is a combination of digestive support and foundational nutrition. The last page of this report you will see how each item is beneficial according to your body and you see a graphic which displays the number of biomarkers that each supplement brought into range. Your comparative assessment highlights only those products which balanced the largest number of bio-markers. Your complete list of foundational supplements is listed below.

The recommended dosage is based on a 150-pound adult. Please use your common sense to dose accordingly. If you are pregnant, breastfeeding, or on any prescription medications, please see your primary physician before starting any supplement program.

Digestive Enzymes

5.69 **NSP - Papaya Mint**

Tablets nutritionally support the digestive system, but they can also be used as tasty breath mints. Papaya fruit contains an enzyme called papain that can break down protein, while peppermint leaves contain aromatic compounds that trigger the production of digestive fluids.

Tablets contain papaya fruit, peppermint leaf, fructose and sorbitol.

Chew 2 tablets with a meal three times daily, or use between meals as a breath freshener.

Probiotic

5.27 **NSP - NutriBiome™ Probiotic Eleven**

Benefits:
•Helps relieve ocasional gastrointestinal distress, such as diarrhea.
•Populates the gut with beneficial microflora.
•Supports digestion.
•Aids in the elimination of toxins.
•Improves immune system functions.
•Regulates intestinal functions.

Probiotic Eleven® represents a unique combination of healthful probiotics to help maintain and replenish intestinal supply. These microorganisms perform essential functions in the body and are affected by aging, adverse intestinal pH, microbial interactions, environmental and dietary temperatures, stress, physiological factors, peristalsis, bile acids, host secretions and immune responses.

Take 1–2 capsules daily with a meal.

Vitamin and Mineral

18.05 **NSP -Nature's Prenatal Multiple Vitamins & Minerals**

Benefits
• Provides essential nutrients needed for energy and metabolism during pregnancy and lactation.
• Provides 800 mcg folic acid needed to prevent neural tube defects.
• Contains antioxidants to help fight the damaging effects of free radicals.
• Helps allay nausea/morning sickness.

Formulated for pregnant and lactating women with 800 mcg of folic acid, Nature’s Prenatal provides a balanced combination of vitamins and

minerals to support the nutritional needs of both mother and baby. It also contains ginger root to help support the stomach. It’s free of artificial colors, flavors, preservatives, sweeteners, sugar, yeast, gluten, lactose, milk, and wheat.

Adults: Take 1 tablet daily with a meal.

Product Line Supplement

31.52 NSP -Noni Liquid

Features & Benefits
• Nature’s Noni Liquid Beverage is prepared from the finest Polynesian sources of Morinda citrifolia fruit.
• Morinda (Noni) has traditionally been used to help with coughs, sore throat, flu, painful menstruation, urinary disorders, broken bones, hemorrhages, bruises, fever, sprains, male and female infertility, memory loss, and senility.

Morinda fruit, more commonly known as Noni in Hawaii, has an extensive history of use among the Polynesian people and others in the South Pacific, Australia, New Zealand, Malaysia, India and the Caribbean. Liquid Morinda has been popular because it's easy to use, however, the unpleasant taste was an obstacle to its consumption. Nature’s Sunshine's Nature’s Noni Beverage utilizes a unique blend of Morinda citrifolia fruit and other natural flavors to produce a pleasant tasting beverage.

Did you know?
In China, morinda is called "Bai ji tian," and is an important kidney tonic, recommended for problems associated with the lower back or pelvic area, such as frequent urination, incontinence, and low back pain. The Chinese also consider Morinda a sexual tonic, used to treat impotence and premature ejaculation in men, infertility in both sexes, as well as various hormonally-linked problems, including irregular menstruation. According to Chinese herbal medicine, morinda increases willpower.

Ingredients: Reconstituted Morinda citrifolia fruit juice (water, dehydrated Noni), natural flavor, concentrated pear juice, grape skin extract, malic acid, tartaric acid, citric acid, ascorbic acid.

Recommendation: Take as is or blend to taste with water or your favorite beverage.

Nature’s NONI Beverage
473 mL, Liquid beverage, Stock No. 4066-7

30.38 NSP - Super Omega 3 (Canada)

Super Omega 3 (60 softgels)
Stock No. 1515-7

Benefits:
A source of omega-3 fatty acids EPA and DHA for the maintenance of good health.
Helps support cognitive health and brain function.
Helps support the development of the brain, eyes and nerves in children and adolescents.
Helps maintain/support cardiovascular health and helps to reduce serum triglycerides/triacylglycerols in adults/adolescents (older than 14 years of age).

How It Works:
Super Omega 3 is an excellent marine source of essential fatty acids (EFAs). Each softgels contain more than 1,000 mg of fish oil per capsule, with a ratio of 33:16 EPA (eicosapentaenoic acid) to DHA (docosahexaenoic acid). It also contains lemon to significantly reduce fishy aftertaste. The body requires EFAs for proper brian and cell membrane maintenance, nerve development and health, mood, inflammation control, and hormonal balance. These fatty acids are called ‘essential’ because they are necessary for health, and they cannot be produced within the human body but must supplied from the diet.

Ingredients:
Medicinal Ingredients: Each capsule contains 1000 mg fish oil (anchovy body oil, mackerel body oil, sardine body oil), providing 380.0 mg Eicosapentaenoic acid (EPA) and 190.0 mg Decosahexaaenoic acid (DHA). Non-medicinal Ingredients: Gelatin capsule (glycerin, water) and natural lemon oil.

Recommended Use:
Dosage (adults, adolescents 14 to 18 years of age): Take 1 capsule twice daily with a meal. Dosage (adolescents 9 to 13 years, children 1 to 8

years): Take 1 capsule once daily with a meal.

27.19 NSP - GreenZone® Ultimate

Benefits:
• Is gluten-free.
• Enhances bodily functions, especially elimination.
• Improves overall immunity.
• Helps the body normalize cholesterol levels.
• Provides a meal that is easily absorbed and metabolized into energy.
• Contains a full array of nutrients the body needs from grains.
• Is pH-balancing.

Ultimate GreenZone® [Vital Nutrition]. Ultimate GreenZone features protein-rich grains such as quinoa, amaranth seeds, brown rice, millet and spirulina, as well as the ancient Aztec seed chia (Salvia hispanica) that provides unsaturated omega-3 and omega-6 fatty acids. It also contains nutrient-rich greens such as kale, broccoli, alfalfa, chlorophyll, artichoke, asparagus, parsley, spinach and chlorella—plus carrots, beets, acerola fruit, lemon bioflavonoids and flax hull lignans to help supplement and alkalize the diet.

Each serving provides 1 gram of a proprietary prebiotic fiber blend (scFOS) that helps feed the body's friendly bacteria, plus enzymes to support digestion. Ultimate GreenZone is now gluten-free and tastes better than before.

For people who are always on the go, or for those who need nutritional support, Ultimate GreenZone offers a perfect complement to a meal by providing extra nutrients and energy. Ultimate GreenZone is easily metabolized into energy and helps promote proper bodily functions, including waste elimination and immune capability.

For Powder: Mix 1 heaping scoop in 8 oz. of water or juice.
For Capsules: Take four capsules three or four times daily with a meal.

25.42 NSP - Vitamin B6 (Canada)

Vitamin B6 (120 tabs)
Stock No. 1626-6 Kosher

Benefits:
Helps the body to metabolize fats, proteins and carbohydrates.
Helps in tissue formation.

How It Works:
Vitamin B6, also called pyridoxine, is involved in more bodily functions than almost any other single nutrient. It affects physical and mental functions.

Ingredients:
Medicinal Ingredients: Each tablet contains pyridoxine hydrochloride (vitamin B6) 50 mg. Non-medicinal Ingredients: Dicalcium phosphate, cellulose, wheat germ flour, stearic acid and magnesium stearate.

Recommended Use:
Dosage (adults): Take one tablet daily with a meal.

25.36 NSP - Damiana & Ginseng Combination

Damiana & Ginseng Combination 100 capsules
Product Code: 1121

This unique adult formula is especially designed to support vitality levels with carefully selected stimulating herbs and nutrients.
Preimer combination includes l-arginine, along with well known, natural herbs, maca extract, ginseng root, oatstraw concentrate, red raspberry leaves, damiana leaves, licorice root, and sarsaparilla root.

Each six capsules contain:

L-arginine	450 mg
Damiana	240 mg
Maca	450 mg

Siberian Ginseng (eleuthero	300 mg
Red Raspberry	300 mg
Licorice Root	180 mg

Recommendation: Take two capsules with a meal three times daily.

100 capsules - 16 day supply
Kosher

Ingredients: L-arginine, maca root extract (Lepidium meyenii), eleuthero root (Eleutherococcus senticosus), oat straw extract (Avena sativa), raspberry leaf (Rubus idaeus), damiana leaf (Turnera diffusa), licorice root (Glycyrrhiza glabra), sarsaparilla root (Smilax officinalis). Capsule shell (gelatin, water). Bulking agent; cellulose, anti-caking agent; magnesium stearate.

Allergy advice: Includes cereals containing gluten. See ingredients in bold.
Not suitable for use during pregnancy or nursing.

Weight Managment

22.20 NSP - СмартМил (SmartMeal)

СмартМил / Ванильный коктейль (SmartMeal / Vanila Shake)
Артикул: 3085

- Питательный белковый коктейль с витаминно-минеральным комплексом
- Низкокалорийный продукт, не содержит холестерина
- Повышает работоспособность, способствует выработке энергии
- Может быть использован в программах коррекции массы тела

Описание
СмартМил / Ванильный коктейль содержит белок, витамины: A, B1, B2, B6, B12, C, D3, E, фолиевую кислоту, ниацин, пантотеновую кислоту, биотин, биоэлементы: кальций, магний, фосфор, хром, селен, медь, марганец, цинк, йод, калий, которые находятся в хелатной форме, омега-3 ПНЖК, линолевую и г-линоленовую омега -6 ПНЖК. Одна порция коктейля (34 г) содержит 15 грамм белка, 3,5 грамм жира, 15 г углеводов, 1,18 г - омега -6 ПНЖК и 219 мг - омега -3 ПНЖК. Энергетическая ценность одной порции – 130 ккал. В состав комплекса также входят: среднецепочечные жирные кислоты, лецитин, гуаровая и ксантановая камеди (растворимые в воде некрахмалистые полисахариды).

Применение
Приготовить напиток, растворив 2 мерные ложки в 200-250 мл воды или молока, затем хорошо размешать. Взрослым принимать в любое время 1 раз в день.

18.04 NSP - 7-Keto

7-KetoTM is a safe, natural metabolite of dehydroepiandrosterone (DHEA). Supplementing with 7-Keto may increase the production of T3, a thyroid hormone. The thyroid hormones play a role in determining the body’s basal metabolic rate.

7-Keto also supports the body’s immune system efforts by enhancing the function of white blood cells. It can also help the body’s efforts to maintain overall health.
It is important to note that, unlike other metabolites of DHEA, 7-Keto is not converted to sex hormones (either androgens or estrogens).

Each capsule of NSP 7-Keto contains 75 mg 7-Keto in a base of chickweed herb (Stellaria media).

CAUTION: Those with hyperthyroidism should consult their health care professional prior to use of 7-Keto capsules.
7-Keto is a trademark of Humanetics Corp., patent no. 5,296,481.

Take 1 capsule daily with a meal.

System Pack

13.10 NSP - Immune System Pack

Immune System Pack (30 day)
Stock No. 5385-8

Try our targeted supplements for improved immune system health. Create a healthier environment and stimulate your body's natural defenses.

Benefits:
Provides year-round immune-system support.
Creates an environment inhospitable to foreign invaders.
Stimulates the body’s natural defenses.

How It Works:
VS-C creates a favorable environment for microbial balance and supports general detoxification and respiratory functions.
Elderberry D3fense contains an array of herbal ingredients and other nutrients that support and boost immune function.
Immune Stimulator promotes immune response by stimulating macrophage, T-cell, B-cell and cytokine activity.

Ingredients:
Each AM packet contains 1 VS-C TCM, 1 Elderberry D3fense and 1 Immune Stimulator. Each PM packet contains 1 Elderberry D3fense and 1 Immune Stimulator.

Recommended Use:
Take the contents of one AM packet with breakfast; take the contents of one PM packet with your evening meal. Follow this pattern for 30 days.

Please ask your Wellness Partner for usage instructions for Essential Oils. It will assist in how to apply and where the oil properly.

Essential Oils

25.76 NSP - Jasmine Essential Oil

Jasmine Pure Essential Oil (Jasminum officinalis, hexane). This sensually sweet floral aroma has been used in human sexuality for centuries.

Jasmine is especially helpful for those with dry, sensitive skin.

23.51 NSP - Peppermint Oil

Peppermint Pure Essential Oil (Mentha piperita, steam-distilled) is both warming and cooling as well as refreshing, uplifting and invigorating.

Its properties are especially soothing to the skin and are balancing to oily skin and hair.

Note: Do not use near eyes or mucous membranes. Strong skin irritant. Dilute well before applying topically.

Not for use during pregnancy or on children under 2.

22.64 NSP - Thyme Wild Essential Oil

Thyme Linalol BIO, Pure Essential Oil (Thymus vulgaris ct. linalol, steam-distilled, organic), also called sweet thyme, has long been used for its stimulating and invigorating properties.

Thyme Linalol contains fewer irritants than red thyme and can be used on children.

Note: Do not use during pregnancy

The following list are emotional essences your body is asking for. Please review each one and identify an event, place, person, time period, situation etc that comes to mind and make a note by each one. Please ask your Wellness Partner if you need further clarification on an item that appears. Each essence does not always have to be you. It can be a family member, friend or someone of influence from childhood etc.

Flower Essences

14.90 NSP - Distress Remedy

Distress Remedy (Flower Remedy) (2 fl oz)
Stock No. 8778-3

Our popular Distress Remedy supports emotional balance and helps with occasional emotional distress.

Benefits:
Supports emotional balance.
May assist the body with occasional emotional distress and emotional balance.

How It Works:
Flower Essences are liquid extracts developed for modern issues of emotional and physical stress.

Ingredients:
Arnica (Arnica mollis), Star of Bethlehem (Ornithogalum umbellatum), Rock Rose (Helianthemum nummularium), Impatiens (Impatiens glandulifera), Clematis (Clematis vitalba), Cherry Plum (Prunus cerasifera) Red Clover (Trifolium pratense), vegetable glycerin and purified water.

Recommended Use:
Take 10–15 drops under the tongue every 10–15 minutes or as needed until symptoms improve. Then decrease to every 1–2 hours, then to four times daily until symptoms are relieved. Avoid any contact with dropper to eliminate product contamination. For children under 12, consult your health care professional.

Bach Flowers

14.24 Impatiens

Impatiens is suitable for people who are easily irritated. They are impatient and want everything done instantly. They act, think and speak quickly. These people are capable and efficient but irritated and frustrated by slow co-workers and therefore prefer to work alone. They are independent, hate wasting time and often finish other people's sentences.

They may have temper flare-ups but these are soon over. When ill, they make restless and irritable patients. They are often fidgety and their hastiness may lead to accident-proneness.

The positive potential of Impatiens is someone who is decisive and spontaneous but less hasty in thought and action. They are relaxed and good-humored with others and sympathetic to those who are slow. They cope calmly and diplomatically with irritating problems.

14.19 Pine

Pine in indicated for people who feel full of guilt and self-reproach; they blame themselves for other people's mistakes and, indeed, for anything that goes wrong. They feel undeserving and unworthy. Their guilt complex and sense of shame is not necessarily based on any actual wrong-doing but destroys the possibility of joy in living.

These people appear humble and apologetic; they will apologize for being ill and may feel they deserve their illness or pain.

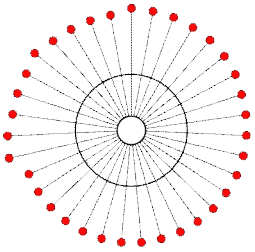
The positive potential of Pine allows people to accept responsibility realistically and to have sound judgment. Positive Pine people accept and respect themselves as they would others, without exaggeratedly negative judgments. In relation to Pine, Dr Bach wrote '... One trace of condemnation against ourselves, or others, is a trace of condemnation against the Universal Creation of Love, and restricts us, limits our power to allow the Universal Love to flow through us to others.'

11.71 Mimulus

Mimulus is for fear from known causes, such as: illness, death, accidents, pain, the dark, cold poverty, other people, animals, spiders, public speaking, loss of friends or job, dentistry, etc. It is for people who suffer from fears that can be easily named. Sufferers may be artistic and talented,

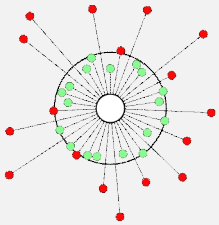
but shy and retiring and can be tongue-tied in company. Mimulus is good for shy, timid, sensitive children, afraid of animals, the dark, etc. (see also Larch).

The positive potential of Mimulus is the personality possessed of quiet courage to face trials and difficulties with humor and confidence. They can stand up for themselves, and with the emotions under complete control can enjoy life without fear.



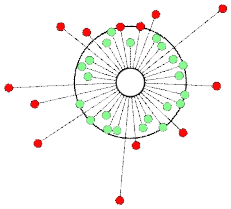
Baseline

Biomarkers Out of Range: 35



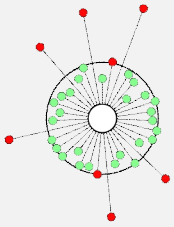
NSP - Papaya Mint

Biomarkers Brought Into Range: 18
Category: NSP Digestive Enzymes
Usage Directions: 2 Tablets 3 times per day



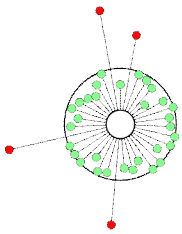
NSP - NutriBiome™ Probiotic Eleven

Additional BioMarkers Brought Into Range: 4
Category: NSP Probiotic
Usage Directions: 1 Capsule 1 times per day



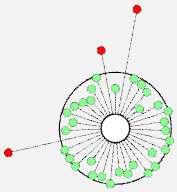
NSP -Nature's Prenatal Multiple Vitamins & Minerals

Additional BioMarkers Brought Into Range: 5
Category: NSP Vitamin and Minerals



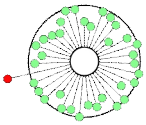
NSP -Noni Liquid

Additional BioMarkers Brought Into Range: 4
Category: NSP Product



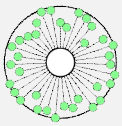
NSP - Super Omega 3 (Canada)

Additional BioMarkers Brought Into Range: 1
Category: NSP Product
Usage Directions: 1 Capsule 2 times per day



NSP - GreenZone® Ultimate

Additional BioMarkers Brought Into Range: 2
Category: NSP Product
Usage Directions: 4 Capsules 3 times per day



NSP - Vitamin B6 (Canada)

Additional BioMarkers Brought Into Range: 1
Category: NSP Product
Usage Directions: 1 Tablet 1 times per day