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Rethink Health: Inflammation is *Repair Deficit*

By Russell Jaffe MD, PhD

This article rethinks **inflammation** and the evidence reveals inflammation is really *repair deficit*. While inflammation is usually presented as a 'fire' to be 'fought' or a symptom to be suppressed, repair deficits are opportunities to rebuild, renew and rehabilitate. Essential nutrient deficits, toxin excess, physical deconditioning and mental anguish potentiate and/or cause the blocks to repair experienced clinically as inflammation.

Inflammation insights

Animals possess mechanisms designed to deal specifically with wound healing repair and microbial defense so that 'inside self' is distinguished from 'outside world'. In humans this exquisitely choreographed suite of reactions is only now being fully appreciated.

In Western medicine, inflammation is seen as having acute and chronic aspects.

> **Acute inflammation** is the short-term immune response our bodies mount in cases of trauma, infection, and allergy when it uses up and runs out of essential protective, energizing nutrients.

Foreign items are determined to be "self" (non-threatening, tolerant) or "non-self" (threatening, intolerant). Infectious agents and digestive remnants (incomplete digested material) are treated equally by the immune system… both are equally foreign. Since defense takes precedence over repair in the immune system, digestive remnants occur due to maldigestion, prolonged transit time and consequent toxicant reabsorption. Intestinal permeability increases due to cumulative repair deficits. Increased permeability allows digestive remnants to invade the body, increasing the defense work in the immune system. Underlying maldigestion and repair deficit set the stage for host hospitality to chronic infection and/or autoimmune, self-attacking chronic degenerative illness.

In healthy people, an acute inflammatory response occurs, releasing pro-inflammatory compounds when needed and then turning them off with anti-inflammatory antioxidants when the threat has been neutralized or the repair completed. Homeostasis restored.

Chronic Inflammation Revealed

Chronic inflammation occurs when repair deficits *persist*. The body calls for repair and the first responder team is unable to complete the repair or defense mission. Recruits are called in the form of pro-inflammatory signals. Persisting inflammation lingers, continuing to call for pro-inflammatory responses even as the immune systems are inadequate to the repair need.

Persisting inflammation means accumulating repair deficits in blood vessel linings (atherosclerosis, coronary artery and peripheral artery diseases emerge), endocrine organs such as the pancreas (diabetes) or adrenal glands (Cushing's hyperadrenalism or Addison's hypoadrenalism), most chronic pain in joint tissue (arthritis, bursitis, back pain and costochondritis), gut lining acquired (lactose and gluten intolerance, inflammatory bowel diseases) — just for starters.
Silent or unappreciated inflammation is due to loss of tolerance and homeostasis in the immune defense and repair system. Repair deficits account for more than two thirds of all chronic disease including metabolic syndrome, diabetes, and heart disease, Alzheimer's neurodegeneration, autoimmune conditions and some cancer.[i] These conditions of cumulative repair deficit reduce life quality and increase costs of mostly palliative, symptom suppressive care.

Immune system tests of delayed allergy:

Inflammation or *repair deficit* often so imbalances immune responses that delayed allergies develop. Delayed or late-phase food and chemical sensitivities contribute to chronic low-grade systemic inflammation and play a role in causing or amplifying autoimmune, chronic and degenerative illnesses.

Various clinical tests have been used, with varying degrees of success, to assess individual adverse responses to environmental antigens[ii]. Antibodies capable of inciting a delayed response, including IgM, sIgA, IgA and IgG, and IgG subclasses have been measured, as have immune complexes and T cell reactions.

Serology antibody tests are often misleading because they do not distinguish helpful from harmful antibodies and only a minority of them is harmful and symptom provoking[iii]. For example, IgG protective antibodies from childhood infections are helpful and not signs of 'delayed allergy' to the infection. Our estimate is that 80+% of IgG antibodies are helpful and that less than 20% are harmful. More importantly, tests that do not distinguish helpful from harmful results are of limited predictive significance at best. Functional tests such as lymphocyte response assays (LRAs) do *not* suffer this methodologic limitation. Indeed, functional tests have been developed to overcome the limitations of usual serology antibody tests.

Other tests like automated cytotoxic tests attempt to identify delayed allergies but only look at cell size change giving the impression that lymphocytes are tested when any particle of a predetermined size is actually being measured. Understandably, these tests have low reproducibility and offer only short-term benefits[iv].

Functional, predictive and more evidence based tests:

LRA by ELISA/ACT™ and MELISA tests both assess reactions of lymphocytes exposed in the lab to different substances but are different by design. Through the technology breakthrough involved in the LRA by ELISA/ACT methodology, it is possible to allow living white cells to react in the laboratory *just as they do* in the body[v]. This determines true delayed allergy / hypersensitivity based on the body's long lived memory-carrying white blood cells. LRA by ELISA/ACT tests are also unique in that all 3 delayed hypersensitivity pathways are measured on the same specimen and at the same time. The clinical results are more true positive and few false negative reactions confirmed in multiple successful community-based controlled outcome studies[vi,vii].

By testing the lymphocytic reactions, it is possible to accurately assess the burden on immune defense and repair systems. The **LRA by ELISA/ACT** functional tests have a 97% accuracy rate[viii] substantially better than non-functional IgG testing and other automated cytotoxic, particle size procedures.[ix]

The *causes* of autoimmunity include exposures to foods or other chemicals to which the body had become hypersensitive, marked by unhealthy antibody, immune complex, or T cell lymphocyte responses.

Restoring immune tolerance:

Restoration of immune competence depends on identification of elements in both biochemistry and lifestyle that need strengthening and substitution for reactive elements until tolerance is restored[x]. Best clinical outcomes incorporate new insights from molecular biology to enable healthy immune, neurohormone, digestive, and detoxification system functions *concurrently*.

- **Functional laboratory testing** is suggested for high value predictive tests. Assessing loss of tolerance to food and environmental chemicals is necessary. Measures of inflammation, detoxification, oxidative stress, and metabolic status are also important.

- **An alkalinizing eating plan** for establishing repair by maintaining healthy cell and body pH levels.

- **Individualized supplement** protocol to address inflammation and specific nutrient deficits to make sure the essentials that cannot be made are present in the amounts needed and in the right places. The level of toxins in the environment, the reduction in nutrient density in what most people eat, the intensity of stress, the more sedentary life style all add up to supplementation being required rather than elective.

- **Lifestyle management** with an emphasis on exercise and mindfulness; geared to enabling healing responses.

Conclusions

Inflammation is *fundamentally* repair deficit, an *opportunity* to identify correctable and acquired needs. The usual, pathology based approach is to fight and vanquish inflammation through anti-inflammatory medications that suppress both symptoms and repair. Rethinking the causes reveals opportunities to stimulate healing responses as described above that resolve the need, restore homeostasis and complete the repair thus restoring comfort and function.

Health for life is a goal of medicine. While it takes a rethinking, today we are able to provide predictive, cost effective risk reduction and health enhancement for each individual.

About the Author

Dr. Russell Jaffe received his BS, MD and Ph.D. from the Boston University School of Medicine. He completed residency training in clinical chemistry at the National Institutes of Health. He is board certified in Clinical Pathology and in Chemical Pathology.

As a physician and scientist who aspired to be comprehensive, objective, empiric and experiential, Dr. Jaffe started his career searching for deeper understanding, evidence and insight in mechanisms of health. Through intense curiosity and scientific skepticism, Dr. Jaffe sought to debunk the best known advocates of a variety of health promotion and healing systems. What started as a journey to disprove holistic forms of care became a rich educational experience that transformed Dr. Jaffe into a student and then researcher in Traditional Chinese Medicine, acupuncture, active meditation, energy medicine, and manipulative arts.

Motivated by his personal transition, Dr. Jaffe went on to help found the Health Studies Collegium, a think tank that focuses on sustainable solutions to global health needs. For 40+ years, Dr. Jaffe has advocated a system that treats people not diagnoses, causes not consequences, and promotes sustainable solutions featuring best outcome habits including incentives for virtuous health cycles. Dr. Jaffe's cumulative experiences enabled him to take his efforts one step further and build **PERQUE** Integrative Health, **ELISA/ACT** Biotechnologies, and

RMJH Rx, companies that offer the world scientifically proven, integrative Dx, Nx and Rx solutions that speed the transitions from sick care to healthful caring.

Resources:

LRA by ELISA/ACT tests are available from:
ELISA/ACT Biotechnologies
1.800.553.5472
ClientServices@ELISAACT.com
www.ELISAACT.com

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[i] Schmidt MI, Duncan BB. Diabesity: an inflammatory metabolic condition (Review). *Clin Chem Lab Med*. 2003 Sep; 41(9):1120-1130.

[ii] Scadding GK, Brostoff J. Immunological Response to Food, In Hunter JO, Jones VA (Eds.) *Food and the Gut*, Sussex, England, Saunders, 1985.

[iii] Kotler DP, Gaetz HP, Lange M, Enteropathy Associated with the Acquired Immune Deficiency Syndrome, *Ann Int Med*, 1984;101: 421-428.

[iv] Hodsdon, W., Zwickey, H. Reproducibility and reliability of two food allergy testing methods*. Natural Medicine Journal*, 2010, 2(3), 8-13.

[v] Jaffe R, Improved Immune Function Using Specific Nutrient Supplementatiom and ELISA/ACT "Immunologic Fingerprint" to detect Late Phase Responses -*Ex Vivo*. *J Am Coll Nutr,*1989; 8(5): 424.

[vi] Deuster PA, Jaffe R. A Novel Treatment for fibromyalgia improves Clinical Outcomes in a Community Based Study. *J Musculo Pain,* 1998*;* 6:133-149.

[vi] Jaffe R, Mani J, DeVane J, Mani H. Tolerance loss in diabetics: Association with foreign antigen exposure. *Diabetic Medicine,* 2006; 23(8): 924-925.

[vii] ELISA/ACT Biotechnologies Newsletter, 2010; 1(2); www.ELISAACT.com

[viii] Report on Quality control and Reproducibility of LRA by ELISA/ACT tests, HSC Report 022010.

[ix] Hodsdon W, Zwickey H. NMJ Original Research: Reproducibility and Reliability of Two Food Allergy Testing Methods, *Nat Med J,* 2010; 2(3): 8-13.

[x] Jaffe R, Mani J, DeVane J, Mani H. Tolerance loss in diabetics: Association with foreign antigen exposure. *Diabetic Medicine,* 2006; 23(8): 924-925.