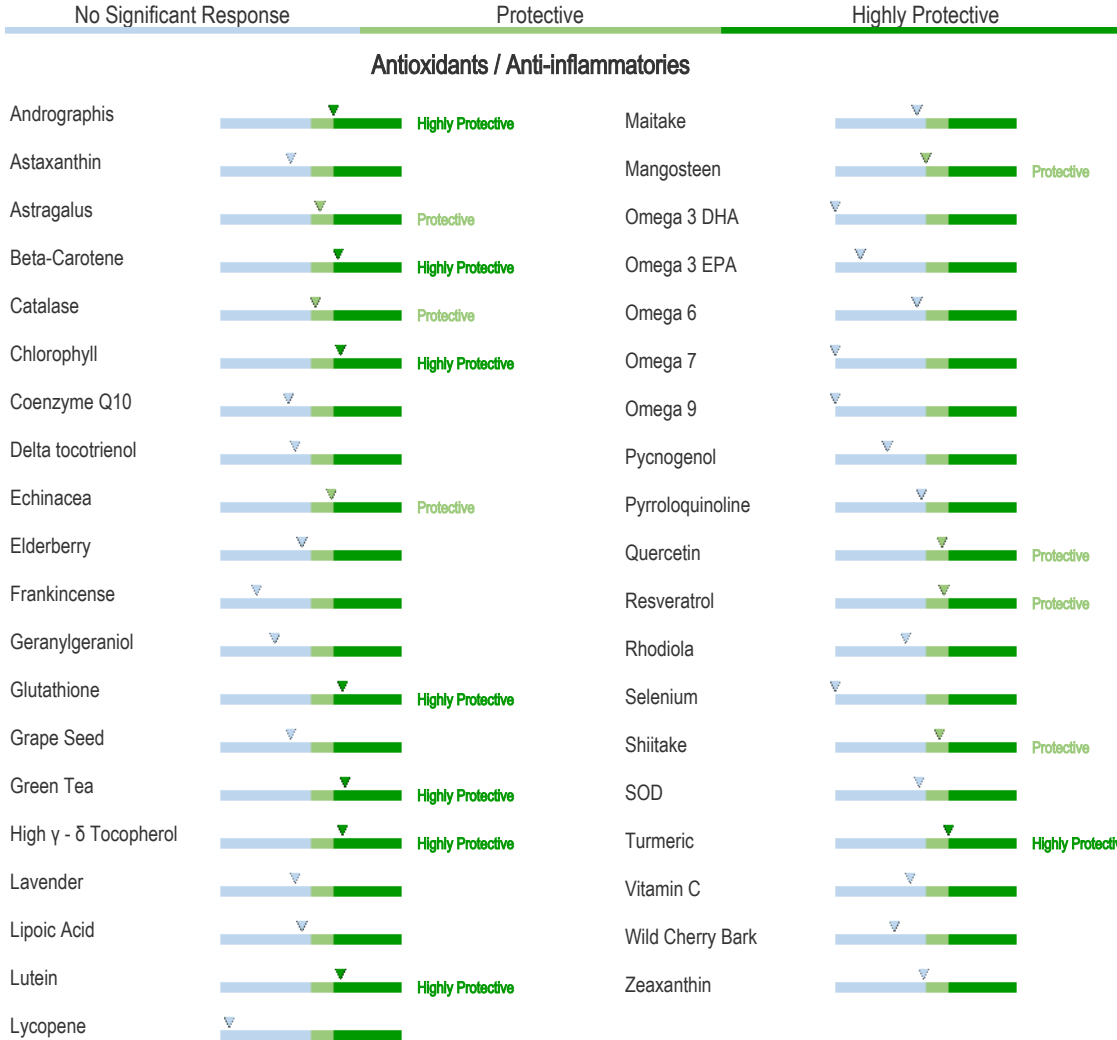




Lab Director  
Dr. Jennifer Spiegel, M.D.

## ANTIOXIDANT PROTECTION ASSAY

<b>Patient Information</b>		Name: PATIENT II, PRETEND	
Date of Birth: 11/04/1977	Gender: F	Lab ID: 68220	
Date Received: 02/11/2010	Date Collected: 01/01/2010	Date Reported: 09/24/2019	
Physician: Sample Physician	Clinic ID: 10804		



IMPORTANT! Identified adverse food reactions- allergies, sensitivities, and intolerances- should be avoided even if these cellular tests have shown those food sources of micronutrients/botanicals to be "protective". The AMA and APA test the responses of B and T lymphocytes, not antibodies (IgE-mediated allergies) or cells of the innate immune system (Alcat Test). Patients and practitioners are encouraged to carefully read all product/supplement labels and avoid all ingredients that are contraindicated for any reason.

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## Beneficial Items

- Green Tea  
Green tea is derived from the plant, Camellia sinensis. Green tea extract is simply green tea leaves prepared as a supplement. Green tea and its extracts, such as ECGC (Epigallocatechin gallate), a polyphenol, have been studied for their antioxidant effects and possible protective impact against heart disease and cancer. **Important for/potential beneficial properties:** • Immune support • Anti-inflammatory • Antioxidant • Anticoagulant/antiplatelet • Blood glucose regulation • Antilipemic • Antiviral • Bone support • Regulation of blood pressure • Protective against certain types of cancer • Stimulation of CNS • Improved cognitive performance • Reduction in dental plaque • Diuretic • Enhancement of muscular endurance in exercise • Increase in calorie and fat metabolism **May be useful for the prevention/treatment of:** elevated blood pressure, high cholesterol, heart disease, Insulin resistance, obesity, Alzheimer's disease, Parkinson's disease, cancer, inattentiveness, genital warts, and inflammation **Sources:** tea, supplemental form, capsules
- Glutathione  
Glutathione is produced in the liver from the amino acids, glycine, cysteine, and glutamic acid. It is considered the body's "master antioxidant". **Important for/potential beneficial properties:** • DNA synthesis and repair • Metabolism of toxins and carcinogens • Immune support • Prevention of oxidative cell damage • Protein and prostaglandin synthesis • Transport of amino acids • Antioxidation, -fights free radicals • Antiviral • Anti-inflammation **May be useful for the prevention/treatment of:** cancer, Parkinson's disease, neurodegenerative disorders, flu, AMD, glaucoma, cataracts, diabetes, heart disease, asthma (not inhaled glutathione), lung disease, liver disease, GI disease, CFS, and side effects of chemotherapy **Sources:** Fruit, vegetables, and meat but glutathione is poorly absorbed from the GI tract. Consuming foods used in cysteine production is recommended- onions, garlic, chives, leeks. Supplementing with N-acetyl L Cysteine can boost glutathione levels. Glutathione can be taken IV or in liposomal supplemental form.
- High  $\gamma$  -  $\delta$  Tocopherol  
Vitamin E is a group of eight fat soluble compounds that have varying levels of biological activity. They include four tocopherols (alpha, beta, gamma and delta) and four tocotrienols (alpha, beta, gamma, and delta). Gamma-delta tocopherol comprises about 70% of the vitamin E in a typical American eating pattern. It has very low vitamin E activity but some of its biological effects may be more pronounced than the effects of alpha-tocopherol, the only isomer of vitamin E officially recognized as capable of meeting human requirements. Although gamma tocopherol is not capable of preventing manifestations of vitamin E deficiency, it does appear to have beneficial properties. There is some concern that high doses of vitamin E might have a pro-oxidant rather than an antioxidant effect. High doses of alpha-tocopherol alone might disrupt the normal antioxidant balance and decrease the effect of gamma tocopherol and other vitamin E isomers. No major roles for delta and beta tocopherol have been defined although mixed tocopherols including all tocopherols have been used and have shown benefit. **Important for/potential beneficial properties:** • Antioxidation, prevention of free radical damage • Immune support • Regulation of gene expression • Heart and blood vessel protection, dilation, and inhibits platelet aggregation (gamma and delta tocopherol) • Anti-inflammation **May be useful for the prevention/treatment of:** And more effective than alpha tocopherol in... prostate cancer inhibition, oxidative DNA damage reduction, increase in superoxide dismutase activity, inhibition of platelet aggregation, scavenging of peroxynitrate, a powerful oxidative agent believed to play a role in CVD, cancer, and neurodegenerative diseases, regulation of extracellular fluid volume and blood pressure. **Sources:** walnuts, corn oil, soybean oil, flaxseed oil. Some research suggests gamma tocopherol might be transformed to alpha-tocopherol by intestinal microflora
- Chlorophyll  
Chlorophyll is a pigment that gives plants their green color. **Important for/potential beneficial properties:** • Anti-aging • Anti-cancer • Antiviral • Deodorant • Wound healing **May be useful for the prevention/treatment of:** acne, herpes simplex virus and shingles, lung and other types of cancer, pancreatitis, skin cancer, fatigue, arthritis, and fibromyalgia **Sources:** greens, chlorella, spirulina, alfalfa, parsley, broccoli, green cabbage, asparagus, green beans and peas, matcha green tea, wheat grass, algae and supplemental form.
- Lutein  
Lutein is a carotenoid vitamin, lutein is related to beta-carotene and is one of two major carotenoids (and zeaxanthin) found as a color pigment in the human eye. **Important for/potential beneficial properties:** • Antioxidation • light filter • Ocular protection **May be useful for the prevention/treatment of:** AMD, cataracts, cognitive decline, certain types of cancer, CVD, and diabetes **Sources:** kale, spinach, broccoli, corn, kiwi, grapes, orange juice, squash, egg yolk, pistachios
- Beta-Carotene  
Beta-Carotene is a pigmented, fat-soluble compound called a carotenoid. It is converted in part to vitamin A in the body. It is converted to retinal which is essential for vision. Then converted to retinoic acid, it is used in growth and cell differentiation. **Important for/potential beneficial properties:** • Anti-inflammatory • Antioxidant • Tumor cell growth inhibition • Cardiovascular protection • Immune enhancing **May be useful for the prevention/treatment of:** cognitive decline, dementia, AMD, breast cancer, GERD, sunburn, retinitis pigmentosa, erythropoietic protoporphyria, rash from sun exposure, and signs of aging **Sources:** green leafy vegetables-spinach, kale, collard greens, orange-yellow fruits and vegetables- sweet potato, carrots, pumpkin, squash, cantaloupe, bell peppers, broccoli, asparagus
- Andrographis  
Andrographis is a plant that is native to South Asian countries such as India and Sri Lanka. Known as the "King of bitters", it is commonly used in Ayurvedic medicine. **Important for/potential beneficial properties:** • Analgesic • Antibacterial • Anti-viral • Anti-inflammatory • Antiplatelet • Anticancer • GI, cardiovascular, liver support • Blood glucose regulation • Immunomodulatory **May be useful for the prevention/treatment of:** common cold, influenza, tonsillitis, IBD- ulcerative colitis, and RA **Sources:** supplementation
- Turmeric  
Turmeric, a plant related to ginger, has been used in Ayurvedic medicine for many conditions including breathing problems, pain, and fatigue. It is a common spice and a major ingredient in curry powder. **Important for/potential beneficial properties:** • Anti-inflammatory • Antioxidation • Antibacterial • Antiseptic • Interference with cancer cell signaling • Blood glucose regulation • Fat metabolism • Wound healing **May be useful for the prevention/treatment of:** arthritis, joint pain, diabetes, digestive conditions- IBS, IBD, obesity, age-related cognitive decline, depression, high triglyceride blood levels, rheumatoid arthritis, and certain types of cancer **Sources:** Turmeric is a common spice and a major ingredient in curry powder. Turmeric's underground stems are dried and made into capsules, tablets, teas, powders, and extracts. Turmeric powder can also be made into a paste for skin issues.

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- **Echinacea** Echinacea is a perennial wildflower native to North America and is closely related to sunflowers, daisies, and ragweed. **Important for/potential beneficial properties:** • Antibacterial • Antifungal • Anti-inflammatory • Anti-oxidant • Anti-vital • Immune stimulating • Wound healing **May be useful for the prevention/treatment of:** infections, common cold, herpes simplex infection (topical), psoriasis(topical), gum inflammation, upper respiratory tract infections (viral), tonsillitis, urinary tract infections, vaginal yeast infection, skin wounds/ulcers (topical), and leukopenia from chemotherapy. **Sources:** Echinacea is often sold as an herbal supplement.
- **Resveratrol** Resveratrol is a naturally occurring polyphenol produced by plants to protect from threats to plants' survival- fungus, drought, inflammation, UV irradiation. **Important for/potential beneficial properties:** • Antioxidation • Anti-aging • Anti-cancer • Anti-inflammatory • Anti-coagulant • Antiviral • Cardioprotective • Liver protection • Immune support • Neuroprotective • Pulmonary protection • Fat metabolism **May be useful for the prevention/treatment of:** Alzheimer's, cardiovascular disease, metabolic syndrome/obesity, diabetes, insulin resistance, cognitive decline, allergic rhinitis, certain types of cancer, and ulcerative colitis **Sources:** red wine, red grape skins, purple grape juice, mulberries, peanuts, mulberries, blueberries and bilberries, eucalyptus, and spruce
- **Quercetin** Quercetin is an antioxidant that belongs to a class of water-soluble plant substances called flavonoids, which are present in certain fruits and vegetables **Important for/potential beneficial properties:** • Antioxidation • Inhibition of histamine release, anti-allergy • Enhancement of capillary and tissue integrity • Certain cancer risk reduction • Anti-inflammatory • Antiviral • Immune support • Glucose regulation • Inhibition of AGE formation **May be useful for the prevention/treatment of:** obesity, CVD, allergic rhinitis, Meniere's disease, diabetes, interstitial cystitis, prostatitis **Sources:** tea, onions, kale, watercress, elderberry, tomatoes, broccoli, green beans, asparagus, apples, and berries
- **Shiitake** Shiitake mushrooms are edible mushrooms native to East Asia. Research on the compounds in shiitake mushrooms, shows that this fungus provides many health benefits. **Important for/potential beneficial properties:** • Anti-inflammatory • Antioxidant • Cardiovascular support • Lipid lowering • Immune system support • Blood glucose regulation • Tumor inhibition **May be useful for the prevention/treatment of:** Type 2 diabetes, cardiovascular disease, certain types of cancers, immune issues, and hypertension **Sources:** You can find it fresh, dried or in various dietary supplements.
- **Astragalus** Astragalus comes from the root of a perennial plant in the legume family that grows in the northern and eastern parts of China as well as in Mongolia and Korea. There are more than 2,000 species of astragalus but most astragalus supplements contain Astragalus membranaceus. Astragalus contains a variety of active constituents including more than 40 saponins, several flavonoids, polysaccharides, trace minerals, amino acids, and coumarins. – Astragalus is also called huang qi or milk vetch. **Important for/potential beneficial properties:** • Antibacterial • Anti-inflammatory • Antioxidant • Antiviral • Bone support • Cardiovascular support • Fertility –increase in sperm motility • Blood glucose support • Liver and kidney protective • Immune support • Vasorelaxant • Wound healing **May be useful for the prevention/treatment of:** common cold, upper respiratory infections, fibromyalgia, diabetes, blood pressure, heart disease, weakness, arthritis, hepatitis, breast and lung cancer, asthma, and anxiety **Sources:** The root of the astragalus plant is put in soups, teas, extracts, and capsules.
- **Catalase** Catalase is a key antioxidant enzyme in the body's defense against oxidative stress. It converts free radicals into hydrogen peroxide which ultimately breaks down to stable and safe water and oxygen. **Important for/potential beneficial properties:** • Antioxidation • Anti-aging and anti-degenerative • Longevity support • Fat metabolism • Support of DNA integrity **May be useful for the prevention/treatment of:** degenerative disease, mitochondrial dysfunction, cardiac issues, and cataracts **Sources:** wheat and barley grass, alfalfa, Brussels sprouts, leeks, onions, broccoli, parsnips, zucchini, spinach, kale, radishes, carrots, red peppers, turnips, cucumbers, celery, avocado, potato, and red cabbage, kiwi, peaches, cherries, apricots, bananas, watermelon, pineapple
- **Mangosteen** Mangosteen is a tropical fruit cultivated in Southeast Asia. The fruit, fruit juice, rind, twig, and bark are used as medicine. **Important for/potential beneficial properties:** • Antioxidation • Anti-allergy • Antibacterial • Anti-inflammatory • Antiviral • Immune support • Astringent • Free radical scavenger **May be useful for the prevention/treatment of:** diarrhea, UTIs, gonorrhea, thrush, tuberculosis, cardiovascular issues, menstrual disorders, cancer, osteoarthritis, dysentery, and skin issues **Sources:** mangosteen fruit, supplemental form

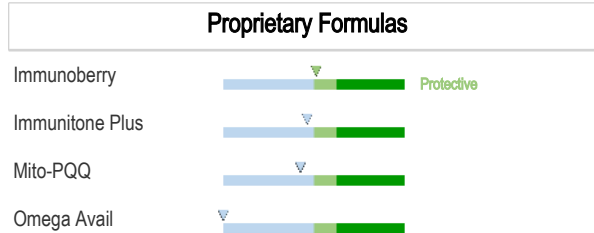
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## Beneficial Formulas

- Immunoberry

Source: <https://catalog.designsforhealth.com/ImmunoBerry-Liquid>

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