Smart Life Forum

www.smartlifeforum.org

NEXT MEETING: Thursday, September 16, 2010, at 7pm

Russell Jaffe, MD

on

Physiology First, the Alkaline Way

SHORT PRESENTATION before Dr. Jaffe's talk:

IMPORTANCE OF ULTRASOUND BONE DENSITY TESTING

By Ken Howayeck, DPM

Dr. Howayeck has directed fellowships and preceptorships which have instructed surgeons and medical students in Foot and Ankle Surgery. He has been his profession's state society president, authored three books, and has the current position of Asst. Professor of Surgery at the University of Hawaii School of Medicine. He is a Certified Speaker for the Foundation for Osteoporosis Research and Education, and is the Founder and Director of Five Star On-Site Testing.

Dr. Howayeck actively seeks out opportunities to bring Five Star's Bone Density Screening services, as well his other health screening contacts, to various Northern California locations and employers. He has a new book coming out this month. The title is, "Step In. Sound On. Sound Off." The subtitle is, "Why most People Should Have an Ultrasound Bone Density Test Done, and Why Most Now Should Do So More Often Than Ever"

His presentation will show the important role that ultrasound screening plays today in osteoporosis awareness. Osteoporosis is a huge and growing concern and can be a silent killer. Many of us are unaware of our own fracture risks. During this meeting he will be available for three minute bone density screenings for a cost of $10.

FMBR (Foundation for Mind Being Research) next meeting:
Richard Unger on "Analysis of Finger Prints as Life Prints".
Friday, September 24, 7:30 pm, at Unity Palo Alto, 3391 Middlefield Rd. See fmbr.org for more details.

Presentation Location:

Cubberley Community Ctr.
Room H1

4000 Middlefield Rd.

Palo Alto, CA

In This Issue

Meet Dr. Russell Jaffe, MD

Dr. Jaffe received his AB, MD and PhD (In Biochemistry and Physiology) from Boston University, all in May 1972. Dr. Jaffe's training included Internal Medicine followed by a residency in Clinical Pathology. He is board certified in Clinical Pathology with a subspecialty certification in Chemical Pathology. Dr. Jaffe remained on the permanent senior staff of the NIH Clinical Pathology Department where he continued method innovation and was active in collaborative research with the Laboratory of Experimental Atherosclerosis (of the Heart, Lung, and Blood Institute).

Concurrently, Dr. Jaffe's interests in the mechanisms of health and the evoking of human healing responses led him to apprentice in such healing arts as acupuncture, mindfulness, massage, music, art and color therapy and a variety of eclectic therapeutic approaches. In addition, Dr. Jaffe performed innovative studies of platelet function and blood clotting in relation to the origins of coronary artery and cardiovascular diseases. Among the tests he developed are the early colon cancer-screening test using occult blood detection not interfered with by vitamin C consumption, as well as a variety of tests related to the blood clotting and immune defense and repair systems ("IDRS").

He developed the first method of measuring cell-mediated immunity using a modified ELISA system in a lymphocyte mitogenesis / blastogenesis brief cell culture known as lymphocyte response assays (LRA). This LRA by ELISA/ACT provides an "immunologic fingerprint" of items to which the body is reactive or tolerant.

Dr. Jaffe has contributed over 100 symposium-invited talks, scientific articles or book chapters. Dr. Jaffe received the J.D. Lane award for original research from the United States Public Health Service, the Merck Sharp and Dohme Excellence in Research Award and, in 2003, was recognized as International Research Scientist of the Year, among other recognitions for his work.

Dr. Jaffe is a Fellow of the Health Studies Collegium and Director of ELISA/ACT Biotechnologies, LLC and PERQUE, LLC in Ashburn, Virginia.

Information about Dr Jaffe's work is available from (800) 525-7372 and by email at rjaffe@ELISAACT.com or rjaffe@PERQUE. Dr Jaffe does not maintain a private practice nor is he available for individual consultations. Dr Jaffe's work is to train the next generation of physicians in Physiology First the Alkaline Way.

Future Speakers:

October 21, 2010, Robert Lustig, MD, on The Fructose Epidemic

November 18, Michael Mayer, PhD, on Body Mind Healing

About Smart Life Forum

Smart Life Forum, Inc. is a 501(c)(3) California nonprofit corporation whose primary mission is to provide credible health education to the public with an emphasis on optimal wellness, anti-aging medicine, and longevity.

Annual memberships in Smart Life Forum, Inc. and charitable donations are tax deductible to the extent allowed by law. For information on how to join or make a donation, please visit our website: www.smartlifeforum.org.

For questions, please contact Mike Korek at (650) 941-3058.

Main Presentation:

Physiology First, the Alkaline Way: Immune Defense and Repair System Functions in Good and Ill Health

By Dr. Russell Jaffe, MD

"Physiology First the Alkaline Way" promotes or restores good health by evoking human healing responses by proactive removal of obstacles to recovery. Obstacles include essential or conditionally essential nutrient deficits, toxin exposure above detoxification ability, learned patterns that evoke distress (bad stress) responses more than eustress (good stress) resilience responses. This approach achieves successes by combining individualized essential factor nutritional replenishment based on predictive, evidence based tests with physical and mindfulness practices in a sustainable environment. These integrate as "Physiology First the Alkaline Way". This approach practices proactive primary prevention to avoid autoimmune, chronic and degenerative diseases or induce sustained remission when these 'epidemic of epidemics' of modern times have expressed themselves.

This Smart Life Forum presentation synthesizes three decades of investigations into the determinants of healthy and unhealthy immune defense and repair and related responses. "Immune defense and repair system" (IDRS) functions in good health and in ill health are compared and contrasted. An integrative approach to inter-dependent neuro-immuno-hormonal, digestive, and detoxification systems are included.

This approach demonstrates how forgiving and responsive the body is, including in people who are functionally biologically young and chronologically long-lived. The opposite is also true. People can be functionally old while chronologically young. Indeed a paradox of this time is that younger people are showing signs and symptoms of ill health that in previous decades where only observed in older people. These changes are too quick to be due to genetics. They are due to the losses in self-regulation (homeostasis) and effective self-repair discussed in this article.

Immune System in Good and Ill Health: The Role of Proactive Prevention

In good health, robust and resilient immune mechanisms neutralize any foreign invaders with sufficient reserves to also repair the body from normal wear and tear, and mark abnormal cells for elimination. In ill health, tolerance and homeostatic resilience are lost. Autoimmune and immune dysfunction conditions occur commonly, and commonly together. They are expressions of lost immune defense and repair tolerance and competences. Health Studies Collegium estimates this accounts for one third of all chronic disease. These are the inflammatory conditions, the conditions of cumulative repair deficit that reduce life quality and increase costs of mostly palliative care. Inflammatory markers of repair deficit include elevations of sedimentation rate (sed rate), C reactive protein (hsCRP), tumor necrosis factor (TNF), and some elevations of fibrinogen, ferritin, and micro albumin, among others as discussed below.

Taken together, glucose, insulin, and energy dysregulation are the underlying, physiologic causes of an additional quarter of all chronic disease as the continuum from insulin resistance through obesity and pre-diabetes, to diabetes and its myriad cardiovascular, autoimmune and chronic disease consequences. These are the conditions marked by elevations in homocysteine indicating impaired detoxification and communication, abnormal glucose to insulin ratios, elevations in over sugared proteins such as fructosamine and hemoglobin A1c.

Diabetes as an example of chronic, degenerative, autoimmune (AI) conditions

Diabetes costs. Diabetes cost to the US in 2010 is calculated at $150-$300 Billion.
Diabetes kills. In all forms, consequences of diabetes are by far the greatest killer at over a million lives a year lost prematurely as a result of diabetes complications.

Diabetes is preventable and (largely) reversible. Life-style is sufficient to manage blood sugar, insulin, and energy regulation until a safer more cost and outcome effective treatment is found.

Proactive prevention is superior even to early disease detection both of which yield better results in practice than the current disease management by symptom suppression. More primary prevention leads directly to less disease allowing for a cost and outcome effective care system to function sustainably, competently and compassionately.

Impaired Systems-level Functions

Acquired essential nutrient deficits and/or impaired detoxification competences are common causes of impaired neuro-hormone, immune, digestive, energetic, and detoxification system functions. Impaired repair induces insulin resistance that induces impaired energy production inside cells. This leads to metabolic Syndrome X linked to weight management problems, and insulin glucose energy dysregulation, known as diabetes. 'Downstream' consequences include cardio-, neuro- and reno-vascular diseases that include heart attacks, vascular insufficiency, senility and stroke. As immune systems become increasingly under- fueled and overworked, repair deficits, more commonly known as inflammation, accumulate and are common causes of swelling and discomfort. Concurrently, innate anti-cancer surveillance mechanisms such as natural killer (NK) and cytotoxic T white blood cells are impaired.

Metabolic acidosis, oxidative stress-makers and repair deficit inflammation are by weight of evidence the antecedent necessary and sufficient causes of AI and immune dysfunction conditions that functionally and metabolically overlap with major chronic, degenerative diseases. Individual dispositions determine, for example, if the thyroid, adrenals, pancreas or reproductive glands will be most symptomatically affected by impaired stress adaptation. Depending upon which symptom complex is most prominent, the diagnosis might be either an AI condition or a chronic, degenerative disease; the causes being in common. See Table 1 that follows.

Table 1. Autoimmune (AI) Syndromes and Associated Antigen Type

	Antigens Specific to Host Components [a]					
Clinical Disorder	**A**	**B**	**C**	**D**	**E**	**F**
Lupus Erythematosus	+		+		+	
Sjogren's Syndrome	+				+	
Polymyositis	+		+			
Hepatitis, Chronic Active	+				+	
Connective Tissue Diseases	+					
Diabetes, Insulin Dependent	+	+				+
Pernicious Anemia	+					+
Biliary Cirrhosis, Primary	+					
Thyroiditis	+	+				+
Addison's Syndrome	+					
Vitiligo	+					
Enteropathy, Antigens[2]	+					
Hyperthyroidism (Graves)	+	+				
AIDS/ARC	+		+			+
Myasthenia Gravis		+				
Hemolytic Anemia			+			
Neutropenia		+				
Thrombocytopenia (ITP)			+			
Rheumatoid Arthritis			+		+	
Multiple Sclerosis			+			
Pemphigus vulgaris			+	+		
Infertility (Autoimmune)			+			
Glomerulonephritis				+		
Discoid Lupus			+			
Dense Deposit Disease					+	
Adult Diabetes	+	+	+			
Sjogren's Syndrome	+	+			+	
Pneumonitis/Bronchitis (allergic)			+	+		
Asthma		+		+	+	

Antigen site in cell or tissue:

A = Intracellular B = Receptor C = Membrane D = Extracellular E = Plasma Protein F = Hormone.

Technology to Detect Autoimmune, Chronic, Degenerative Disease Causes

More than half of all American adults and a rapidly growing proportion of young people have an immune system that has shifted from tolerant and resilient, self-regulating, and self-restoring into an imbalanced, aggressive and self-attacking mode known as autoimmunity (AI).

Chronic degenerative diseases either are, or overlap with, AI conditions of differing descriptive names. It is increasingly clear that most heart and vascular chronic diseases are the result of oxidative stress, loss of repair ability, and deficits in essential nutrients, as is common with loss of tolerance in the immune defense and repair system (IDRS).

The LRA by ELISA/ACT™ technology and treatment approach exemplifies Physiology First the Alkaline Way. LRA means lymphocyte response assay. These tests have been developed to test the hypothesis that the causes were exposures of foods of other chemicals to which the body had become hypersensitive, marked by unhealthy antibody, immune complex or T class lymphocyte responses. This concept has been successfully tested in controlled outcome studies in diabetes, fibromyalgia muscle pain and chronic fatigue syndrome. Clinically and by anecdotal report, all autoimmune conditions respond to this approach of indentifying the individually specific exposures that burden and wear down the immune defense and repair system.

Comprehensive identification of provocative substances and personalized plans designed to evoke healing responses are included with LRA tests results. Comprehensive determination of all sources of immune burden is more helpful than non-functional IgG antibody measurement or isolated lymphocyte counting. An evidence-based approach to reducing immune system burden is suggested. Substitution for reactive items coupled with health-promoting diet substitutions, targeted supplementation, and psycho-social health promoting activity recommendations can restore tolerance in most cases.

Through the lymphocyte response assay, ex vivo technology, it is possible to allow living white cells to react in the laboratory just as these lymphocytes do in the body. This ex vivo procedure measures lymphocyte memory white cell reactivity to determine true delayed allergy / hypersensitivity based on the body's long lived memory-carrying white blood cells. A comprehensive, patient-centered, appetizing and interesting plan is offered to promote long-term sustainable healthy practices that bring remission demonstrated through assessments of health restoration, tolerance, and resilience.

By contrast, limitations of other testing systems such as antibody measurement and particle size determination have been elsewhere reported. Results of these tests usually involve simple avoidance. Simple avoidance often provides a symptom remission; however, new sensitivities and symptoms emerge within months if the underlying causes of maldigestion, and essential nutrient deficits and oxidative stress are left unattended.

The Alkaline Way includes a health promoting, nutrient, and fiber-rich largely whole food diet along with targeted supplementation based on individual need. Priority is given to locally vine-ripened, organic or biodynamic sources of foods. Mineral rich water is the primary beverage. Healthier activities, attitudes and environmental awareness are included.

The Alkaline Way plan described here assesses an individual's metabolic balance. Examples include helpful buffering minerals to neutralize excess metabolic cell acids and antioxidants to protect from

oxidative damage, restore cell energy production, rehabilitate mitochondria and reset homeostatic mechanisms. All these enhance core functions with multiple systemic and symptomatic benefits.

Sustained Remissions by Integrative Management in Autoimmunity

Intact homeostatic mechanisms and IDRS (Immune Defense and Repair System) reserves are rare in people with chronic, degenerative and AI (auto-immune) illness, yet can be routinely restored in people who are unwell. In AI, homeostasis and IDRS are profoundly disrupted yet routinely yield to comprehensive care management. The earlier the start, the more cost and outcome-effective.

Physiologic markers of AI include intracellular acidosis that impairs electron transport and reduces energy production while also impairing detoxification. Other markers of AI risk include oxidative stress indicators such as otherwise unexplained elevations in sedimentation rate, ferritin, fibrinogen, TNF, CRP, prealbumin, IL-2, IL-6, and IL-12 among others. Underlying causes include cumulative antioxidant deficits often observed clinically as inflammation.

Impaired methylation is also commonly reflected in elevations in homocysteine above the healthy value of <6 µmol/L. Problems with cell communication, detoxification, and transport result from such impaired methylation. This article reframes these common states in physiologic rather than pathologic terms, and offers integrative approaches to care as evidence-based options to be included as first line comprehensive care. This is what is synthesized as The Alkaline Way.

Advances in molecular biology allow clinical information to be organized on the basis of physiologic causes rather than symptomatic, pathologic consequences. Organizing diagnosis by underlying biochemical or attitudinal disturbance with emphasis on functional capacity and predictive tests provides earlier and more effective points of low risk, low cost therapeutic entry. In clinical practice this is outcome-effective and cost-efficient. This is particularly valuable for the chronic illnesses that have become endemic in our time. This is an application of nanotechnology that nature has conducted since cells were formed.

Recommended Process

The main elements of this Physiology First Alkaline Way immune-strengthening, health-restoring program include:

1. Reduction of true immune reactive burden after predictive tests like LRA.
2. Replacement of individually sufficient essential nutrient antioxidants, buffers, and required cofactors based on functional tests of biochemical individuality.
3. Reduction of toxicant exposure and enhancement of detoxification competencies.
4. Enhancement of immune defense and repair competences along with restoration of tolerance and homeostasis, self-repair, and self-regulation.
5. Mindfulness and relaxation response practices, active meditation, and therapeutic biofeedback provide effective tools for being more aware, more a witness to life than at the mercy of life's vicissitudes.
6. Activity and mobility that is enjoyed including aerobic, weight-bearing, as well as endurance-building, and movement that sustains core body strength.

Auto-Immunity (AI): Repair Deficit, Loss of Tolerance and Homeostasis

When the IDRS attacks rather than defends and repairs, AI is present. Concurrent presence of multiple AI syndromes is routine. AI conditions such adult diabetes; thyroiditis and inflammatory pain conditions like fibromyalgia, arthritis, or migraine headaches are often concurrent. These are often treated in isolation because of the specialists involved in the diverse symptom expressions known as AI.

When routine wear-and-tear is not repaired, the integrity of the extracellular connective tissue scaffolding is impaired. This means the basement membranes glycoproteins, the structural collagens and elastins are not being renewed and the most stressed spots wear out first. A result is increase in tissue permeability. Initially, this tissue permeability increase results in the entry of larger plasma proteins with platelets, dendritic first responder cells and, when needed, lymphocytes, all seeking to induce repair to 'put things right'. When the intestines are affected, this is clinically known as leaky gut syndrome if the repair is incomplete. Too often the lack of essential nutrients or the burdens on the immune system prevent repair from being completed. Cumulative repair deficits are commonly known as inflammation. Appreciating them as repair deficit opens a variety of integrative care options.

A "repair deficit" can be enhanced by over-production and imbalance of stress hormones such as cortisol and DHEA. Neurochemicals of distress such as adrenalin to serotonin imbalance add to hormone receptor resistance. Growth markers such as insulin (IGF1) go up when repair deficits increase and reduce when they are corrected. This makes them useful as clinical correlates of outcome. Buffering mineral deficits result in intracellular metabolic acidosis linked to reduced energy production and impaired ability to safely remove toxins.

Increase in blood-tissue permeability sets the stage for AI and can be provoked by a variety of external or internal antigens perceived as foreign and thus overly burden immune responses.

Causes of repair deficit - also known as inflammation - can be summarized as:

1. Chronic deferral of necessary routine repair due to distress, toxin excess or lack of essential nutrient for IDRS (Immune Defense and Repair System)
2. Depletion of buffering reserve with consequent intracellular acidosis
3. Immunologic overload from repeated foreign antigen exposure
4. Impaired activity patterns
5. Unhealthful rather than healthful learned mental patterns.

Reversing the Repair Deficit: Restore IDRS functions through Physiology First the Alkaline Way

We will now describe beneficial interventions. Sustained remission routinely emerges when these approaches are consistently applied.

1. Alkaline oligo-antigenic diets

IDRS is responsible for recognition and neutralization of foreign 'invaders', for routine repair, and for intercellular communication required to maintain physiologic rhythms. When the foreign antigen load increases, chemical signals of alert or alarm are released. These include adrenergic monoamines, cortisols, insulin, ACTH, and kinins. The effect of these hormone messengers is to defer repair while the immediate need imposed by the foreign antigen assault is attended. When the frequency and intensity of these foreign invasion signals increase, so many repairs may be deferred that the host becomes increasingly susceptible to chronic inflammation. The stage is set for chronic inflammatory conditions. The primary organ system affected is determined by the susceptibility imposed by the individual's life and style of living. This is known as host hospitality.

When dietary consumption patterns provide insufficient minerals to buffer metabolic acids, cell alkaline reserves can be depleted and the intracellular environment become acidotic.

A metabolically alkaline diet means that the food has a buffering effect on cellular chemistry. While the concept of acid of alkaline ash residue is the precursor to metabolic acidity of alkalinity, this can be different from the food's primary chemistry. For example, citrus fruits are alkalinizing because the metabolism of citric and other dicarboxylic acids generates upon metabolism more than twice as much bicarbonate buffer as there is primary acid in the food. This means that citrus fruit and similar foods are acid in the food yet alkaline forming in the body. (See Figure 1. Food & chemical effects on acid/alkaline body chemical balance, on next page). This includes most commonly consumed foods and the degree to which they acidify or alkalinize body chemistry. Immune responses directly and indirectly thus generate substantial amounts of acidic products. In the usual but illness-provoking situation where foreign invasion occurs along with impaired buffering capacity, it is especially important to avoid as many sources of antigen-induced or other causes of acid formation as possible because of their adverse effects on cell metabolism.

See Figure 1 on next page…

Figure 1.

Food & Chemical Effects on Acid / Alkaline Body Chemical Balance™

Most Alkaline	More Alkaline	Low Alkaline	Lowest Alkaline	Food Category	Lowest Acid	Low Acid	More Acid	Most Acid
Baking Soda	Spices/Cinnamon Valerian Licorice •Black Cohash Agave	•Herbs (most): Arnica, Bergamot, Echinacea Chrysanthemum, Ephedra, Feverfew, Goldenseal, Lemongrass Aloe Vera Nettle Angelica	White Willow Bark Slippery Elm Artemesia Annua	Spice/Herb	Curry	Vanilla Stevia	Nutmeg	Pudding/Jam/Jelly
Sea Salt Mineral Water	•Kambucha Molasses Soy Sauce	•Green or Mu Tea Rice Syrup Apple Cider Vinegar	*Sulfite* Ginger Tea •Sucanat •Umeboshi Vinegar	Preservative Beverage Sweetner Vinegar	*MSG* *Kona Coffee* Honey/MapleSyrup Rice Vinegar	*Benzoate* *Alcohol* Black Tea Balsamic Vinegar	*Aspartame* *Coffee* *Saccharin* Red Wine Vinegar	*Table Salt (NaCL)* *Beer, 'Soda'* Yeast/Hops/Malt *Sugar/Cocoa* White/Acetic Vinegar
•Umeboshi Plum		•Sake	•Algae, Blue Green	Therapeutic		*Antihistamines*	*Psychotropics*	*Antibiotics*
			•Ghee (Clarified Butter) Human Breast Milk	Processed Dairy Cow/Human Soy Goat/Sheep	Cream/Butter Yogurt Goat/Sheep Cheese	Cow Milk Aged Cheese Soy Cheese Goat Milk	•Casein, Milk Protein, Cottage Cheese New Cheese Soy Milk	*Processed Cheese* Ice Cream
		•Quail Egg	•Duck Egg	Egg	Chicken Egg			
				Meat Game Fish/Shell Fish	Gelatin/Organs •Venison Fish	Lamb/Mutton Boar/Elk/•Game Meat Mollusks Shell Fish (Whole)	Pork/Veal Bear •Mussel/Squid	Beef Shell Fish (Processed) •Lobster
				Fowl	Wild Duck	Goose/Turkey	Chicken	Pheasant
			Oat 'Grain Coffee' •Quinoa Wild Rice •Amaranth Japonica Rice	Grain Cereal Grass	•Triticale Millet Kasha Brown Rice	Buckwheat Wheat •Spelt/Teff/Kamut Farina/Semolina White Rice	Maize Barley Groat Corn Rye Oat Bran	Barley Processed Flour
Pumpkin Seed	Poppy Seed Cashew Chestnut Pepper	Primrose Oil Sesame Seed Cod Liver Oil Almond •Sprout	Avocado Oil Seeds (most) Coconut Oil Olive/Macadamia Oil Linseed/Flax Oil	Nut Seed/Sprout Oil	Pumpkin Seed Oil Grape Seed Oil Sunflower Oil Pine Nut Canola Oil	Almond Oil Sesame Oil Safflower Oil Tapioca •Seitan or Tofu	Pistachio Seed Chestnut Oil *Lard* Pecan Palm Kernel Oil	*Cottonseed Oil/Meal* Hazelnut Walnut Brazil Nut *Fried Food*
Lentil Brocoflower •Seaweed Nori|Kombu|Wakame|Hijiki Onion/Miso •Daikon/Taro Root •Sea Vegetables (other) Dandelion Greens •Burdock/•Lotus Root Sweet Potato/Yam	Kohlrabi Parsnip/Taro Garlic Asparagus Kale/Parsley Endive/Arugula Mustard Greens Jerusalem Artichoke Ginger Root Broccoli	Potato/Bell Pepper Mushroom/Fungi Cauliflower Cabbage Rutabaga •Salsify/Ginseng Eggplant Pumpkin Collard Greens	Brussel Sprout Beet Chive/Cilantro Celery/Scallion Okra/Cucumber Turnip Greens Squash Artichoke Lettuce Jicama	Bean Vegetable Legume Pulse Root	Spinach Fava Bean Kidney Bean Black-eyed Pea String/Wax Bean Zucchini Chutney Rhubarb	Split Pea Pinto Bean White Bean Navy/Red Bean Aduki Bean Lima or Mung Bean Chard	Green Pea Peanut Snow Pea Legumes (other) Carrot ChickPea/Garbanzo	Soybean Carob
Lime Nectarine Persimmon Raspberry Watermelon Tangerine Pineapple	Grapefruit Canteloupe Honeydew Citrus Olive •Dewberry Loganberry Mango	Lemon Pear Avocado Apple Blackberry Cherry Peach Papaya	Orange Apricot Banana Blueberry Pineapple Juice Raisin, Currant Grape Strawberry	Citrus Fruit Fruit	Coconut Guava •Pickled Fruit Dry Fruit Fig Persimmon Juice •Cherimoya Date	Plum Prune Tomato	Cranberry Pomegranate	

•Therapeutic, gourmet, or exotic items *Italicized items are NOT recommended*

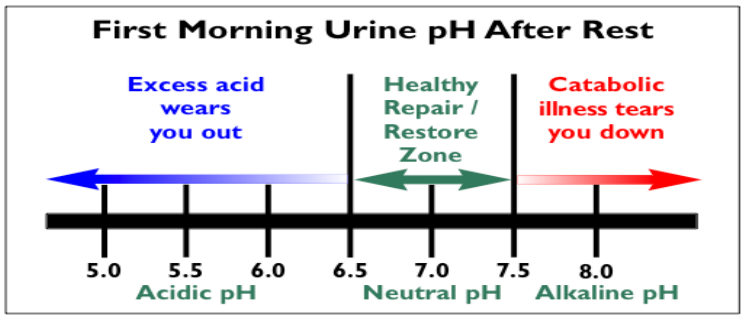
Prepared by Dr. Russell Jaffe, Fellow, Health Studies Collegium. Reprints available from Health Studies Collegium, 2 Pidgeon Hill Drive, #410 Sterling, VA 20165, 703-768-5126. Sources include USDA food data base (Rev 9 & 10), Food & Nutrition Encyclopedia; Nutrition Applied Personally, by M. Walczak; Acid & Alkaline by H. Ahara. Food growth, transport, storage, processing, preparation, combination, & assimilation influence effect intensity. Thanks to Hank Liers for his original work. [Rev 7/07]

2. Self test of alkaline status: First morning urine pH assessment of metabolic acidosis risk

The first morning urine pH gives a good indicator of the body's mineral reserve and its acid/alkaline state. The body routinely uses overnight rest time to excrete excess acids. This capacity varies based on toxin load and individual ability to make energy, to make toxins inactive, and to excrete them.

Using specialized pH Hydrion test strips (Figure 2, on next page) can effectively give one a reliable assessment of their body's acid or alkaline balance. A value of 7.0 indicates the neutral state, neither acid nor alkaline. Ideally, the first morning urine pH should be in a pH range of 6.5 to 7.5. A neutral or slightly acidic pH indicates that the overall cellular pH is appropriately alkaline and that the small amounts of acids built up from normal metabolism have been easily concentrated for excretion. Cell cytoplasm or 'juice' functions best in a narrow, slightly alkaline range.

Figure 2. Picture of the pH strips and meaning of 1st morning urine measurements



3. Meaning of immune System Tests of Delayed Allergy

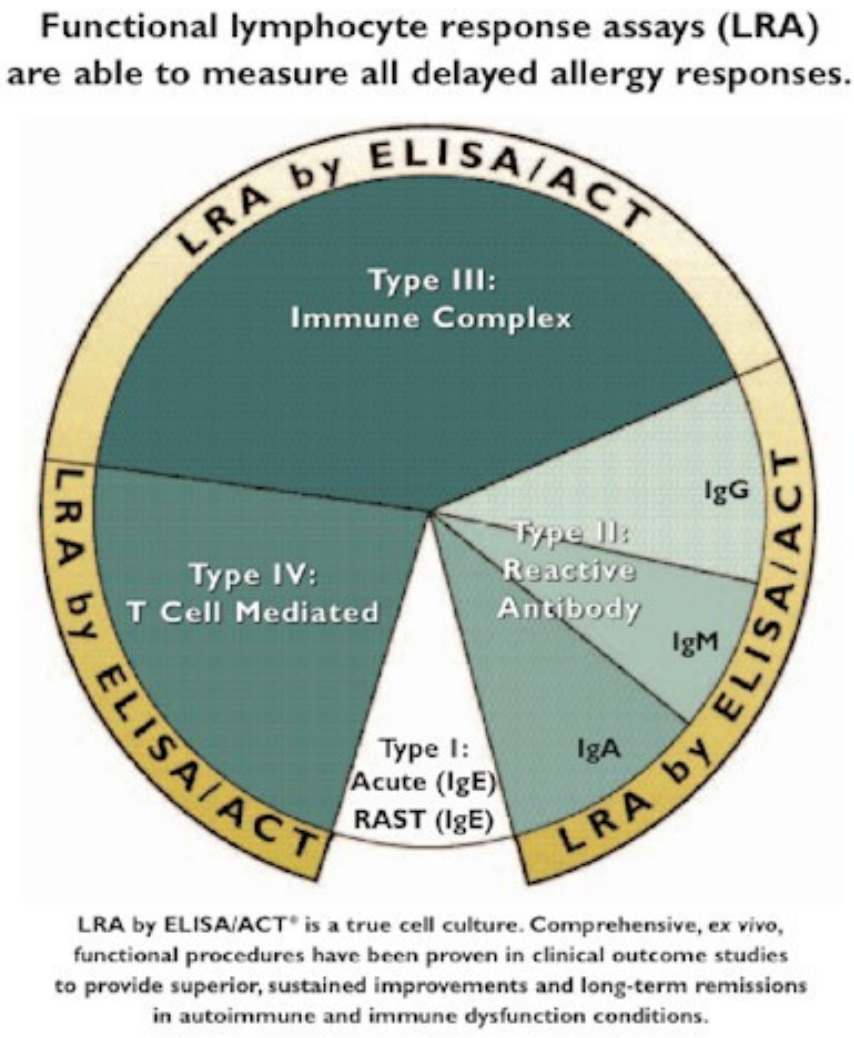
Various clinical tests are currently in use for assessing an individual's adverse response to environmental antigens. Antibody assays can be performed, most easily for immunoglobulin G (IgG). This has the advantage of examining the immunologic memory of the person. Antibodies capable of inciting a delayed response can be of the IgA, IgM, or IgG class as not all IgG antibodies induce symptomatic responses.

Four subclasses of IgG have been identified. These subclasses have different biologic functions and vary independently in different clinical conditions. This makes clinical interpretation of total IgG antibodies against specific antigens a challenge. Only IgG4 is cytophilic for mast cells (mast cells are involved in wound healing and defense against pathogens, as well as allergy). Thus, some IgG antibodies may be protective and others are suggestive of clinically active adverse response. Measurement of IgG antibodies omits information about IgA and IgM offenders and requires multiple subclass assays to provide the most accurate clinical information. Immune complexes can also be assayed through a variety of techniques, each with its own methodology limitations. Measurement of this and other aspects of cell-mediated immunity can be particularly useful in immune complex disorders.

Classically, gluten has been implicated in inflammatory bowel diseases (IBD), but an increasingly wide range of digestive antigens are now recognized as sources of mucosal inflammation and host sensitization with potential immunologic overload.

A novel ELISA test of cell-mediated immunity (LRA by ELISA/ACT®) is specific for all three delayed hypersensitivity pathways (humoral, immune complex and cellular by Gel and Coombs classification) or type 2 reactions (by Levin). This allows for concurrent measurement of clinically significant humoral (IgA, IgG, and IgM), immune complex, and cellular causes of delayed hypersensitivity. This functional assay is unique in covering all hypersensitivity pathways allowing more true positive reactions to be identified. These are depicted in the "Wheel of Allergy" (Figure 3 on next page).

Figure 3. Wheel of Immune Response Mechanisms



Antibody quantitations (IgG ELISA, IgG EIA) are serum static tests. This means they look for the presence or absence, and amount, but not action or function, of the antibody. For example, an antibody can be neutralizing and protective (beneficial) or can be complement activating and reactive (symptom-provoking). A serum ELISA procedure for antibody quantitation (IgG) is not able to distinguish function and therefore detects both beneficial and reactive antibodies. In contrast, a functional lymphocyte response assay (e.g., LRA by ELISA/ACT) detects only complement-activating, reactive antibodies since lymphocytes are not activated by protective, neutralizing antibodies.

<u>The LRA by ELISA/ACT procedure has a 97% accuracy rate, higher than non-functional IgG testing and other automated cytotoxic, particle size procedures.</u>

The substantial reduction in immunologic load plus alkalinizing foods can improve immune defense performance. This means reduced or eliminated host hospitality to chronic infection of any kind. This also means enhanced repair, reduced inflammation and better anti-cancer surveillance.

4. Physical Fitness and Immune Competence

Physical motion is necessary for physical health. The basic truth of physical activity is that we retain and restore what we use, and loose what we do not use. This means that learning to move fluidly, to stretch easily and smoothly, to learn the links between breath and movement, and to move rather than be static are essential to physical well being, and immune defense and repair competence.

Moving in ways that are enjoyed are superior to moving in ways that are not enjoyed. This means exercise should be a pleasure and adequate rather than a burden and excessive. When immune defense and repair systems are operating well, repair is efficient, effective and prompt. This means feeling better rather than having to recover after being physically active.

5. Mindfulness and Immune Competence

The mind and body are always connected and interactive. This means that every physical act has a mental component and vice versa. Only in the mechanistic, reductionist view of the world are mind and body disconnected.

Physiology First the Alkaline Way recognized the intimate link between mind and body. This means that doing what we know and knowing why we do what we do are both important. This also means that if our thoughts or attitudes are unhealthy, they can be relearned in ways that promote rather than impair health. Distress is more about internal perception than external stress. Being at peace rather than anxious can be learned observationally through well-validated practices. Learning optimism is both possible and effective.

Conclusions

The immune system is our repair, defense, and communication system. All specific functions depend on the interactive neuro-immuno-hormonal surveillance system. Restoration of immune competence depends upon identification of elements in the biochemistry and perception of the person that need strengthening and substitution for reactive elements until tolerance is restored. Physiology First the Alkaline Way programs restore tolerance, homeostasis, energetic balance and resilience. Successful health promotion and maintenance from Physiology First the Alkaline Way is the rule for those who follow it with care and appreciation.

Resources Labs for tests and interpretations (some are for health practitioners only):

www.betterlabtestsnow.com 1.877.894.8363 (consumer accessible functional lab tests with interpretations)

www.PERQUE.com 800.525.7372 (Pharmaceutical quality dietary supplements & meal replacements)

www.elisaact.com 800.553.5472 (professional LRA by ELISA/ACT tests and treatment plans)

www.Labrix.com 877.656.9596 (Clinical services)

www.doctorsdata.com 800.323.2784 (Mineral and digestive analyses)

www.metametrix.com 800-221-4640 (functional lab tests including 8-oxo-guanine)