

LRA by ELISA/ACT® Test Results For:

Report, Sample October 12, 2016

Your test results include:

- Strong Reactions
- Moderate Reactions
- Non-Reactive Items
- Detailed Description of Reactive Items
- Laminated Wallet Card with Results

October 12, 2016

STRONG REACTIONS

Avoid for at least 6 months.

Grape Seed Oil

Bean, Pinto/Frijole

Sulfite/Metabisulfite

Caffeine

Carmoisine

Barley

Annatto

2-Methyl Pentane

Penicillamine

MODERATE REACTIONS

Oats

Cats

Yogurt (Cow)

PeppermintArrowroot

Methyl paraben
 FD&C Yellow #5

Vinyl Chloride
 Mushroom, Shiitake

Ampicillin
 Streptomycin

Avoid for at least 3 months.

• Tea, Black

Chestnut

MSG (Monosodium Glutamate)

Chlordane

Water chestnut

MODERATE FOOD GROUP(S):

COW DAIRY

Butter (Whole)

Cheese (Cow):

Brick

Cottage Cheese

Parmesan

Processed Cheese

Lactalbumin

Lactoglobulin

Milk (Cow): Casein

Milk, Pasteurized

Milk, Raw

Yogurt

Whey

Thus of the 505 substances tested, reaction is noted to 24 items and 1 food group(s).

While both strong and moderate reactions are equally burdensome to your immune defense and repair systems, we have found that it takes about half as long to restore tolerance of moderate reactions as compared to the strong ones.

Non-Reactive Items

- •1, 2 Dichlorobenzene
- •2, 4, 5 T
- •2,4-D
- ·3-Methyl Pentane
- Acai Berry
- Acesulfame
- ·Aduki/Adzuki Bean
- Agave nectar
- Aldrin
- Alfalfa
- ·Algae (Chlorella)
- ·Algae (Spirulina)
- Allspice
- Almond
- Aloe
- Alternaria alternata
- Aluminum
- Amaranth
- Amitriptyline (Elavil)
- Amoxicillin
- Anchovy
- •Anise Seed
- Antimony
- Apple
- Apricot
- Arnica
- Arsenic
- Artemisia anua
- Artichoke
- Asparagus
- Aspartame/Nutrasweet
- Aspergillus fumigatus
- · Aspergillus niger
- · Aspergillus oryzae
- Aspirin/Coal Tar
- Astragalus
- Avocado
- Baking Powder
- Bamboo
- Banana
- Barium Sulfate
- Basil
- Bass

- Bay Leaf
- ·Bean, Garbanzo
- ·Bean, Kidney
- ·Bean, Lima
- ·Bean, Mung
- ·Bean, Navy
- ·Bean, Soya
- ·Bean, String/Wax
- Beef/Veal
- Beet
- Benzaldehyde
- Benzene
- Benzopyrene
- Benzyl Acetate
- Bergamot
- Beryllium Oxide
- BHA
- •BHT
- Black Cohash
- Blackberry
- Bladderwrack
- Blueberry
- Bok Choi
- ·Botrytis cinerea
- Boysenberry
- Brazil Nut
- Brilliant Black
- Broccoli
- Buckwheat/Kasha
- Buffalo
- ·Butter, Clarified (Ghee)
- Cabbage/Brussels Sprouts
- Cadmium
- Calcium Propionate
- Camphor
- •Camu Camu
- ·Candida albicans
- Cantaloupe/Honeydew
- Caraway Seed
- Carbamates
- Carbon Disulfide
- Carbon Tetrachloride
- Cardamom

- Carmine/Cochineal
- Carob
- Carrot
- Cashew
- ·Cassava (Yuca)
- Cat Dander (Felis cattus)
- Catfish
- Cauliflower
- Celery
- Cellulose/Hemicellulose
- ·Cephalexin (Keflex)
- Chamomile
- Chard
- ·Cheese, Romano (Sheep)
- ·Cheese/Milk (Goat)
- Cherry
- Chia
- Chicken
- Chicory
- Chive
- Chloroform
- Chrysanthemum
- Cilantro
- Cinnamon
- Ciprofloxacin (Cipro)
- ·Cis-Dichloroethylene (1, 2-
- ·Cladosporium cladosporioides
- Cladosporium herbarum
- •Clam
- Clarithromycin (Biaxin)
- Clove
- Coconut
- Cod Liver Oil
- Codfish
- Collard Greens
- Coriander
- ·Corn (Maize)
- Cottonseed Oil
- Crab
- Cranberry
- Cream of Tartar
- Cucumber
- ·Cucumber, Japanese

Non-Reactive Items, cont'd

- Cumin
- Currant
- Curry
- Cyclohexylamine
- •D & C Green #5
- D & C Orange #5
- •D & C Red #33
- D & C Violet #2
- D&C Orange #4
- Date
- DBCP (1,2 Dibromo-3-chloropropane)
- DDT
- Deer/Venison
- DEET
- Detergent (Synthetic)
- ·Diacetyl (2,3-Butanedione)
- Diazepam (Valium)
- Dibutyl Phthalate
- Dieldrin
- Dill
- Docosanol (Abreva)
- Dog Dander (Canis familiaris)
- Dong Quai
- Dragon Fruit
- Duck Feathers (Anas platyrhynca)
- Duck/Goose
- Dulse
- Echinacea
- EDTA
- Egg White (Chicken)
- Egg Yolk (Chicken)
- Eggplant
- Elderberry
- Endive
- Endrin
- EphedraEpicoccum nigrum
- •Epidermophyton floccosum
- Erythromycin
- Ethyl Acetate
- Ethyl Acetoacetate
- Ethyl Butyrate
- Ethyl Mercury

- Ethylene Dibromide
- •FD&C Blue #1
- •FD&C Blue #2
- FD&C Green #3
- •FD&C Red #2
- •FD&C Red #3
- •FD&C Red #40
- •FD&C Yellow #10
- •FD&C Yellow #6
- Feverfew
- Fig
- Flaxseed/Linseed Oil
- Fluconazole (Diflucan)
- Formaldehyde
- Fusarium solani
- Fusarium vasinfectum
- Garlic
- Gelatin
- Geotrichum candidum
- ·Gin (Juniper Berries)
- Ginger
- ·Ginseng, American
- ·Ginseng, Chinese
- Ginseng, Siberian
- Gliadin
- Gluten
- Glyphosate
- Goat Hair/Skin Scraping (Capra hircus)
- ·Goji Berry
- Gold
- Goldenseal/Hydrastis
- Goose Feathers (Anser anser)
- Gooseberry
- ·Grape/Raisin, Green
- Grape/Raisin, Red
- Grapefruit
- Guaifenesin (Mucinex)
- Guinea Pig Hair (Cavia porcellus)
- Gum, Acacia
- Gum, Agar
- Gum, Carrageenan
- Gum, Guar
- Gum, karaya

- ·Gum, Locust Bean
- Gum, Tragacanth
- •Gum, Xanthan
- Haddock
- · Halogenated Biocide
- Hawthorne
- Hazelnut/Filbert
- Helminthosporium halodes
- Helminthosporium sativum
- Hemp
- Heptachlor
- Hexachlorocyclohexane
- Hijiki
- Honey
- Hops
- Horse Dander (Equus caballus)
- Horseradish
- Hydrogenated Oil
- Hydroxychloroquine (Plaquenil)
- ·Hypericum/St. John's Wort
- Ibuprofen
- •Irish Moss
- Isopropyl Ether
- Kale
- Kamut
- •Kelp/Sea Weed
- Kiwi
- •Kombu
- Lamb/Mutton
- Latex
- Lead
- Leek
- Lemon
- Lemongrass
- ·Lentils, Red, Green
- ·Lettuce, Iceberg
- ·Lettuce, Red Leaf
- ·Lettuce, Romaine
- Licorice
- Lime

Maca

- Lobster
- Lomatium

Non-Reactive Items, cont'd

- Macadamia
- Mace
- Magnesium stearate
- Maleic Anhydride
- Malt
- Mango
- Mannitol
- Marjoram
- Menthol
- Mercury
- Mesalamine (Asacol)
- Metallic Catalysts
- Methoxychlor
- Methyl Mercury
- Methylene Chloride (Dichloromethane)
- Methylphenidate (Ritalin)
- Millet
- ·Miso, Barley
- ·Miso, Brown
- ·Miso, Hatcho
- ·Miso, White
- Molasses
- Morpholine
- Mucor mucedo
- Mucor racemosus
- Mushroom
- · Mushroom, Maitake
- ·Mushroom, Reishi
- · Mustard Greens, Spice
- Naproxen
- Nectarine
- ·Nickel (II) Chloride
- Nitrates/Nitrites
- Nitrosamine Mix
- Noni
- Nutmeg
- Nystatin
- Okra
- Olive
- Omeprazole (Prilosec)
- ·Onion, Yellow
- Orange
- Oregano

- Organophosphates
- Oyster
- •Palm Oil
- Papaya
- Paprika
- Parsley
- Parsnip
- ·Pea, Black-Eyed
- ·Pea, Green, Snow
- Peach
- Peanut
- •Pear
- •Pecan
- •Penicillin
- Penicillium notatum / chrysogenum
- ·Penicillium roqueforti
- Pentachlorophenol (PCP)
- Pepper, Black
- ·Pepper, Cayenne
- ·Pepper, Chili, Red
- ·Pepper, Green, Red, Yellow
- ·Pepper, White
- Perch/Mackerel
- Petroleum By-Products & Solvents
- Phenol
- Phthalates
- Pimiento
- Pineapple
- Pinene
- Piroxicam (Feldene)
- Pistachio
- •Plum, Umeboshi
- •Plum/Prune
- Polyethylene glycol
- Polysorbate 20
- Polysorbate 60
- Polysorbate 80
- Polyvinylpyrrolidone
- Pomegranate
- •Ponceau 2R
- •Ponceau 4R
- Poppy Seed
- ·Pork/Bacon/Ham

- Potassium Bromate
- Potassium sorbate
- ·Potato. Sweet
- ·Potato, White
- Primrose Oil
- Propyl Gallate
- Propyl paraben
- Propylene Glycol (1,2-Propanediol)
- Psyllium Seed
- Pullularia pullulans
- Pumpkin
- Pyrene
- Quail
- Quinoa
- Rabbit
- Rabbit Hair (Oryctolagus cuniculus)
- Radish
- ·Rapeseed/Canola Oil
- Raspberry
- •Resin
- Rhizopus nigricans / stolonifer
- Rhodotorula
- Rhubarb
- ·Rice, Basmati
- ·Rice, Brown
- •Rice, White
- •Rice, Wild
- Rose Hips
- Rosemary
- Royal Jelly
- Rutabaga
- Rye
- Saccharine
- Safflower Oil
- Saffron
- Sage
- Salicylate
- ·Salmon/Lox
- Sardine
- Scallion/Spring Onion
- Scallop
- Scopulariopsis brevicaulis
- Sea Lettuce

Non-Reactive Items, cont'd

- Selenium Sulfide
- Sesame/Tahini
- Sheep Wool (Ovis aries)
- Shrimp
- ·Silicates / Silicon Dioxide
- Silicone
- Silver
- Slippery Elm
- Snapper
- Soap (SDS/SLS)
- Sodium alginate
- Sodium Benzoate
- Sodium erythorbate
- Sodium Fluoride
- Sodium Propionate
- Sole/Flounder/Halibut
- Sorbitol
- Spearmint
- Spelt
- Spinach
- ·Splenda (sucralose)
- Squash
- Star Fruit
- Stemphylium botryosum
- Stevia
- Strawberry
- Sugar Cane / Sucanat
- ·Sugar, Beet
- ·Sugar, Corn
- ·Sugar, Maple
- Sunflower
- Swordfish
- Tamari
- Tamarind
- Tangerine/Mandarin Orange
- Tapioca
- Tarragon
- Tert-Butyl-Ethyl Ether (TBEE)
- Tert-Butyl-Methyl Ether (TBME)
- Tetrachloroethylene
- Tetracycline
- Thricothecium roseum
- Thyme

- Tilapia
- Tin/Stannous Chloride
- Titanium Dioxide
- Tobacco
- Tofu
- Toluene
- Tomato
- Trichloroethylene (TCE)
- •Trichoderma harzianum
- Trichophyton mentagrophytes interdigitale
- Trichophyton rubrum
- Triticale
- Trout
- Tuna
- Turbot
- Turkey
- Turkey Feathers (Meleagris gallopavo)
- Turmeric
- Turnip, Greens
- Tylenol (Acetaminophen)
- Valerian
- Vanilla
- Vegetable Glycerin
- Wakame
- ·Walnut Oil, Black
- ·Walnut, English
- Watercress
- Watermelon
- Wheat
- White Willow Bark
- Xylene
- Xylitol
- ·Yaki Nori/Laver
- ·Yeast, Baker's (S. cerevisiae)
- ·Yeast, Brewer's (S. cerevisiae)

LRA by ELISA/ACT® Tests Results and What They Mean

LRA by ELISA/ACT tests use a breakthrough technology that allows the laboratory, for the first time, to observe immune reactions of specialized white cells (lymphocytes) just as they occur in your body (*ex vivo*, to be technical).

Live lymphocytes from your blood sample are exposed to antigens in our lab. Reaction indicates loss of tolerance and development of self-attack known as delayed hypersensitivity.

- Strong reaction means that > 50% of cultured lymphocytes react.
- Moderate reaction means that 5-50% of cultured lymphocytes react.

Complete food group(s) will be displayed as reactive when two or more foods in that group are reactive. Dairy, because it is commonly cross-allergenic, is the only exception. The dairy group will appear in bold if even one item in the dairy group is reactive. It is recommended to avoid all items in a food group if it is listed in bold.

Reactive items are an adverse load on your body's immune defenses. This means a reduced ability to respond to new or chronic infections. Reactive items also decrease immune activities needed to repair your body. This can provoke inflammation and self-attack ("autoimmunity").

Avoid **strong** reactors for **six (6) months** and **moderate** reactors for **three (3) months** to reduce the burden on the immune system and restore your body's ability to repair. Avoiding reactive items can break the cycle of impaired defense and repair, allowing your body to start the recovery and repair process.

Immediate allergies (Type 1 IgE linked) are not detected by the LRA by ELISA/ACT tests. Immediate allergies are usually detected by history, routine skin tests, or RAST tests. If you have known immediate allergies, you should continue avoiding those items. Consult with your health professional if you have any questions regarding your immediate allergies.

LRA by ELISA/ACT Tests Are Different

The LRA tests identify only reactive lymphocytes. B class lymphocytes react to harmful antibodies; T class lymphocytes react directly.

Protective memory (non-reactive IgG) antibodies do not provoke symptoms and are not detected by ELISA/ACT LRA tests. Detecting only the items that provoke reactions is an advantage of lymphocyte response assays.

Other antibody tests (ELISA IgG, EIA IgG, IgG tests) do not offer this advantage. These tests measure only if antibodies are present. Since antibodies can be helpful or harmful, knowing the amount of an antibody tells nothing of its function-does it protect and help or does it react and harm?

Some labs measure particles and assume all particles of a certain size are reactive lymphocytes—again, these measurements are not as helpful as the LRA by ELISA/ACT tests.

MD, Ph.D., FASCP, FACAAI, FACN

References: Golub, E.S. Immunology: A synthesis Sinauer Associates, Inc., Sunderland, MA 1987 p474-479. Sell, S. Immunology, Immunopathology, and Immunity, 4th Ed., Elsevier, NY, 1987 p 314-321. Jaffe, R. Improved Immune Function Using Specific Nutrient Supplementation and ELISA/ACT "Immunologic Fingerprint" to Detect Late Phase Responses Ex Vivo. J Am Col Nutr 8(5): 424, 1989.

Amount Times Action/Use **Special Comment Name Priority Supplements:** PERQUE LIFE Two tabsules Once a day with Provides essential vitamins and minerals in Energizing and alkalinizing GUARD Multivitamin (4 if using PERQUE meal/s of the most bio-absorbable and bio-available formula: enhances and multimineral/ Lifeguard mini) choice. Total forms, for optimal metabolic functioning. protects the immune system transporter enhanced of 2 (4 mini) w/o iron PERQUEPotent C Depends on amount Four or more Central regulator of cell metabolism, a Refer to the Ascorbate **GUARDAscorbate** body will absorb times a day stimulant to structural connective protein (Vitamin C) Calibration (buffered Vitamin C) (determined by the synthesis, & is vital to repair protocol that will help Powder or tablets Ascorbate calibration determine the body's need protocol) for Vitamin C . This is also on Page 98 in The Alkaline Way Guide 4 tabsules This flavonoid and flavanol combination Best taken in conjunction PERQUE PAIN Twice a day; **GUARD FORTÉ,500** total of 8 improves utilization of Vitamin C; reduces with ascorbate. mg. Quercetin with 5 chronic viral activity and decreases mg. of (OPC soluble) inflammation. Proanthocyanidins PERQUE DIGESTA 1-2 capsules With all meals: Rebuilds healthy digestive flora in the After 6 months from start of **GUARD FORTÉ** 1-2 capsules for 1month intestinal tract. Inhibits the growth of therapy a stool culture of With pathogens . Promotes better overall microflora (intestinal bugs) (Synergy of 9 1 capsule beneficial probiotics) breakfast&dinne digestion is recommended. Please r: for 2 months see your healthcare With breakfast professional to obtain further only, after 3 information. months Unique antioxidant 1 capsule Breakfast & Helps restore liver function. Use for 3 months and dinner recheck liver enzyme complex: Promotes liver health activity. **PERQUE** 1 sublingual lozenge 3 times a day (3 Improves methylation detoxification and Hydroxocobalamin is the **ACTIVATED B12** lozenges/day) reduces cell susceptibility to stress injury. preferred form of B-12 and **GUARD** Also, improves transport of biochemicals and is suitable for vegetarians. If (Oral Vitamin B12 as reduces reactivity of muscle fibers. Best homocysteine levels are hydroxocobalamin dissolved under the tongue, not swallowed. monitored, sufficient intake for energy and to reduce levels<6 mg/dl is detoxification) recommended.

L-Methionine combination.

Name Amount Times Action/Use Special Comment

Specific supplements that may be helpful:

PERQUE CHOLINE CITRATE (unique liquid performance- enhancing formula for body and mind)	1300 mg. (1 teaspoon) diluted in juice or water	Breakfast & dinner.	Improves cell membrane communication& bile acid production.	Choline citrate is fivefold more active than choline bitartrate. Choline Bitartrate is also likely to be antigen- contaminated,
Coenzyme Q10 micellized with pure rice bran oil	60 mg.	Twice a day	Improves cell electron transport and increases energy production in the cell.	Improves heart /muscle health and energy
PERQUE TRIPLE EFA GUARD Essential Fats Omega 3,6,9 DHA EPA CLA	2 softgels	Three times a day : total of 6	Omega 3 reduces plaque formation. Omega 6 decreases inflammation Omega 9 enhances membrane fluidity.	Essential Fatty Acids in the right proportions for improved health
PERQUE METABODETOXPL US (MDP)GUARD Enhanced fat metabolizers: Carnitine fumarate MCT, GABA & Kelp Alginate	2 softgels	4 times a day : Total of 8	Provides effective fat metabolism; gives exercise benefits; controls appetite. Also important for heart muscle function	This is a potent formula, with convenient dosage and lasting results
PERQUE ENDURA/PAK GUARD L-Glutamine + Pyridoxyl- Alphaketoglutarate ("PAK")	3 capsules	Twice a day	Gives body energy, supports mental sharpness, helps regenerate the intestinal surface cells.PAK recycles L -glutamine and prevents glutamate build up.	Take on empty stomach, i.e 1/2 hour before a meal / 2 hours after meals or at bedtime
PERQUE MOOD GUARD : Balances brain chemistry : Magnesium L- Aspartate, Glycine,	2 capsules	Twice a day 30 -60 minutes before eating (empty stomach Total 4	Detoxifies the body, alleviates mild to moderate depression, regulates sleep rhythms.	Clinically superior to SAMe

Report, Sample		Nutrit	ional Recommendations	
<u>Name</u>	<u>Amount</u>	<u>Times</u>	Action/Use	Special Comment
PERQUE ADRENO DISTRESS GUARD: Nature's comprehensive stress relief: Rhodiola, Magnolia and Phellodendron	2 soft gels	Twice a day	Neutralizes stress, balances cortisol and rebuilds hormone function	Store product below 70°F.
PERQUE GLUCOSE REGULATION GUARD:Natural insulin/sugar regulation :	2 softgels	Twice a day with meals: Total of 4	Regulates blood sugar levels and energy balance, decreases insulin resistance, decreases hormonal dysregulation	Lowers body weight while increasing lean body mass
PERQUE JOINT GUARD :Potent joint pain relief with Glucosamine, Chondroitin, OPC	3 capsules	Twice a day	Facilitates joint cartilage repair and renewal, reduces pain and increases joint mobility.	OPC and Molybdenum are unique ingredients to this formula; they additionally provide powerful nutrition protection for the joint
Super Echinacea (alcohol tincture) or Echinacea Glyceride (glycerol extract)	1 tablespoon (15cc) in 4 oz. water or juice.	5 days a week, for 12 months□ (e.g. Mon-Fri)	Boosts immune system function. Particularly T-helper cells and the production of immune stimulating chemicals like interferon.	
Liquid Nutrient Plan	Up to full amount to feel satisfied.	One day each week	Provides easily assimilated nutrients with minimum work by digestive system, so repair can occur.	Refer to the Liquids-Only Nutrient Sufficiency Plan: page 94 in The Alkaline Way Guide for more information
Panax Ginseng extract	One ampule	1/2 hour before lunch.	Enhances adaptation to distress.	
Charcoal capsules or tablets	1 or 2 capsules or tablets.	After breakfast, lunch, dinner. As needed for gas.	Absorbs excess formed gas.	Take after meals only if needed for 'gas control'.
L-Histidine	600 mg.	•	Decreases inflammation & increases body's pool of electron trapping chemicals.	Take on empty stomach 1/2 hour before meals or 2 hours after meals.

Report, Sample

Nutritional Recommendations

<u>Name</u>	<u>Amount</u>	<u>Times</u>	Action/Use	Special Comment
Ginger Tea	Add a fresh 1 inch size piece of minced ginger into 8 oz. of boiling water.	As beverage of choice		Honey or organic cane juice may be added to taste.

Learn new patterns of consumption. You may want to read Diet for a Small Planet by Frances Moore Luppe, Diet and Nutrition by Rudolph Ballantine, MD., Minding the Body, Mending the Mind by Joan Borysenko, PhD., and Acid and Alkaline by Herman Aihara.

Take balanced and fully active nutritional supplements as recommended in this report. Your health professional, or the sources cited in this report, can provide ordering information.

Demonstrate your commitment to your health as an essential part of your life by performing each and every part of this report as recommended by your physician with full attention.

Learn abdominal breathing and practice it for a few minutes once or more each day. Abdominal breathing means actively filling the abdomen as though it were a balloon being filled. Next allow the balloon to slowly passively deflate. Repeat for the full five minutes twice daily.

Discuss the meditation technique that is best for you with your doctor. Active Meditation: the Western Tradition by Robert R Leichtman, MD and Carl Japikse is an example of a non-sectarian, non-denominational approach to evoking your healing response, and is distinctly helpful.

Combine foods according to Food Combining for Better Digestion in order get the most efficient assimilation of nutrients from the foods you eat. This is Page 19 in the Alkaline Way Guide.

Have your digestion evaluated by a Comprehensive Stool Analysis.

Use special, biologically active dichromatic green lights. These are known as PAR38 (150 watt green) and are made by GE and Sylvania. These are available from *Thinking of You* at 800-806-8671. Direct the light at the face from a distance of about 5 feet for about 20 minutes daily: before bed and on rising are particularly good times. Refer to Light Therapy: Page 109 in the Alkaline Way Guide.

Exercise using the rebounder-type trampoline for 15 minutes twice a day . Rebounder-type trampolines can be purchased at your local sporting goods store. Refer to Distress Busting: Central Health Promoting Actions - Rebounder Trampoline: Page 106 in The Alkaline Way Guide

Take a daily salt and soda bath. The Epsom salt (Magnesium Sulfate) electrolyte improves the electrical conductivity of the skin and the alkaline baking soda helps rid the skin of acid residue deep in the pores. Put one half cup each of Epsom salts and baking soda in a tub of warm (not hot) water. Soak for 10-15 minutes and shower thereafter, gently rubbing the skin with a loofa. Refer to Distress Busting: Central Health Promoting Actions - Salt and Soda Baths for more information: Page 91 in The Alkaline Way Guide

Receive traditional acupuncture [6-8 sessions to determine effectiveness] from a traditional acupuncturist near you. Ask your physician for a referral.

Grapeseed Oil

<u>History/Discussion:</u> Grapeseed oil has half the saturated fat of olive oil. It is rich in antioxidants and has a high smoking point (the temperature must get very high before it begins to chemically decompose).

<u>Sources of Exposure</u>: Grape seed oil is used for: salad dressings, marinades, deep frying, flavored oils, baking, massage oil, sunburn repair lotion, hair products, body hygiene creams, lip balm and hand creams.

<u>Substitutions</u>: Other oils like sunflower, safflower, peanut, sesame, and canola (assuming that you do not react to them).

Sulfite/Metabisulfite

<u>Items Tested:</u> Sulfiting agents are used for a variety of preservative properties including controlling microbial growth, preventing browning, spoilage and bleaching of some foods. Six sulfiting agents are currently considered by the FDA to be safe as chemical preservatives. These are sulfur dioxide, sodium sulfite, sodium and potassium bisulfite and sodium and potassium metabisulfite.

<u>History/Discussion:</u> Sulfites have been used for many years in foods and pharmaceuticals. They were approved for use in the US as long ago as the 1800's. In recent years, however, the safety of sulfites in foods and drugs has been questioned. Sulfites can cause severe allergic reactions in sensitive individuals resulting in breathing difficulties, wheezing, asthma, hives, severe itching, nausea, vomiting, diarrhea, abdominal pain and cramping, headaches and, in some cases, anaphylactic (allergic) shock and death. Asthmatics, especially steroid-dependent asthmatics, are particularly sensitive to sulfites. Some 10 percent of the population is asthmatic and an estimated 2 to 10 percent of all asthmatics are sulfite-sensitive and are at marked risk for severe reactions. Not all sulfite-sensitive people are asthmatic, but asthmatics are at greatest risk for severe reactions. Vitamin B12 and molybdenum may be helpful in decreasing one's reactivity to sulfites, but should not replace avoidance. In almost all applications, erythroate and ascorbate can be substituted, avoiding sulfite risk.

Sources of Exposure: Sulfites and metabisulfites may appear as sulfite, sodium or potassium metabisulfite, sodium or potassium bisulfite, sodium sulfite, or sulfur dioxide in ingredient listings. Common sources of exposure (always read labels) include alcoholic beverages (wine, beer, cocktail mixes, wine coolers), baked goods (cookies, crackers, mixes including dried fruits or vegetables, pie crust, pizza crust, quick crust, flour tortillas), beverage bases (dried citrus fruit base, bottled beverages, mixes, cider, root beer), condiments (horseradish, onion and pickle relishes, pickles, olives, salad dressing mixes, wine vinegar), confections, frostings and fillings (brown, raw, powdered or white sugar derived from sugar beets, fruit fillings, gelatin, pectin, jelling agents), dairy product analogs (filled milk - skim milk enriched in fat content by addition of vegetable oils), fish and shellfish (fresh, frozen, canned or dried shrimp, frozen lobster and scallops, canned clams, dried cod), processed fruits and vegetables (canned, bottled or frozen juices; canned, dried, frozen or pickled fruits or vegetables; jams and jellies, maraschino cherries, shredded coconut, instant mashed potatoes, potato salad), soy protein products, trail mixes, canned or dried soups or mixes, sweet sauces or syrups (corn syrup, high-fructose corn syrup, maple syrup, pancake syrup, molasses, fruit toppings), and teas (instant or liquid concentrates).

Caffeine

<u>Item Tested:</u> Caffeine is an odorless, white powder with a bitter taste that occurs naturally in coffee, cola, guarana paste, tea and kola nuts.

History/Discussion: Caffeine is the number one psychoactive drug in the US.

Consumption of caffeine in considerable amounts can lead to various adverse health effects including:

- Over-arousal of the nervous system causing irritability, insomnia, anxiety, & panic attacks
- Rebound tiredness and fatigue, especially in sensitive individuals
- Increased blood pressure (hypertension)
- Increased heart rate (tachycardia) and arrhythmias (Paroxysmal Atrial Tachycardia, PAT)
- Increased serum cholesterol levels
- Decreased immune function (animal studies)
- Fibrocystic breast disease

<u>Sources of Exposure:</u> Caffeine is a common ingredient in many over-the-counter and non-prescription medications as well as being a component of coffee, tea, cola, chocolate/cocoa, guarana, and many sodas (see list below).

Items Commonly Containing Caffeine Coffee, 7 oz (207 ml) 80 - 135 mg Decaf 3 - 4 mg Espresso, 1 shot, 1.5 - 2 oz (44 - 59 ml) 100 mg Tea Iced, 12 oz (355 ml) 70 mg **Brewed** 40 - 60 mg Cocoa Chocolate, Cadbury, 1 oz (28 g) 15 mg Chocolate Milk, 8 oz (237 ml) 8 mg Hot cocoa mix, 1 pkg 5 mg Soda, 12 oz (355 ml) Coca-Cola and Diet 45.6 mg Pepsi 37.2 mg Diet Pepsi 35.4 mg Dr. Pepper 39.6 mg Mountain Dew 55.0 mg (0 mg in Canada) Jolt 71.2 mg Excedrin 65 mg Vivarin 200 mg Guarana 5% by weight, 25 mg caffeine in 500 mg of whole guarana seed

Substitutions: Coffee alternatives include hot spring or purified water with lemon, ginger tea, herb teas and fresh juice.

Carmoisine

Item Tested: Carmiosine, a red coloring agent. Also called Azorubine, Acid Red 14, Azorubin, Brilliant carmoisine

History/Discussion: Carmoisine is a bluish-red coloring and used widely in the UK.

In the United States it is not allowed in foods, drugs or cosmetics but is used in technical applications as a coloring agent for cleaners, marking pens, water colors, poster paints and the like. It is used in foods in Mexico and South America as well as parts of Asia. Carmoisine is banned in the US, Canada, Japan, Norway and Sweden. The UK is in the process of trying to ban this colorant and many food manufacturers are voluntarily removing it from their products. It is a water-soluble color.

<u>Sources of Exposure:</u> Carmoisine may be consumed in foods made in the various countries where it is still allowed, such as Mexico, much of South America and parts of Asia. It is found in soda, marzipan products, jams, preserves, jelly. Exposure to carmoisine also comes from the use of water colors, poster paints, marking pens, etc.

Substitutions: Any non-reactive coloring agent.

Annatto

Item Tested: Annatto, sometimes called Roucou,

History/Discussion: Annatto is a derivative of the achiote trees of tropical regions of the Americas, used to produce a red food coloring and also as a flavoring. Its scent is described as "slightly peppery with a hint of nutmeg" and flavor as "slightly sweet and peppery". Annatto is produced from the reddish pulp which surrounds the seed of the achiote (Bixa orellana L.). Annatto is commonly found in Latin America and Caribbean cuisines as both a coloring agent and for flavoring. Central and South American natives use the seeds to make a body paint, and lipstick. For this reason, the achiote is sometimes called the lipstick-tree. Achiote, otherwise referred to as annatto or the Lipstick tree, originated in South America and has spread in popularity to many parts of Asia. It is very popular in Philippine cooking. It grows as a dense small tree or shrub. The heart shaped fruits are brown or reddish brown at maturity, and are covered with short stiff hairs. When fully mature the fruits split open exposing the numerous dark red seeds. While the fruit itself is not edible, the orange-red pulp that covers the seed is used as a commercial food colouring and dye (similar to turmeric). The achiote dye is prepared by stirring the seeds in water, and is popular in South America and Asia. In the Philippine Islands the seeds are ground and used as a condiment. Annatto provides a bright and exotic appearance for many kinds of dishes. It is also used in cosmetics and textile manufacturing. Note: Because it is a natural colorant companies using annatto may label their products "all natural" or "no artificial colors".

<u>Sources of Exposure:</u> It is used in many cheeses (e.g., Cheddar, Red Leicester, and Brie), margarine, butter, rice, smoked fish and custard powder. May also be used to color rice, desserts, and other foods.

<u>Substitutions:</u> Any of the non-toxic natural colors from food and/or plants.

2-Methyl Pentane

<u>Item Tested:</u> Pentanes are aliphatic solvents and are taken almost exclusively from crude oil. 2-methyl pentane has six carbons in its molecule and is almost always found associated with another six carbon molecule, hexane. Isohexane is a synonym for 2-methyl pentane.

History/Discussion: 2-Methyl pentane affects our bodies in many ways. On our skin it causes irritation, redness, swelling and changes in the underlying color. It damages nerves, which causes weakness and numbness of hands and feet and difficulty walking, and has a narcotic-like effect when it accumulates in the body. It causes irritation of our eyes and the linings of our mouth and lungs. Most commonly, the highest level of exposure to 2-methyl pentane occurs in the workplace. People who are sensitive to chemicals, however, have been noted to have toxic levels in their bodies without occupational exposure. This is probably due to exposure to gasoline, its vapors or other solvents. The understanding of the toxicity of 2-methyl pentane was not learned from studying this molecule itself, but from studying its close cousin hexane. To prove that someone has been recently exposed to 2-methyl pentane, its level is measured in one's urine. There has been a connection shown between how much comes out in the urine and how much damage to nerves exists. Realizing that people are getting sick from this and similar compounds has stimulated a new area of research to understand and get control of this problem. ELISA/ACT is the first procedure that can identify individual immunotoxic, hypersensitivity reactions to 2-methyl pentane.

Sources of Exposure: Hexane, and consequently 2-methyl pentane, is found in many manufactured items. It is used in glues, varnishes, dental cements, some oils used in food preparation, and, most importantly, in unleaded gasoline. Gasoline contains up to 9.19% 2-methyl pentane. This chemical has been found in the blood of a large subset (68%) of chemically sensitive individuals who may have inhaled it from ambient air, or from direct contact with gas fumes at the pump or in traffic. Improvement in the chemically sensitive patients contaminated with 2-methyl pentane parallels a decrease of this chemical in their blood.

<u>Suggestions for those hypersensitive to 2-Methyl Pentane:</u> Consume pure water. Drink pure spring, filtered or purified water and bathe with filtered water. For bathing purposes you can obtain either a "whole house" water filtration system or a simple carbon filter that attaches to your shower head. Filter your home and/or work place and/or auto air as necessary with a HEPA filter. Avoid gasoline fumes, exhaust and exposure to solvents.

Penicillamine

<u>Item Tested:</u> Penicillamine, 3 Mercapto-D-valine is a non-metabolized amino acid.

<u>History/Discussion:</u> Penicillamine is a chelating agent used in the treatment of lead poisoning, copper overload (Wilson's Disease), mercury overload and heavy metal toxicity in general. It is also used as a drug treatment for rheumatoid arthritis where it appears to inhibit collagen formation.

Penicillamine is a recognized metabolite of penicillin. It is now, however, produced synthetically. Synthetically produced Penicillamine contains no penicillin antigen.

Short term, occasional use of Penicillamine as a chelating agent, as per the protocol of Jaffe, 1996, is generally safe and effective. Longer term, daily use of this drug can lead to alternations in the white blood cells and damage to cell cross linking which has been associated with a lupus-like syndrome. Myasthenic syndrome is another adverse reaction associated only with long term use of Penicillamine.

Sources of Exposure: Penicillamine is sold under the trade names of Cupramine, Depen and D-Penamine.

<u>Substitutions:</u> Non-chemical agents which help to remove heavy metals from the body include Vitamin C, garlic, the sulfur amino acids methionine and cysteine, adequate water, higher fiber diets and sauna therapy.

Barley

<u>History/Discussion</u>: Barley is a member of the *Gramineae* (grass) family. It was known to the ancient Greeks, Romans, Chinese, and Egyptians and was the chief bread material in Europe as late as the 16th century. It probably originated in North Africa and Southeast Asia.

Sources of Exposure: Barley can be found in hot cereals, as pearled barley in soups, in the form of barley malt and barley green. Malt is obtained from barley that has been left to ferment. Malted barley is used in brewing, with 10 percent of the world's crop going into the production of beer. Barley malt is also used as a sweetener in many foods including health food cereals, candies, and non dairy milk substitutes such as soy and rice milks. Barley may be a part of hydrolyzed vegetable protein.

<u>Substitutions</u>: Any of the other non-reactive grains.

Oats

<u>History/Discussion:</u> Oats are suited to cultivation in cold, damp climates and came to be a popular grain in Ireland, Northern England and Scotland. In the early 1600's explorers brought oats to New England. The bran from oat is well known as a water soluble bran which attracts water into the bowel, corrects constipation and increases the excretion of cholesterol. Oats contain a higher percentage of fat than other cultivated grains, thus they impact warmth and stamina. Oats also contain antioxidants which allow for rolled oats, cut oats and oat flour to be longer-lasting than wheat flour. It is also one of the few grains that has an alkalinizing effect on the body.

<u>Sources of Exposure:</u> Oats in the form of flour is found in oat breads and selected shortbread cookies. Other oat products include cold cereals like Cheerios, hot oatmeal cereal and oat groats

<u>Substitutions</u>: Any other non-reactive whole grain.

Tea, Black

<u>History/Discussion:</u> Tea contains 1-5% caffeine. If you are reactive to black tea or caffeine we recommend that you avoid all commercial tea blends.

<u>Sources of Exposure:</u> This includes all iced teas, English teas, Chinese green tea from which black tea is made, Oolong tea, Bancha (twig) tea, Sencha tea, and Calli tea.

Substitutions: Herb teas are a good alternative, unless one is sensitive to any of the herbs, Yerba mate.

Bean, Pinto, Frijole

History/Discussion: The pinto bean or frijole is a member of the Fabaceae (legume) family.

Sources of Exposure: Vegetarian dishes, soups, salads and other processed foods (check labels).

Substitutions: Mung, lima, kidney beans or any other non-reactive bean or vegetable of choice.

Note: Avoidance of specific foods to which you react is sufficient. There is no added benefit in avoiding a complete food family unless specifically directed to.

Yogurt (Cow)

Items Tested: The **DAIRY** category includes Butter, Whole; Butter, Clarified (Ghee); Cheese, Brick (Cow); Cheese, Cottage (Cow); Cheese, Parmesan (Cow); Cheese, Processed (Cow); Casein; Lactalbumin; Lactoglobulin; Milk, Pasteurized (Cow); Milk, Raw (Cow); and Yogurt (Cow). Casein, Lactalbumin and Lactoglobulin are various proteins found in dairy products. Ghee or clarified butter is a derivative of butter. It is made by melting butter and removing all the milk solids.

<u>History/Discussion:</u> If you are reactive to one or more products in the cow dairy family, it will be listed on your results in bold as **DAIRY**. This is done to draw your attention to the greater possibility of cross-reactivity to other dairy products, possibly resulting in the development of more reactions within this group. Therefore, it is recommended that you avoid all cow dairy products and substitute as described below.

<u>Substitutions</u>: The only exception to this avoidance of all dairy recommendations involves organic ghee. Ghee or clarified butter is a derivative of butter. It is made by melting butter and removing all the milk solids. If you are shown sensitive to whole butter but not to clarified butter (ghee) you may try using organic ghee while avoiding whole butter. Soy, goat and sheep yogurt are other options.

Chestnut

<u>History/Discussion:</u> American chestnuts were a dietary staple of the American Indians who taught the Pilgrims to cook them in stews or grind them into flour for bread.

Chestnuts can be enjoyed whole as a tasty snack. They can also be mashed, pickled, chopped, minced, or sliced. They can be added to sauces or soups as a thickener and flavor enhancer. Because of their starchiness, cooked chestnuts can be served as a vegetable and mashed like potatoes

Sources of Exposure: Whole chestnuts and products made with chestnuts.

Substitutions: Other soft nuts.

Peppermint

Sources of Exposure: Mint candies and gum, toothpaste, mouthwashes and herb teas.

Substitutes: Non-mint varieties.

Arrowroot

<u>History/Discussion</u>: Arrowroot is a starch from the arrowroot family.

Sources of Exposure: Commercial foods (check labels).

Substitutions: Other non-reactive spices and starches.

Note: Avoidance of specific foods to which you react is sufficient. There is no added benefit in avoiding a complete food family unless specifically directed to.

MSG (Monosodium Glutamate)

Items Tested: The commercial glutamate-rich product base

A technical point: the commercial preparations described have processing components that are immune reactive and may provoke symptoms. While this is referred to as MSG, pure amino acid glutamate (the 1 form)and its sodium salt are not what provokes the reactions. We use the term MSG here as it is used in the food industry and as you would be exposed to it rather than in a strict chemical sense

<u>History/Discussion:</u> MSG is used as a flavor enhancer due to its excitatory action on sensory taste receptors. The substance has been used as a flavor enhancer/seasoning for many years, being introduced into the US market in the early l950's. Many people are familiar with MSG because of its proposed relationship to the "Chinese Restaurant Syndrome", a condition characterized by numbness, weakness, heart palpitations, flushing, cold sweat, headaches, hives, and asthma. Those persons who are sensitive to MSG are particularly susceptible to this condition. MSG may cause hyperactivity in children and needs to be further studied for its mutagenic (ability to cause mutations) and reproductive effects. Vitamin B6 and magnesium may help reduce the symptoms caused by MSG.

<u>Sources of Exposure:</u> It is found in many **processed, prepared and packaged foods**, especially meat tenderizers and seasoning products, sauces and gravies, condiments, soups, pickles, candy, and baked goods. MSG is one of the most common hidden additives in restaurant food.

Disodium guanylate and disodium inosinate are other additives that serve to increase the effect of MSG; their presence implies that MSG is present as well.

Some common MSG synonyms:

Autolyzed Yeast Extract (Hidden MSG)

Textured or Hydrolyzed Proteins (Hidden MSG and GMO)

Hydrolyzed Corn (Hidden MSG and GMO)

Modified Starches (Hidden MSG or Possible GMO)

Natural Flavors (Possible Hidden MSG)

Disodium Inosinate or Disodium Guanylate (MSG enhancers)

See the Truth in Labeling Campaign's website at www.truthinlabeling.org.

Synonyms and items that always contain MSG: Glutamate, Monosodium glutamate, Monopotassium glutamate, Glutamic acid, Calcium caseinate, Sodium caseinate, Gelatin (used in commercial products like Jello ®), , Hydrolyzed protein, Yeast extract, Yeast food, Yeast nutrient, Autolyzed yeast

Items that often contain MSG or create MSG during processing/storeage: Textured protein, "Flavors"/"flavorings", "Natural flavorings", Natural pork flavoring, Natural beef flavoring, Natural chicken flavoring, Bouillon, Stock, Broth, Malt flavoring, Barley malt, Malt extract, "Seasonings", Carrageenan, Soy sauce, Soy sauce extract, Soy protein, Soy protein concentrate, Soy protein isolate, Pectin, Maltodextrin, Whey protein, Whey protein isolate, Whey protein concentrate, Protease, Protease enzymes, Enzymes, and any items that are "Enzyme modified", "Protein fortified", "Ultrapasteurized", or "Fermented".

Note: Natural whole foods containing yeast e.g freshly baked bread, pure gelatin, whole soy bean, and traditionally fermented foods should not contain MSG. Be extra cautious when you see a processed food item. Organic products are generally the better choice here.

Methyl paraben

<u>Item Tested:</u> Methylparaben, also methyl paraben, one of the parabens, is a preservative with the chemical formula CH3 (C6H4(OH)COO). It is the methyl ester of p-hydroxybenzoic acid.

<u>History/Discussion:</u> Methylparaben is produced naturally and found in several fruits, primarily blueberries, along with other parabens. Methyl and propylparabens are considered GRAS (generally regarded as safe) for food and cosmetic antibacterial preservation. Methylparaben is readily metabolized by common soil bacteria, making it completely biodegradable.

Methylparaben is readily absorbed from the gastrointestinal tract or through the skin. It is hydrolyzed to p-hydroxybenzoic acid and rapidly excreted without accumulation in the body. In a population with normal skin, methylparaben is practically non-irritating and non-sensitizing; however, allergic reactions to ingested parabens have been reported.

Studies indicate that methylparaben applied on the skin reacts with UVB leading to increased skin aging and DNA damage.

<u>Sources of Exposure:</u> Methylparaben is an anti-fungal agent often used in a variety of cosmetics and personal care products. It is also used as a food preservative and has the E number E218.

Methylparaben is commonly used as a fungicide in Drosophila food media. Usage of methylparaben is known to slow Drosophila growth rate in the larval and pupal stages.

FD&C Yellow #5

Item Tested: FD&C Yellow #5 food color is also known as Tartrazine, Acid Yellow or Lemon Yellow.

<u>History/Discussion:</u> FD&C Yellow # 5, or Tartrazine, is bright orange-yellow powder which is freely soluble in water. FD&C Yellow # 5 is one of the most widely used color additive in food, drugs, and cosmetics. Originally a coal-tar derivative, it is a pyrazole coloring agent. FD&C Yellow # 5 has provoked asthma in some individuals and may cause hives in some patients. In particular it can cause allergic reactions in persons sensitive to aspirin. Some aspirin sensitive patients have been reported to develop life-threatening asthmatic symptoms upon ingestion of this coloring. The FDA requires labeling of FD & C Yellow # 5 in food, drugs and cosmetics.

Sources of Exposure: FD&C Yellow # 5 is used in some prepared breakfast cereals, imitation strawberry jelly, bottled soft drinks, gelatin desserts, ice cream, sherbets, custards, dry drink powders, candy, confections, bakery products, preserves, spaghetti and puddings. Also used as a coloring in hair rinses, hair-waving fluids, and in bath salts. FD&C Yellow # 5 is also used as a dye for wool and silk. Efforts were made to ban this color in over-the-counter pain relievers, antihistamines, oral decongestants, and prescription anti-inflammatory drugs. It is still available in these products, however.

<u>Substitutions</u>: Any of the non-toxic natural colors from food and/or plants.

Chlordane

<u>Items Tested:</u> Chlordane is another of the organochlorine insecticides belonging to the cyclodiene family. It is a manmade chemical that was registered for use as a pesticide in the U.S. from 1948 to recently. Chlordane is not a single chemical but is a mixture of more than 50 chemicals. Because it does not dissolve in water, before it can be used, it must be placed in water with emulsifiers (soap-like substances) to make a milky-looking mixture of liquid particles.

<u>History/Discussion:</u> It comes as a viscous, amber liquid and was used as an agricultural insecticide, especially for corn and for control of cutworms, ants, root weevils, grasshoppers and bugs. In 1976 it ranked as the 11th most frequently used agricultural pesticide. All agricultural uses of chlordane were voluntarily canceled in 1983. Interestingly, its most effective use was for exterminating termites, as it stays in the environment for over 25 years. Beginning in 1987 chlordane could only be used for the exterior of buildings to control termites. In 1988, the Environmental Protection Agency banned all uses of the compound. Chlordane affects the nervous system and the digestive system Many persons believe that chlordane in low concentrations is minimally toxic and low dose exposure should induce negligible symptoms. However, chlordane does accumulate due to magnification within the food chain. It builds up in the tissues of fish, birds and mammals. Also, chlordane is very stable, breaks down slowly and can stay in the soil for over 20 years.

Sources of Exposure: According to the Agency for Toxic Substances Registry, almost every American has been exposed to small amounts of this chemical because it has been used on food crops (such as corn and citrus) and in houses to stop termites. The highest exposure today, the Agency reports, is to people living in houses that were treated with chlordane for termites (small amounts of chlordane stay in the indoor air of houses for many years after treatment) and from eating foods prepared from plants grown on chlordane-treated fields and the fat of meat from animals that eat grass from chlordane-treated fields. Contact with chlordane contaminated soil is also a possible source of exposure. The compound stays in the environment for years (25 or more) and can still be found in food. For example, some fish in the Great Lake have been found to contain significant amounts of chlordane. Some of the trade names for chlordane include Octachlor and Veliscol.

Recommendations for those hypersensitive to Chlordane: Consume pure water. Drink pure spring, filtered or purified water and bathe with filtered water. For bathing purposes you can obtain either a "whole house" water filtration system or a simple carbon filter that attaches to your shower head. Consume organic foods which are free of pesticides and solvents. The popularity and availability of organic foods is growing daily with increased public awareness about the importance of pure, nutrient-dense food. Many large grocery stores now carry organic foods. Also, check your local area for health food stores, food cooperatives and organic farm cooperatives. Filter your home and/or work place air as necessary with a HEPA filter. Avoid solvents and use them only as necessary in well ventilated areas.

Vinyl Chloride

<u>Item Tested:</u> Vinyl chloride is a man-made chemical. It is a colorless gas at room temperature but is normally stored under pressure and used as a liquid. It has a mild, sweet odor that can be detected at 300 parts per million, which is too high to provide adequate warning of danger. Vinyl chloride is soluble in fats and organic solvents, and is only slightly soluble in water.

<u>History/Discussion:</u> Most of the vinyl chloride produced in the United States is used to make polyvinyl chloride (PVC). The vinyl chlorides are strong irritants, and cause slowing of brain function and intoxication similar to alcohol.

Sources of Exposure: A majority of people are exposed to vinyl chlorides since they are produced in great quantities in this country and found mainly in urban air. Vinyl chloride can be found in the air from its use in aerosol sprays, as an intermediate in the production of many chemical compounds including poly vinyl chloride, from vinyl chloride production plants themselves, volatilization from new plastic parts and upholstery in car interiors, the burning of PVC products and other plastics, and in small amounts from tobacco smoke. Many consumer goods including foods and beverages are packaged in various forms of vinyl chloride. Small amounts of residual vinyl chloride can migrate into the packaged contents and be consumed. Both soft and hard plastics containing vinyl are known to leach into the substances with which they come in contact. This leaching is especially true of the softer container, such as wrappings for foods and intravenous containers as well as drinking water containers. Plastic cooking bags and the heating of plastic food containers in microwave ovens allow of the release of even more unwanted chemicals. It is estimated that from 70 to 80 percent of all food is packaged in various polymers, some of which contain potential cancer-causing agents. Its sweet, pleasant smell is the main component in what people call "new car smell", as the interiors of most cars use large amounts of plastic derived from vinyl chloride. Residual monomers can also be leached into the drinking water from new PVC piping. Ground water can also be contaminated with vinyl chloride. Vinyl chloride may remain in the ground water for months or years. Vinyl chloride has been found in 133 of the 1177 waste sites on the National Priorities List. Vinyl chloride has sometimes been found as a contaminant and/or by-product in the production of surgical/cosmetic implants.

Suggestions for those hypersensitive to Vinyl Chloride: Consume pure water. Drink pure spring, filtered or purified water and bathe with filtered water. Buy and store water in glass containers. Consume organic foods which are free of pesticides and solvents. The popularity and availability of organic foods is growing daily with increased public awareness about the importance of pure, nutrient-dense food. Many large grocery stores now carry organic foods. Also, check your area for local health food stores, food cooperatives and organic farm cooperatives. Store food in glass or enameled containers. Avoid contact of your food with plastic containers or food wraps. Use wax paper in direct contact with food as an alternative. Filter your home and/or work place air as necessary with a HEPA filter. Avoid exposure to aerosol sprays, tobacco smoke, plastic food and water containers and food wraps, plastic shower curtains, etc. Ventilate areas containing items made of plastic and vinyl.

Mushroom, Shiitake

<u>Items Tested:</u> The shiitake mushroom is a member of the Fungus kingdom and is commonly known as Japanese Forest Mushroom. It is a firm, fleshy mushroom that is longer and darker than commercial mushrooms and has a wider, umbrella-like cap.

History/Discussion: The shiitake mushroom is known for its strong, succulent flavor and its medicinal powers. The shiitake mushroom is a common element in the Japanese diet and is regarded there as a protector against cancer. It has a long history of use in Oriental medicine and, more recently, scientific research is substantiating many of its historical uses. It has been demonstrated to have anti-tumor properties and anti-viral effects related to its immune stimulating activity and cholesterol lowering effects. Particular research attention has been given to its polysaccharide components. It is also a rich source of some vitamins and minerals, including B12. For research references see, Werbach, M. and Murray, M., Botanical Influences on Illness. Tarzana, Ca: Third Line Press, 1994. (105-106).

<u>Sources of Exposure:</u> Shiitake mushrooms are now widely available in natural, macrobiotic, Asian, and gourmet-food markets and may be found in gourmet and Asian cuisine. They can be purchased dried or fresh.

<u>Substitutions:</u> Non-reactive mushrooms and vegetables.

Water chestnut

<u>History/Discussion</u>: The water chestnut, also called the Chinese water chestnut or the water caltrop, is a tuber vegetable that resembles a chestnut in color and shape. Originating in Southeast Asia, water chestnuts are the roots of an aquatic plant that grows in freshwater ponds, marshes and lakes, and in slow-moving rivers and streams.

Sources of Exposure: Fresh and canned water chestnuts. They are commonly associated with Chinese cooking, but now in other cuisines as well.

Substitutions: Celery, bamboo shoots (assuming you do not react to them).

Ampicillin

Item Tested: Ampicillin is a form of penicillin known as an "extended-spectrum aminopenicillin'.

History/Discussion: Ampicillin is a beta-lactam antibiotic, a semi-synthetic antibiotic structurally related to penicillin. Ampicillin therapy is associated with a higher incidence of rash than are other penicillins; ten percent as opposed to two percent. Most of the rashes associated with ampicillin occur at least one week after institution of therapy and occasionally as late as the third or fourth week after treatment has been discontinued.

Sources of Exposure: Ampicillin is sold under various trade names including Augmentin, Clavulin, Alphamox, Amoxil, Trimox, Utimox and Wymox. Ampicillin is used in veterinary medicine as well as with humans, and therefore animal products may contain traces of the drug. This is another reason why those seeking to lower their immunologic load, increase host resistance and regain health should consume biodynamically or organically grown foods, including organic flesh food and dairy products.

<u>Substitutions</u>: Other non-reactive antibiotics. At times natural herbal antibiotics and antioxidant nutrient supplement can replace chemical antibiotics. The use of a fully buffered Vitamin C (as the PERQUE Buffered Ascorbate, call our Client Services department, 800-553-5472 for protocol) and a quercetin with proanthocyanidins (as the PERQUE Repair Guard, 1000 mg two to four times a day) is helpful. High dose echinacea (1 tablespoon a day for 5 days a week) is both antibiotic and immune enhancing. Other herbs with an antibiotic action include astragalus, berberine (as from goldenseal), Oregon grape, barberry root, and garlic.

Streptomycin

<u>Item Tested:</u> Streptomycin is an antibiotic agent obtained from the soil organism, *Streptomyces griseus*.

<u>History/Discussion</u>: This antibiotic exhibits its action by inhibiting bacteria protein synthesis. Streptomycin is active against the tuberculosis bacillus and a large number of gram-positive and gram-negative bacteria. It is used as an antibacterial agent in humans as well as in animals. Adverse reactions can include hypersensitive reactions including rash, fever, hives, angioneurotic edema, headache and transient reduction white blood cells. Dermatitis, tinnitus, vertigo and kidney toxicity can also occur.

Sources of Exposure: The major source of exposure is from use of the antibiotic itself. Traces of the drugs could also remain in animal products obtained from animals treated with Streptomycin. This is another reason why those seeking to lower their immunologic load, increase host resistance and regain health should consume biodynamically or organically grown foods including organic flesh food and dairy products.

<u>Substitutions:</u> Other non-reactive antibiotics. At times natural herbal antibiotics and antioxidant nutrient supplement can replace chemical antibiotics. The use of a fully buffered Vitamin C (as the PERQUE Buffered Ascorbate, call our Client Services department, 800-553-5472 for protocol) and a quercetin with proanthocyanidins (as the PERQUE Bio Quercetin, 1000 mg two to four times a day) is helpful. High dose echinacea (1 tablespoon a day for 5 days a week) is both antibiotic and immune enhancing. Other herbs with an antibiotic action include astragalus, berberine (as from goldenseal), Oregon grape, barberry root, and garlic.

COW DAIRY

<u>Items Tested:</u> The **DAIRY** category includes Butter, Whole; Butter, Clarified (Ghee); Cheese, Brick (Cow); Cheese, Cottage (Cow); Cheese, Parmesan (Cow); Cheese, Processed (Cow); Casein; Lactalbumin; Lactoglobulin; Milk, Pasteurized (Cow); Milk, Raw (Cow); and Yogurt (Cow). Casein, Lactalbumin and Lactoglobulin are various proteins found in dairy products. Ghee or clarified butter is a derivative of butter. It is made by melting butter and removing all the milk solids.

<u>History/Discussion</u>: If you are reactive to one or more products in the cow dairy family, it will be listed on your results in bold as **DAIRY**. This is done to draw your attention to the greater possibility of cross-reactivity to other dairy products, possibly resulting in the development of more reactivates in this group. Therefore, it is recommended that you avoid all cow dairy products and substitute as described below.

<u>Substitutions</u>: The exception to this avoidance of all dairy recommendations involves organic ghee. If you are shown sensitive to whole butter but not to clarified butter, which is also known as ghee, you may try using organic ghee while avoiding whole butter. Sheep and goat dairy may be used as substitutes if non reactive.

Report, Sample 78608 10/12/2016

Expected Re-Test Date is 4/15/2017

STRONG REACTIONS

Grape Seed Oil Carmoisine Penicillamine

Sulfite/Metabisulfite Annatto

Caffeine 2-Methyl Pentane

MODERATE REACTIONS

Barley Bean, Pinto/Frijole Peppermint

Oats Yogurt (Cow) Arrowroot FD&C Yellow #5 Mushroom, Shiitake Tea, Black Chestnut MSG (Monosodium Glutamate) Chlordane Water chestnut

Methyl paraben Vinyl Chloride Ampicillin

Streptomycin MODERATE FOOD GROUP(S):

COW DAIRY

ELISA/ACT Biotechnologies, LLC

Rotation Diet Plan for Sample Report 78608

At a glance:

Rotation of foods is often indicated to strengthen the immune system while avoiding allergies and hypersensitivities shown by the LRA by ELISA/ACT tests.

- The enclosed diet outline is based on a 4 day rotation plan.
- Each day provides a list of foods to choose from for that day.
- It is not necessary to eat all the items listed for that day; you may make your choice according to your preference.
- Amounts can be modified based on individual needs or requirements.
- For adequate digestive repair and restoration we provide for a "Juice or Liquids Only Day". This diet plan shows Sunday as the Juice Day. However, you may choose any day.

Please note that the EAB Rotation Diet is designed to help you get started on rotation and can be individualized. It complements the LRA by ELISA/ACT and Alkaline Way health restoration program.

Rotation Diet for Sample Report

Sunday (or Day 1)

Fish					
fish broth					
Fowl					
chicken broth	16-oz	turkey broth	16-oz		
Fruit					
apple juice	8-oz	apricot juice	8-oz	berry juice	8-oz
cherry juice	8-oz	grape juice	8-oz	grapefruit juice	8-oz
lemon juice		melon juice	8-oz	orange juice	8-oz
peach juice	8-oz	pear juice	8-oz	pineapple juice	8-oz
prune juice	8-oz				
Grains					
wheatgrass juice	2-oz				
Meat					
meat broth	16 oz				
Miscellaneous	 S				
herb tea	16 oz	miso broth	16-oz	seaweed broth	8-oz
Mollusks					
clam broth	8-oz				
Spices and Se	asonings				
ginger tea	16-oz				
Sugars					
honey	2-T				
Vegetables					
alfalfa sprouts	as desired	beet	as desired	bell pepper	as desired
broccoli	as desired	cabbage	as desired	carrot juice	as desired
celery	as desired	chive	as desired	cucumber	as desired
garlic	as desired	kale	as desired	lettuce-romaine	as desired
mixed juice	as desired	mixed juice	as desired	onion	as desired
parsley	as desired	spinach	as desired	tomato	as desired
vegetable broth	as desired	watercress	as desired		

Note:

- 1. Plan one juice day per week Sunday or Day 1
- 2. If you are reactive to any yeast, no fruit for first month.
- 3. For menu ideas and recipes, please refer to the Joy of Food Alkaline Way Handbook

Monday

Crustaceans					
lobster	4-oz				
Fish					
anchovy		flounder	4-oz	salmon/lox	4-oz
snapper	4-oz	sole	4-oz	swordfish	4-oz
Fowl					
chicken	4 oz	egg-chicken	2	egg-duck	2
game fowl	4 oz				
Fruit					
apple	4	blackberry	8-oz	currant (dry)	2-oz
lemon	4	lime	4	orange	4
pear	4	persimmon	8-oz	pineapple	8-oz
pomegranate	6-oz	tangerine	4	watermelon	8-oz
Grains					
amaranth		corn		rice(white)	
Meat					
beef	3-oz				
Miscellaneou	ıs				
miso(hatcho)	1-T	sea salt		tapioca	6-oz
Mollusks					
oyster	4-oz				
Nuts and Sec	eds				
flax	2-oz	hazelnut/filbert	2-oz	pecan	2-oz
pistachio	2-oz	sesame/tahini	2-oz		
Oils					
corn oil	1-T	flax seed oil	1-T	olive oil	1-T
sesame oil	1-T				
Spices and S	Seasonings				
curry	_	horseradish		mustard	
paprika		thyme		-	
Sugars					
sucanat	1-T				
Vegetables					
artichoke	8-oz	bell pepper	8-oz	cabbage	8-oz
carrot	8-oz	celery	8-oz	corn	
eggplant	8-oz	green peas	8-oz	lettuce-iceberg	8-oz
lima bean	6-oz	olive	2-oz	onion	6-oz
sweet potato	12-oz	tomato	8-oz		

Tuesday

Z 			
Sheep chees	se 2-oz		
z catfish	4 oz	perch	4-oz
z trout	4-oz		
z goose	4-oz		
blueberry	8-oz	cherry	8-oz
z cranberry	4-oz	figs (dry)	2-oz
z nectarine	4	papaya	8-oz
raisins	2-oz		
quinoa		tritcale	
1.			
z rabbit	3-oz		
oz sea salt		seaweed/kelp	1-oz
z			
Z			
z cashew	2-oz	peanut	2-oz
z sunflower	2-oz		
primrose oil	1-T	safflower oil	1-T
·			
nings			
		ginger	
rosemary			
z cauliflower	6-oz	chick peas	4-oz
Z Caulillower			
z cauliflower z kale		kohlrabi	8-oz
	8 oz		8-oz 4-oz
z kale	8 oz eaf 8-oz	kohlrabi parsley turnip	
	z catfish trout z goose goose blueberry cranberry nectarine raisins quinoa rabbit z rabbit z cashew sunflower primrose oil nings garlic rosemary	sheep cheese 2-oz z catfish 4 oz trout 4-oz z goose 4-oz blueberry 8-oz cranberry 4-oz nectarine 4 raisins 2-oz quinoa z rabbit 3-oz sea salt z cashew 2-oz z sunflower 2-oz primrose oil 1-T nings garlic rosemary	z caffish 4 oz perch z trout 4-oz z goose 4-oz z goose 4-oz z goose 4-oz z cranberry 8-oz cherry z cranberry 4-oz figs (dry) nectarine 4 papaya raisins 2-oz quinoa tritcale z rabbit 3-oz z cashew 2-oz peanut z primrose oil 1-T safflower oil nings garlic rosemary

Wednesday

Crustaceans					
crab	4-oz				
Dairy					
goat cheese	2-oz	goat milk	8-oz		
Fish					
cod	4 oz	haddock	4-oz	halibut	4-oz
tuna	4-oz	turbot/white	4-oz		
Fowl					
turkey	4-oz				
Fruit					
apricot	10	cantaloupe	1	cranberry	8-oz
date	15	grapefruit	2	guava	8 oz
honeydew	1	kiwi	4	mango	2
plum/prune	10	raspberry	8-oz	strawberry	8-oz
Grains					
buckwheat		rye		teff	
Meat					
lamb	3-oz	venison/deer	3-oz		
Miscellaneou					
herb tea	16-oz	sea salt		spirulina	6
Mollusks					
clam	4-oz				
Nuts and See	eds				
almond	2-oz	macademia	2-oz	pumpkin	2-oz
walnut	2-oz	doddoiilid		Partiplant	
Oils					
almond oil	1-T	cod liver oil	1-T	soybean oil	1-T
walnut oil	1-T	COG IIVEI OII	1-1	30yDean Oil	1-1
Spices and S					
basil		bay leaf		cayenne	
chili		oregano		sage	
		0,300		20.30	
Sugars	4 T				
maple	1-T				
Vegetables					
alfalfa sprouts	8-oz	asparagus	8-oz	avocado	8-oz
beet	8 oz	broccoli	8-oz	kidney bean	8-oz
leek	4 oz	mung sprouts	8-oz	navy bean	8-oz
potato	8-oz	radish	3-oz	soy(fermented)	6-oz
spinach	8-oz	squash	8 oz	watercress	4-oz

Thursday

Crustaceans					
lobster	4-oz				
Fish					
anchovy		flounder	4-oz	salmon/lox	4-oz
snapper		sole	4-oz	swordfish	4-oz
Fowl					
chicken	4 oz	egg-chicken	2	egg-duck	2
game fowl	4 oz				
Fruit					
apple	4	blackberry	8-oz	currant (dry)	2-oz
lemon	4	lime	4	orange	4
pear	4	persimmon	8-oz	pineapple	8-oz
pomegranate	6-oz	tangerine	4	watermelon	8-oz
Grains					
amaranth		corn		rice(white)	
Meat					
beef	3-oz				
Miscellaneou	ıs				
miso(hatcho)	1-T	sea salt		tapioca	6-oz
Mollusks					
oyster	4-oz				
Nuts and See	eds				
flax	2 oz	hazelnut/filbert	2-oz	pecan	2-oz
pistachio	2-oz	sesame/tahini	2-oz		
Oils					
corn oil	1-T	flax seed oil	1-T	olive oil	1-T
sesame oil	1-T				
Spices and S	easonings				
curry	J	horseradish		mustard	
paprika		thyme		· -	
Sugars					
sucanat	1-T				
Vegetables					
artichoke	8-oz	bell pepper	8-oz	cabbage	8-oz
carrot	8-oz	celery	8-oz	eggplant	8-oz
green peas	8-oz	lettuce-iceberg	8-oz	lima bean	6-oz
olive	2-oz	onion	6-oz	sweet potato	12-oz
tomato	8-oz				

Friday

Saturday

Crustaceans					
crab	4-oz				
Dairy					
goat cheese	2-oz	goat milk	8-oz		
Fish					
cod	4-oz	haddock	4-oz	halibut	4-oz
tuna	4-oz	turbot/white	4-oz		
Fowl					
turkey	4-oz				
Fruit					
apricot	10	cantaloupe	1	cranberry	8-oz
date	15	grapefruit	2	guava	8-oz
honeydew	1	kiwi	4	mango	2
plum/prune	10	raspberry	8-oz	strawberry	8-oz
Grains					
buckwheat		rye		teff	
Meat					
lamb	3-oz	venison/deer	3-oz		
Miscellaneou	s				
herb tea	16oz	sea salt		spirulina	6
Mollusks					
clam	4-oz				
Nuts and See	ds				
almond	2-oz	macademia	2-oz	pumpkin	2-oz
Oils					
almond oil	1-T	cod liver oil	1-T	soybean oil	1-T
walnut oil	1-T	234 11701 011		30,20011 011	
Spices and So					
bay leaf		cayenne		oregano	
Sugars					
maple	1-T				
Vegetables					
alfalfa sprouts	8-oz	asparagus	8-oz	avocado	8-oz
beet	8-oz	broccoli	8-oz	kidney bean	8-oz
		potato	8-oz	radish	3-oz
muna sprouts	8-0Z	DOIAIO			
mung sprouts soy(fermented)	8-oz 6-oz	spinach	8-oz	squash	8-oz