Breaking the Itch-Scratch Cycle:
Research and treatment for Eczema/Atopic Dermatitis

"The immune system has an incredible capacity for balance and counterbalance to maintain optimal and properly tuned immune responses,"
John Wherry, Ph.D., Deputy Editor of the Journal of Leukocyte Biology. [F1]

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DEFINITION

Eczema, also known as Atopic Dermatitis, and Atopy, is very common worldwide. It affects more than 15 million people in the United States, and the number of people diagnosed with Eczema is growing every year. The National Eczema Association describes this dis-ease as an itchy rash or inflammation of the skin that is long-lasting and often accompanied by, or induced by allergies or asthma. The itchy rash causes scratching and the scratching creates redness and swelling. These rashes and inflammations can occur on any area of the skin yet, most commonly occurring near the joints, on the arms and legs and on the face.

KEY SIGNS, SYMPTOMS AND COMPLICATIONS

Eczema is most common in infants and children. The research organization, Atopic Dermatitis Vaccinia Network [F1a], states that Eczema that is widely prevalent over the body occurs most often in infants. Older children and adults most commonly get eczema at the joints, face and on hands and feet. People often experience initial symptoms intermittently until the disease becomes acute with increased intensity. Over time, specific symptoms can change, and become more severe, then 'hibernate' and flare up again. The primary complaint is on the skin; however symptoms can affect all body organs.

Common Symptoms:

- Red, white, to brownish-gray colored inflammations or patches
- Small, raised bumps that may 'weep' fluid
- Itching, sometimes worse at night
- Dry, thickened, cracked, raw or scaly skin
- Irritability and depression

Other possible symptoms:

- Gastro-Intestinal symptoms like bloating, diarrhea, acid reflux
- Respiratory Symptoms related to Allergic rhinitis including reddening of nose, itchy/watery eyes, and excessive mucus.
- Possible cardiovascular symptoms including heart palpitations.
- Headache and sinus congestion

Complications [F1a]:

- People with eczema are susceptible to recurrent viral infections of the skin such as eczema herpeticum (a widespread herpes skin infection) and pearly wart like lesions called molluscum contagiosum.
- People with eczema should not avoid receiving smallpox vaccinations, even if the symptoms have been dormant for years. The ADVN reports an increased risk of a serious and potentially fatal complication called eczema vaccinatum. This needs to be researched more fully.

CAUSES

There is still no single cause of eczema; however it is generally accepted that triggers can be either exogenous (external) or endogenous (internal) and that people can suffer from both at the same time. Eczema affects everyone differently so identifying specific triggers is essential in easing and eliminating

symptoms. Researchers and some medical practitioners are now viewing Eczema as an autoimmune disease that is caused by the over-activity, or hyper-sensitivity, of the immune system, where the immune system attacks itself.

Autoimmune dis-ease is a grouping of more than 80 chronic illnesses including dis-eases of the nervous, gastrointestinal, and endocrine systems as well as skin and other connective tissues, eyes, and blood. In all of these dis-eases, the body's immune system (including B and/or T immune cells) begins attacking the very organs it was designed to protect. [F2]

Exogenous Causes

External causes include the environments we are exposed to, the stress we experience in our lives and the way we treat our skin.

Skin

Although, to one with active symptoms it seems impossible to avoid, scratching the skin can make the rashes worse. Bacteria, especially Staphylococcus aureus a natural member of our skin flora, can enter through broken skin and become a minor skin infection, boils or even pneumonia. Barbara S. Baker discusses research findings in which patients with eczema exhibit defects in innate and acquired immune responses resulting in a heightened susceptibility to bacterial, fungal and viral infections (Baker [F2b]). Allergens released by the yeast *Malazessia furfur*, a common normal skin flora, have also been causal in disease development. Exercise is great in many ways. It gets blood flowing, moves the lymph, and can even lead to reduced stress. However, with the friction of movement, sweat dampened clothes can also irritate sensitive skin. Try to avoid wool or synthetic fabrics and choose natural fabrics like cotton, hemp, or linen to allow the skin to breathe. Taking very hot and long baths and or showers can dry out and irritate the skin as well. Keep skin moisturized using emollient lotion.

Environmental

Some studies attribute the increasing prevalence of Eczema to decreased exposure to microorganisms during early life. This correlation needs to be studied further but may result in an altered Th-1/Th-2-balance and/or reduced T cell regulation of the immune response [F2b]. The Mayo Clinic also suggests environmental factors can play a role in eczema flare-ups. Some factors mentioned on their website include rapid changes in temperature, dust or sand, exposure to solvents, cleaners, soaps or detergents, cigarette smoke, low humidity, and living in cities where pollution is high. Based on this, people who live in larger cities or who earn their living using toxic solutions need to take extra precautions. Other allergens common to most homes include dust mites, animal dander, and pollen. The findings of a study printed in *ScienceDaily* in early 2010, and funded by the NIH/National Institute of Allergy and Infectious Diseases [F2a] found a genetic disposition where excess stimulation of T-Cells are present in the epidermis, making the skin more permeable to irritants like detergents and dust mites.

Stress

The term stress includes a whole spectrum of situations; worrying, anxiety, fear, depression, oppression, and misery are all stressful conditions that affect the body. The daily stress of dealing with our personal responsibilities in our relationships, and commitments to home, work and/or school can leave us feeling stressed out. Most people experience symptoms of

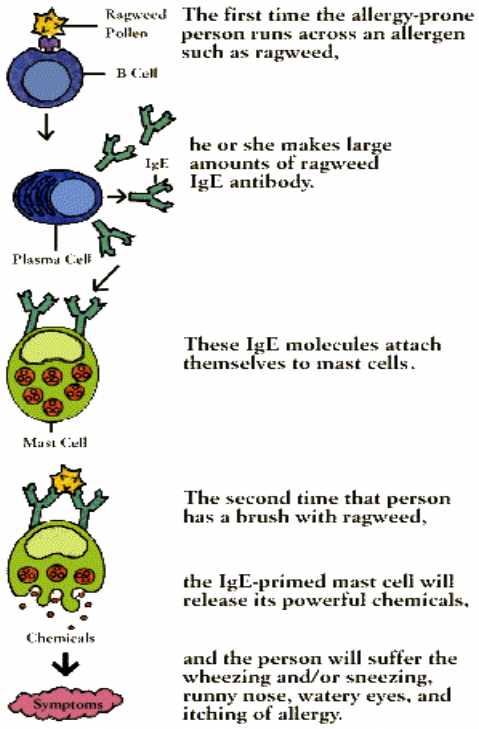
stress that come from commuting, loud noises, paying bills, or having arguments with family and friends. Each one of us deals with stress differently and we each need to find ways to identify and manage our stress so that we can maintain optimal health and keep Atopic dermatitis in an un-inflamed state. Deeper stresses come when people have experienced traumatic situations in their life including being a witness or survivor of violence or natural disasters. Our life experiences definitely have an impact on our overall stress levels.

Endogenous Causes

Internal causes of eczema include the food we put into our body as well as our acquired and innate immune system functions.

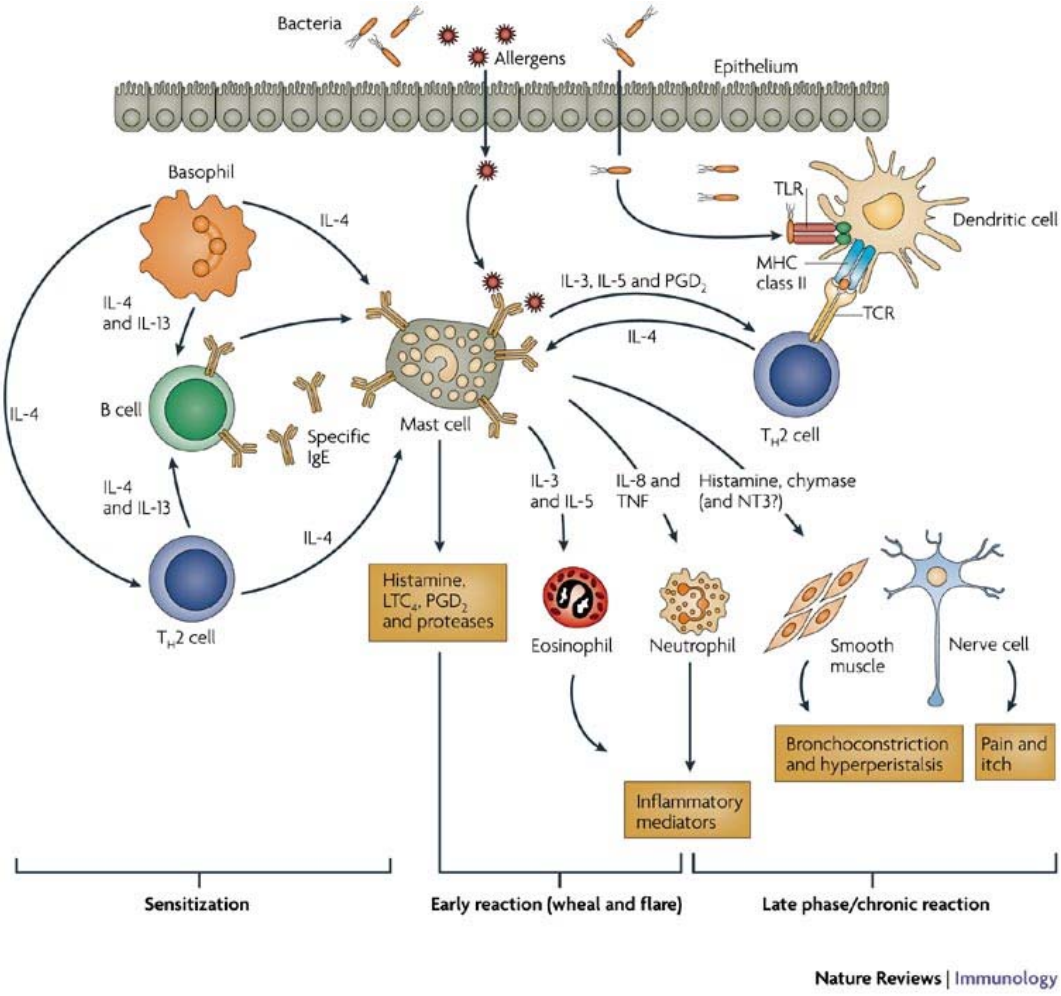
Auto-Immune Function

In order to understand the endogenous causes of eczema, we must look deeper into the immune system and understand how the body reacts to allergens. An analogy of this system given by dermatologist Dr. Victoria Lewis [F4], is of a lock and key. The invading foreign protein or 'antigen' is the key and the body's immune system must manufacture a lock, or 'antibody' to trap it. The immune system first reacts to the allergen by activating the T-lymphocytes (T-cells), which activate the B-lymphocytes (B-cells) to release substances called immunoglobulin E (IgE) antibodies and prostaglandins. These IgE antibodies attach to the mast cells, stimulating them to release inflammation activators and soluble granule remnants, including cytokines, and anti-allergen mediators such as histamine, tryptase, and chymase, to destroy the foreign antigens. In the case of hypersensitivity, the mast cells that originally released the histamine to react to the antigens, over-react, creating excessive inflammation, redness, and itching [F5].



Allergies develop slowly. Before acute symptoms of allergy become apparent, the immune system has been assessing antigens that the body has come in contact with and producing antibodies to fight off intruders. The immune system of allergic individuals produces IgE antibodies against harmless environmental antigens, called allergens. When the body identifies an allergen the generation of IgE producing long-living B-lymphocytes (plasma cells) is coded in the memory of the cells and kicks into full production. These coded, allergen-specific, plasma cells sit in lymphatic organ tissues and are prepared to react immediately. Over several years, these cells secrete large quantities of IgE antibodies even without the presence of the coded allergen. The 'sensitization' of the surface of the mast cells occurs when the IgE antibodies bind to the high affinity IgE receptors. The sensitized mast cells lay in wait and do not cause allergic reactions. As soon as the allergen binds to receptor-bound IgE antibodies, stimulation of mast cells and release of inflammatory mediators occurs within minutes and results quickly in clinical signs of allergy. Allergic reactions can occur immediately, once the allergen is identified in the system, even when individuals have been asymptomatic for years.[F6]. See the visual image above *http://www.dermamed.com/tech_docs/resp_disorders/resp_lit.asp.*

A defining characteristic of the atopic immune system is the capacity to generate elevated IgE antibodies. When looking to regulate immune imbalance we look at the differentiation pathway of T-helper 0 (Th0) cells. These precursor Th0 cells are induced to differentiate into T-helper 2 (Th2) cells that typically produce IL-4, IL-5, and IL-13. The Interleukins (Il-4, IL-5, etc.) are a group of cytokines produced by leukocytes to act on leukocytes, stimulating or silencing growth or differentiation of T and B Lymphocytes. Th2 cells control the synthesis of IgE [1] F7. Understanding allergy and immune system disease requires balancing mast cell regulation and understanding the inherent self-regulation of the immune system including the part of interleukins F1.



(Above)Release of histamine (that contributes to the 'symptoms' of allergies) by mast cells requires the production of antibodies (IgE) by B-cells and that process is regulated, in part, by cytokines produced by basophils (Bischoff 2007).http://people.eku.edu/ritchisong/301notes4.htm

Diet

Eczema is a skin dis-ease that is associated with atopic conditions such as asthma and IgE-mediated food allergy and whose skin lesions are characterized by a Th-2 cell-mediated response to environmental antigens (Baker F2b). It has become much more widely accepted that food intolerance may play a big part in triggering eczema outbreaks. It is generally acknowledge that between 10-25% of those with Atopic Dermatitis have food sensitivities. Additionally, some eczema is associated with celiac disease, Irritable Bowl Syndrome F3 and

asthma [F2]. The most common trigger foods are chicken eggs, cow's milk, shell fish, peanuts, wheat, nuts, rice, codfish, food additives and some fruit, alcohol and coffee.

TESTS AND DIAGNOSIS

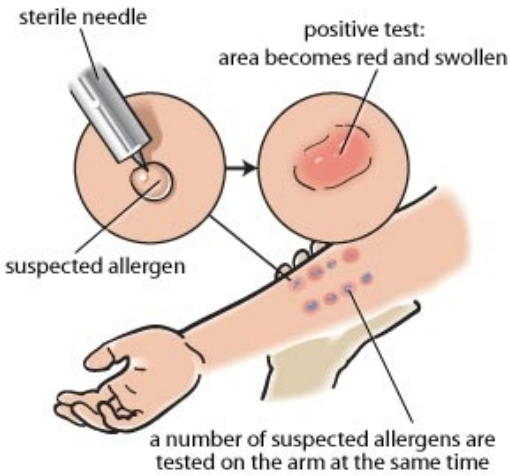
There is no definitive test for diagnosing eczema. A primary care physician or dermatologist may ask you questions about your medical history, including your family, and examine the visible symptoms on your skin in order to diagnose you based on their professional experience. Most people diagnosed with, or experiencing symptoms of eczema, have a family history of allergies, hay fever, and or asthma. It is possible to get skin tests and blood tests for food and environmental allergies, though they are not always definitive. One such blood test is called the RAST (radioallergosorbent test). Both skin and blood testing look for elevated levels of immunoglobulin (IgE) antibodies [F8].

Skin Prick Testing

This test measures specific IgE attached to Mast cells in the skin. See diagram below [F9]:

Allergen solutions for skin prick testing:

- Positive control (histamine)
- Occupational allergens may be present (ammonium persulphate, platinum salts, antibiotics, and latex)
- Negative control (diluent), no direct comparison
- Inhaled allergens (house dust mite (HDM), grass pollen, cat dander, dog hair)
- Food allergens



Disadvantages of skin prick test:

- Food allergens (less standardized), less reliable than inhaled allergens
- Itching and pain at site
- Skin conditions (eczema or dermatographism) interfere with interpretation
- Histamine antagonists (antihistamines) suppress skin reaction

TRADITIONAL MEDICAL TREATMENT

Treatments for eczema by medical doctors are focused preventing contact with external allergens and alleviating inflammation and itching. Common methods of treatment for eczema include:

- Environmental protection from or elimination of known allergens
- Use of emollients
- Corticosteroids
- Light therapy (phototherapy)
- Antibiotics
- Antihistamines

- Immonomodulators

Exogenous Methods

Environmental

If, allergens such as dust mites, detergents, or foods are known, than it is important to eliminate contact. If it is necessary to come into contact with toxic chemicals while at work it is necessary to use protective measures such as gloves, goggles and or masks to protect our skin and our internal systems as well.

Emollient Lotions

It is important to keep skin moisturized and protected using emollient lotions and oils. Medical practitioners may recommend different brands, but do your own research and read the labels for inactive ingredients like alcohol that may be drying to the skin.

Corticosteroids

The leading prescribed treatment is Corticosteroid creams or ointments to relieve the itching feeling on the skin and break the itch-scratch cycle. These topical treatments vary in potency. Low dose corticosteroids, like hydrocortisone, are available over-the-counter. Hydrocortisone is most similar to the naturally occurring corticosteroid cortisol produced by the body. Higher dose synthetic corticosteroids need prescriptions and include betamethasone, fluticasone, mometasone, prednisone (brand names, such as Deltasone and Sterapred), methylprednisolone (Medrol), prednisolone (Prelone, Pediapred), dexamethasone (Decadron, Hexadrol), and higher dose hydrocortisone (Acticort, Cortef) [F10]. The steroids are absorbed into the skin to stop T-cells from producing inflammation-causing chemicals, like IgE and prostaglandin.

For more severe cases, doctors sometimes prescribe oral corticosteroids, such as prednisone, or an intramuscular injection of corticosteroids to reduce inflammation and to control symptoms. These medications are often also prescribed to treat arthritis and other rheumatic dis-ease. They are more powerful than lower dose steroids and should not be used long term because of increased risk of serious side effects.

Local Side Effects

Local side effects of long-term or repeated use occur in the areas treated with the steroid and can include skin irritation or discoloration, thinning of the skin (atrophy), permanent stretch marks (striae), temporary pigment changes, and permanent appearance of swollen of fine blood vessels under the surface (telangiectasia). If the eczema appears to get worse, there may be a skin allergy to the steroids, the skin may bruise easier or become more prone to infection.

To minimize the risk of steroid side-effects, Helen Marshall, a registered pharmacist in the United Kingdom, with a background in hospital pharmacy, recommends taking these precautions [F11]:

- Use the least potent steroid possible to control the inflammation.
- Only apply the steroid to affected areas of skin.
- Use the steroid prescribed by your doctor sparingly, and no more than once or twice a day.

- Avoid using steroids on large areas of skin for long periods of time.
- Certain areas of skin – the face, genitals, raw skin, thin skin and areas of skin that rub together, such as beneath the breasts or between the buttocks - absorb more steroid than other areas.
- Ask your medical professional if applying dressings over the area of skin treated with the steroid will increases the absorption into the skin.
- Stop using steroids once the inflammation is under control.
- Compliment steroid use with skin moisturizers and emollients to help prevent flare-ups.

Systemic Side Effects

A systemic side-effect is one that occurs within the body. If used on large areas of skin for prolonged periods of time, potent steroids can be absorbed into the bloodstream and affect other areas of the body. This may lead to suppression of adrenal glad function leading to additional illness and dis-ease. The adrenal glands are responsible for producing the body's own steroid hormones (cortisol, etc.). Children's systems are still developing and more sensitive, and therefore have a higher risk [F11].

Dr. Theodore R. Fields, MD, FACP Attending Physician, Hospital for Special Surgery, Professor of Clinical Medicine, Weill Cornell Medical College reports that long-term use of corticosteroids can result in the many side effects, including (see Appendix A):

- Altered Response to Physical Stress
- Steroid Withdrawal Syndrome
- Infection
- Gastrointestinal Ulcers or Bleeding
- Osteoporosis
- Weight gain
- Insomnia
- Mood Changes
- Fluid Retention and Elevated Blood Pressure
- Elevated Blood Sugar
- Eye Problems

Light therapy (phototherapy)

In the age of sunscreen it may seem unwise to prescribe light therapy for the treatment of skin dis-ease like eczema however, exposure to controlled amounts of natural sunlight has been beneficial in alleviating symptoms of eczema. If getting sunlight the natural way is not comfortably possible due to climate or other factors, doctors can prescribe session of exposure to artificial ultraviolet A (UVA) or ultraviolet B (UVB) light either alone or with medications. Long-term exposure to UV rays has harmful effects, including premature skin aging and an increased risk of skin cancer.

Endogenous Methods

Antibiotics

Scratching can lead to bacterial infections on the skin. Some doctors will recommend antibiotics

to treat these acute infections or over longer periods to reduce the amount of bacteria residing on the skin to prevent future infections as well.

Antihistamines

The role of antihistamines is to block the action of histamines at its receptors (on the mast cells) and thus decreasing the body's reaction to the allergen. This will reduce the itching, swelling and redness associated with the eczematic flare. Antihistamines can be pills, liquids, nasal sprays and even eye drops. Commonly, antihistamines are taken before bed to relieve night-time symptoms. Many people experience greater itching at night, and through the night, resulting in trouble sleeping or feeling well rested. Lower dose Antihistamines are available over-the-counter without prescription. Common side-effects include dry mouth, urine retention, blurred vision, and the ability to concentrate and stay awake, and should not be used simultaneously with monoamine oxidase inhibitors (MAOI) [F13]. Antihistamines only treat symptoms and do not attempt to treat the cause of the eczema. Commonly used antihistamines include [F14]:

- **Over-the-counter:** Allegra (Fexofenadine), Benadryl (Diphenhydramine), Claritin (Loratadine), Zyrtec (Cetirizine), and Tavist (Loratadine). Ocu-Hist is an OTC eye drop (Naphazoline-decongestant and Pheniramine-antihistamine.
- **Prescription:** Clarinex (Desloratadine) and Xyzal (Levocetirizine). Astelin (Azelastine) is a prescription nasal spray. Eye drops include Emadine (Emedastine) and Livostin (Levocabastine).

Immunomodulators

Instead of prescribing steroids or in addition, medical practitioners are prescribing medications called Immunomodulators. These include tacrolimus (Protopic) and pimecrolimus (Elidel) which affect the immune system and in order to help maintain normal skin texture and reduce flares. There are concerns about long-term effects of these medications on the immune system. The Food and Drug Administration (FDA) states, "Although a causal relationship has not been established, rare cases of malignancy (e.g., skin and lymphoma) have been reported in patients treated with topical calcineurin inhibitors, including ELIDEL Cream" [F15].

HERBAL ALTERNATIVES AND COMPLIMENTARY THERAPY

Our body wants to keep us healthy and is constantly working to keep us in balance. Western Herbal Medicine provides many insights into healing the symptoms and causes of eczema. Each herb has specific properties and reactions in the body. Using herbs to support, tone, and strengthen the systems of our body, can help us heal our dis-ease.

Western Herbal Approach

From a Western Herbalist perspective it will be important to treat eczema both internally and externally with herbs and supplemental therapies. It is important to support the healing of the skin as well as the digestive system and liver, immune system, and nervous system.

Herbal actions specific to treating eczema include:

- Alterative - support organ function and elimination.
- Antipuritic - treat itch sensation to break itch-scratch cycle.
- Anti-inflammatory - Topically and Internally

- Astringent - topically on weeping sores.
- Emollient - topically to soothe entire affected area.
- Lymphatic - move lymph and eliminate waste.
- Nervine Relaxant - relieve anxiety and relax peripheral nerves and itch feeling.
- Diuretic - support elimination of waste and detoxification.
- Hepatic - support liver and digestion.
- Vulnerary - topically for wound healing.

Exogenous Treatments

We may not be able to identify all the allergens that affect us because we do not have financial resources or access to health care professionals. That does not mean that we cannot take steps to reduce the amount of allergens that live in or enter our space. Since many people display allergic responses to dust mites, it can be beneficial to take inventory in your house on where they might live and eliminate them. Occasionally, items that trap dust, such as down pillows and comforters, mattresses, carpeting and drapes, can worsen the condition. So, replace these items with hypoallergenic materials, or get covers for your mattress and pillows. Invest in a hepa-filter air purifier or vacuum cleaner to clean drapes and carpets. You can even remove carpets altogether.

Emollients

It is important to keep the skin moisturized by applying emollient lotions, creams or oils at least twice a day and immediately after taking bathing. I have found Coconut Oil, chamomile infused Jojoba oil, and chaparral (larrea tridentata) infused olive oil (and alcohol tincture) to be helpful during acute skin flares. An ointment recipe on Eczema.Net [F16] uses Golden seal root powder with vitamin E oil and honey, mixed into paste and applied to affected regions. Golden seal is antibiotic, working to heal skin and prevent infection, Vitamin E is a natural astringent soothing the skin, and honey is widely valued for its anti-inflammatory and anti-allergenic properties.

During acute flares it can be helpful to take an Oatmeal bath. Place approximately 2 cups of oats in an old sock or towel with a rubber band around the end. Cook on the stove in a pot with water while you fill the bath. Place both the 'broth' and sock in the bath tub. This will make it easier to clean up after you have calmed your skin and your nerves. The sock can be applied and held to specific areas of inflammation and the 'milk' can be squeezed out of the sock to create a really soothing milky bath. As hot water will aggravate the inflammation, do not make the bath too hot. If using this method just before bed, add nepeta cataria (catnip) or matricaria recutita (chamomile) to the mixture to increase the calming affect on the nerves and welcome sleep. Applying a cool compress to the affected areas can also reduce irritation and inflammation during acute attacks.

Other Herbs for Topical Use Include:

Calendula Officinalis (calendula)
Hydrastis canadensis (goldenseal)
Plantago spp. (Plaintain)
Stellaria media (chickweed)
Urtica dioica (nettle)

Endogenous Methods

Three main systems where the outside world comes in contact with the inside world of our bodies are the skin, respiratory tract, and the gut. Immune response is heightened in these areas to protect us from foreign invaders like bacteria, pollen, viruses, etc.

Digestive

Our digestive system speaks to us. It gives us clues as to its function. Sometimes we have gas or bloating. Sometimes we are constipated or have diarrhea. If we pay attention to the signals our body is giving us we can listen, learn, and heal. There is a strong like between autoimmune diseases and food sensitivities because of the interaction between the immune system and the digestive system.

Food Allergies

The inflammatory immune response is triggered by food sensitivities to gluten, corn, eggs, soy, and other foods. These food sensitivities may be genetic or acquired.

Herbalist Paul Bergner published tips for evaluating the digestive system function in order to identify and eliminate food allergens and heal the digestive tract. It is necessary to use a Food/Mood Diary (Appendix B) to identify foods eaten, moods, and symptoms. Some symptoms occur immediately, others over a period of days. While reviewing the Food/Mood Diary it is important to look for a Triangle pattern including 1) digestive symptoms, 2) predominant mood or energy symptoms, plus 3) complaints of musculoskeletal aches to autoimmune tissue disorders including inflammation. Symptoms such as upper gastrointestinal pain or abdominal bloating, without obvious causes, are the first indicator of digestive dis-ease. Steroidal drugs like prednisone can exacerbate the symptoms and damage to the gastro-intestinal tract. If the symptom triangle is present, it is necessary to test the body's response to food elimination. If digestion, mood and autoimmune symptoms all improve after elimination of a food, it signals that the individual is constitutionally intolerant of the food.

To complicate the allergies further, Berger states that the food often causing the symptoms is consumed everyday and at most meals. These seem to be foods we cannot do without. Seemingly, we are addicted to them. Bergner links this to a possible sympathetic adrenal response to the presence of the irritant in the gut. Eating the food at regular intervals becomes woven into the systemic response to stress. Our bodies feel a surge of norepinephrine and adrenaline associated with the immune response these proteins trigger (Traditions in Western herbalism Conference materials). Do you have any known intolerances? Do you consume those foods anyway?

The only conclusive way to identify food allergies is to do a full elimination and provocation diet. Liz Lipski's Elimination/Provocation Diet provides a healthy outline to follow (Appendix C). This should include up to 40 days of elimination, eating only foods commonly known to be 'hypo-allergenic', with a gradual reintroduction of foods, one-at-a-time to identify allergy triggers. Take detailed notes using the Food/Mood Diary and review your findings to eliminate from your diet the foods, which give you a high allergic response. After a period of elimination and healing, it

can be possible to introduce the trigger foods back into your diet.

Probiotics

Sean Donahue, herbalists, recommends including a probiotic supplements with a minimum of 15-20 billion live organisms to re-establish healthy gut flora. This is supported by a study on Probiotics and Immune Health by Yan F, Polk DB., that found probiotics 'regulate the functions of systemic and mucosal immune cells and intestinal epithelial cells'. This supports the therapeutic use of probiotics in treating immune response-related diseases, such as allergy, eczema, and viral infection.

Bitter Herbs

The use of bitter herbs for toning and strengthening the digestive system is well documents in traditional medicine of both Europe and China. Bitter herbs also have a toning and strengthening effect on the whole nervous system and vitality of the human body. This can help us deal with stress and maintain our overall health. I have found that taking bitter herbs 15 minutes before meal, can stimulate the digestion and ease assimilation in those suffering from eczema.

In his book, Foundations of Health, Healing with Herbs & Foods, Christopher Hobbs, Herbalist and Botanist explains that bitters work in three major ways. Bitter Herbs will 1) activate the gastric secretion of hydrochloric acid (HCL), 2) increase the tone and strength of the autonomic nervous system, and 3) activate the immune system. First, bitter herbs stimulate secretion of HCL in the stomach, and production of digestive enzymes such as bile from the gall bladder. Taken before meals, these bitters will stimulate digestive function preparing the body to digest the food that is coming. Effectively, bitters are improving blood circulation, nutrient absorption and elimination of waste.

Additionally, bitters work to strengthen the autonomic nervous system, which controls digestive organ function. By supporting the function of the digestive organs, they become stronger and more capable of doing their job without the use of bitters. In supporting our nervous system function, we may also feel lowered anxiety and stress.

Mr. Hobbs, writes that bitter herbs like gentian, can modulate the gut-associated immune system, thus activating or modulating the immune system. In Europe, bitter herbs are given to people recovering from infectious diseases including chronic fatigue syndrome. As stated by Mr. Hobbs, clinical tests in Europe have shown a decrease in sIgA antibodies and a reduction or elimination of symptoms associated with inflammatory bowel disease in patients using bitter herbs. It is important to note the difference between immune stimulating herbs and immune modulating herbs. In conditions such as eczema it may be contraindicated to use immune stimulating herbs. Instead, immune modulating herbs that work to balance the already active immune system are better suited for this constitution (David Hoffman, Medical Herbalism, p. 446).

"Classic Bitters" Formula, Hobbs, Pg. 121

Artichoke leaf (1 part)

Gentian (1/4 part)
Orange or tangerine peel (1 Part)
Cardamom seed (1/4 Part)
Ginger root (1/4 Part)
Powder the above herbs and add either vodka, wine or brandy Let soak for 2 weeks, shaking every day or so. Filter the liquid out and store in glass containers. Alternatively, simmer herbs for 30 minutes at 1 part herb mixture into 20 parts water. Refrigerate unused portion and consume within 3 days.

Other bitter herbs include:
Agrimonia eupatoria L. (Agrimony), Artemesia vulgaris L. (Mugwort), Hydrastis canadensis (Goldenseal), Foeniculum vulgare (Fennel), Taraxicum officinale (Dandelion Root), Sassafras albidum (Sassafras), Matricaria recutita (Chamomile), Salvia officinale (Sage), Thymus vulgaris (Thyme).

David Hoffman, Western Herbalist, includes a prescription for Eczema in his book[F17] :

Eczema Prescription

Galium aparine (cleavers)	1 part
Urtica dioica	1 part
Trifolium pratense	1 part

Dosage: Tincture up to 5ml, three times a day
With Tea infusion of fresh Urtica dioica or Galium aparine two to three times a day.

If the eczema is persistent and resistant to the use of mild alteratives listed above, continue with the Galium aparine, but substitute Arctium lappa (burdock root) and Scrophularia nodosa in equal parts. The dosage of this is recommended at up to 2.5ml of tincture three times a day building up to 5ml a day. If flare ups on the skin occur cut down the amount of Scrophularia nodosa and try again.

Other Digestive Healing Actions and Herbs
Demulcent (soothe mucus membranes) - Althea officinalis (Marshmallow) or Ulmus fulva (Slippery Elm)
Vulnerary (heal wounds) - Calendula officinalis (Calendula), Plantago Spp. (Plaintain), Achillea millefolium L. (Yarrow)
Astringents - Juglans Nigra (leaf or hull) or Rubus idaeus (Raspberry Leaf)
Anti-Inflammatory - Evening Primrose Oil, Chamomile, Curcuma longa (Turmeric)
Hepatic Alteratives - Arctium lappa (burdock), Hydrastis canadensis (goldenseal), Mahonia aquifolium (oregon grape root), Berberis vulgaris (Barberry), Iris Versicolor (Blue Flag) *USE IN LOW DOSES
Diuretic and Lymphatic - Trifolium pratense (Red clover), Fumaria officinalis (fumitory), Viola Tricolor (heartsease)
Angelica archangelica (Angelica) - Astringent, tonic, diuretic, vulnerary, cholagogue, anti-inflammatory
Artemisia vulgaris (Mugwort)- bitter tonic, stimulant, nervine tonic

Respiratory
Our nose is can be the 'canary in the coal mine' of our respiratory system. If there is an environmental allergen around, the nose is sure to know. If environmental toxins complicate your eczema, asthma or seasonal allergies it is important to know how to support, tone and strengthen respiratory function. Use of non-steroidal anti-inflammatories (NSAID's) like Ibuprofen and aspirin can disrupt the immune function in the respiratory tract.

Herbs that tone the upper respiratory tract include:
Euphrasia spp. (Eyebright) - Astringent
Ephedra sinica (Mormon tea) - Antispasmodic
Hydrastis canadensis (Goldenseal) - anticatarrhal, anti-inflammatory, antimicrobial, bitter
Hyssopus officinalis (Hyssop) - Anti-spasmodic, anti-inflammatory, nervine, expectorant.
Sambucs Nigra (Elder Berries) - work specifically in the respiratory tract to normalize inflammatory cytokine response. It seemingly strengthens cell membrantes preventing virus penetration.
Slidago virganurea (Goldenrod) - Anti-Inflammatory, anticatarrhal
Urtica dioica (Nettle) - Anti-inflammatory, anti-histamine
Cretageous (Hawthorn) - recommended for acute asthma attacks and toning to heart.
Inula Helenium (Elecampane) - Expectorant, antitussive, diaphoretic, hepatic, antimicrobial.
Lobelia - instantaneously stops spasms and opens airway, calming anxiety. *LOW DOSE ONLY, high dose can induce vomiting.

Immunomodulating, Adrenal supporting, and Adaptogenic herbs
Herbs in this category need more study but have shown promise in treating the overall system by modulating immune function, or supporting the adrenals and/or nervous system. Richo Cech, writes in his book *Making Plant Medicine*, that herbs containing medicinally active polysaccharides are typically immune enhancing and nutritive. These herbs can also help us deal with stress, which can contribute to the symptoms of eczema. Cech includes Astragalus, Boneset, Burdock, Codonopsis and Echinacea. Echinacea has been well accepted as an immune stimulating herb, however, studies are showing some of its immunemodulating abilities with allergen response [F19].

Other Herbs to support these functions include:

Eleuthro[F20] – immunostimulating, immunomodulating, adaptogenic, nervine, stimulating
Ganoderma lucidum[F21]– immunomodulatory, anti-angiogenic, and cytotoxic effects. Constituents of Ganoderma lucidum affect immune cells and immune-related cells including B lymphocytes, T lymphocytes, dendritic cells, macrophages, and natural killer cells. In addition, studies suggest this mushroom also inhibits tumor growth through direct cytotoxic effect and anti-angiogenic actions.
Cordyceps – studies show and possible affinity for the intestinal immune system[F22],
Schizandra - helps restore and regulate the adrenals especially when depleted from steroid medications.
Glycyrrhiza glabra (Licorice Root) - emollient, demulcent, anti-inflammatory, antihepatotoxic, antispasmodic, expectorant, mild laxative, and nutritive.

Additional Supplements

Essential Fatty Acids - keep skin lubricated and balanced. Sources of EFAs include hemp seed, fish oil, and flaxseed.
Zinc - supports immune function and healing.
Vitamins C, D and E inhibit inflammation of the skin and itching.

HEALING ECZEMA

Our bodies want to heal. Our bodies know how to heal. Using the food we eat, the sleep we get, the environment we are in, and our mental and physical experiences, we perform a balancing act. Sometimes our body is out of balance and has to divert resources from one system to send them to another. If we first look at our personal symptoms and analyze our experiences, we can develop a healing plan. The longer the body is out of balance the more likely we are to develop 'chronic' dis-eases. It takes time for the body to get out of balance, and it takes time to get the body back into balance. There is no quick fix to healing eczema.

What is most important is being aware of your body and your specific symptoms. An easy way to determine if there is a correlation between a specific allergen (food or environmental is to keep a Food/Mood log. If we think about the foods we eat, the activities of our day, and the moods we experience, we can recognize patterns. We drink coffee to give us pep. We drink chamomile tea to relax us before bed. How do I feel when I eat a lot of pasta? What happens to my digestion or my mood when I eat a lot of ice cream or beans? How do I really feel? Have I been ignoring obvious symptoms?

Once we recognize patterns we can evaluate them and decide if they are healthy for us and contribute positively to our health and well-being. David Hoffman, FNIMH, AHG, in his book Medical Herbalism, states that human immunity is 'ecology in action', representing the relationship between us and the world. To treat and heal our immune system we must address four aspects of human life including body health and wholeness, emotional well-being, mental vision and perspective, and spiritual openness and vitality. So if eczema is caused by my immune system attacking itself….what does that mean spiritually and emotionally?

Footnotes

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Appendices Attached

Appendix A - Side Effects of Corticosteroids

Appendix B - Food/Mood Diary

Appendix C - Liz Lipski's Elimination Diet

Appendix A

Dr. Theodore R. Fields, MD, FACP Attending Physician, Hospital for Special Surgery, Professor of Clinical Medicine, Weill Cornell Medical College reports that long-term use of corticosteroids can result in the many side effects, including:

1. Altered Response to Physical Stress

If you have taken steroids for more than two weeks, even if you then stop, your body may have a decreased ability to respond to physical stress - because your adrenal glands may not react as they should normally. This effect can last as long as a year after steroid discontinuation. If you have a surgical procedure, develop a new serious illness, or experience serious trauma (such as a car accident), your body may not be able to respond to the physical stress. Your blood pressure could drop, and other physical effects can occur, which at times can be very serious. This condition, called adrenal insufficiency, can be avoided by taking "stress dose steroids" should such illness or injury occur while you are taking steroids or during the year after you have been on them. The stress dose makes up for the sluggishness of your adrenal glands and provides your body with the steroid it needs to handle the physical stress. After a year off steroids, essentially all patients have been shown to have recovery of adrenal gland function and are able to respond properly to the physical stress of surgery or major illness.

> *Self-care tips:* If you are taking or have taken steroids in the past two years, be sure to tell your doctor or dentist. You may need a higher dose of steroid at times of major stress, such as surgery or very extensive dental work or serious infection. Discuss this possibility with the surgeon or dentist, etc., taking care of you at the time.

2. Steroid Withdrawal Syndrome

Rapid withdrawal of steroids, particularly if you have taken these medications for more than two weeks, may cause a syndrome that could include fatigue, joint pain, muscle stiffness, muscle tenderness, or fever. These symptoms could be hard to separate from those of your underlying disease. That's why steroids should never be withdrawn suddenly, but rather must be tapered slowly.

> *Self-care tips:* If you get symptoms like these when you taper your steroids, discuss them with your doctor. Your physician will work with you to continually try to taper your steroid dose, at a safe rate of decrease. On each visit, discuss with your physician whether it is possible to decrease your steroid dose. Even if you develop a side effect that requires stopping or rapidly reducing your steroid therapy, you still need to taper the dose-never stopping or decreasing the dose abruptly. The adverse effects of an abrupt decrease of steroid dose are often worse than the side effect you were concerned about.

3. Infection

Long-term steroids can suppress the protective role of your immune system and increase your risk of infection.

> *Self-care-tips:* Have a yearly flu shot as long as you are on steroids. If you are on steroids for a prolonged period of time, discuss with your doctor the possibility of getting Pneumovax - a vaccination against a certain type of pneumonia. Get immediate medical attention for signs of possible infection, such as high fever, productive cough, pain while passing urine, or large "boils" on the skin. If you have a history of tuberculosis, exposure to tuberculosis, or a positive skin test for tuberculosis, report this to your doctor.

4. Gastrointestinal Ulcers or Bleeding

Steroids may increase your risk of developing ulcers or gastrointestinal bleeding, especially if you take these medications along with non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen or aspirin.

Self-care tips: Take the steroid medication after a full meal or with antacid as this may help reduce irritation of the stomach. If you experience frequent heartburn, discuss it with your doctor. An acid-reducing medicine may be prescribed. Call your doctor right away if you have any severe, persisting abdominal pain or black, tarry stools.

5. Osteoporosis

Thinning of the bones, with an increase in fracture risk, can be a result of steroid therapy. At the beginning or before the start of steroid therapy, many physicians ask their patients to have a bone density test, especially if the steroid dose is high. The test will be repeated in the future, to assess the effectiveness of measures to prevent bone loss.

Self-care tips:

- Take calcium supplements and milk products, like cheese or yogurt, to get your calcium intake to at least 1500 mg of calcium a day. It is essential that calcium be taken throughout steroid therapy, since one can lose 10-20% of bone mass within the first 6 months of corticosteroid therapy.
- Take a multivitamin to be sure you get a minimum of 400 IU of vitamin D a day, because it helps the absorption of calcium. Some physicians recommend 800 IU of vitamin D a day.
- Smoking and alcohol increase the risk of osteoporosis, so reduce or eliminate these habits as much as possible.
- Weight-bearing exercises, such as walking, running, and dancing, are helpful in stabilizing bone mass. Exercise will also improve your balance and flexibility and decrease your risk of falls. Ask your doctor about which kinds of exercises are appropriate for you.
- Other bone-preserving medications that your doctor may prescribe depending on your individual medical history include: alendronate (Fosamax), calcitonin (Miacalcin), raloxifene (Evista), and risedronate (Actonel). If women have hot flashes after menopause and are treated with estrogen, this will also help preserve bone density.
- Assess your risk of falls. Thoroughly examine your home and correct situations that might result in a fall, such as eliminating scatter rugs and any obstacles between bedroom and bathroom, and installing night-lights.

6. Weight gain

Steroids affect your metabolism and how your body deposits fat. This can increase your appetite, leading to weight gain, and in particular lead to extra deposits of fat in your abdomen.

Self-care tips: Watch your calories and exercise regularly to try to prevent excessive weight gain. But don't let weight gain damage your self-esteem. Know that the weight will come off - and your stomach return to its normal size - relatively easily in the six months to a year after you discontinue steroids.

7. Insomnia

Steroids may impair your ability to fall asleep, especially when they are taken in the evening.

Self-care tips: Ask your physician if you can take your entire daily dose in the morning. Try to establish a regular hour for getting into bed and small rituals that help you prepare for sleep. Make sure your bedroom is cool and dark and free of noise. Learn relaxation exercises to help you get rid of the day's tension. If all of this doesn't work, ask your doctor about other options.

8. Mood Changes

Especially in doses over 30 milligrams per day, steroids can affect your moods. Some people can feel depressed, some extremely "up" and others go up and down for no apparent reason. You also may feel irritable or anxious.

Self-care tips: just being aware that steroids can do this sometimes makes it less of a problem, but this side effect at times requires that the steroid dosage be decreased. When the steroid dose is absolutely necessary, sometimes another medication can be added to help with the mood problem. Make sure your family and friends know about this possible side effect - so they will know what's going on if you respond in an unexpected way. Ideally, tell your family and friends about this possible side effect as you start the medication, so that they can help you detect any changes in your behavior.

9. Fluid Retention and Elevated Blood Pressure

Because cortisone is involved in regulating the body's balance of water, sodium, and other electrolytes, using these drugs can promote fluid retention and sometimes cause or worsen high blood pressure.

Self-care tips: A low sodium diet helps reduce fluid accumulation and helps control blood pressure. Look for low-salt versions of typically high-salt foods, such as chips, soups, canned vegetables, salad dressings, and prepared foods. You'll get more salt "taste" if you salt food at the table rather than during cooking. Watch for swelling of your ankles, and report it to your doctor. Have your blood pressure checked regularly, especially if you have a history of hypertension. In some instances, your physician may prescribe diuretics (water pills) or other medications to manage these problems.

10. Elevated Blood Sugar

Since cortisone is involved in maintaining normal levels of glucose (sugar) in the blood, long-term use may lead to elevated blood sugar or even diabetes.

Self-care tips: See your doctor regularly for blood sugar checks while you are on steroids. If you already have diabetes, follow your prescribed medical and dietary regimen with care, including regular monitoring of your sugar levels, ideally both at home and in your physician's office.

11. Eye Problems

Steroids can sometimes cause cataracts or glaucoma or worsen these conditions if they are already present.

Self-care tips:

If you have a history of glaucoma or cataract, tell your ophthalmologist if you are started on steroids because a special schedule of check-ups may be needed. If you develop any visual problems while on steroids, see your ophthalmologist promptly. Some steroid-caused blurred vision may be temporary and not serious. However, ophthalmology

evaluation should always be arranged for any new visual symptoms while on steroids. Let your ophthalmologist decide if the symptom is serious.

12. Atherosclerosis (Hardening of the Arteries)
Steroids may increase the rate of development of atherosclerosis, which could increase your risk of heart disease. This risk is probably much more significant if steroids are taken for more than a year, and if taken in high dose.

Self-care tips:
Follow a heart-healthy lifestyle - a low-cholesterol and low-fat diet, regular exercise, and stress management. If you develop signs suggesting a heart problem, such as chest pain, get medical attention quickly. Make sure that your cholesterol and blood pressure have been checked and treated if necessary.

13. Aseptic Necrosis
Steroids, particularly at higher doses, can sometimes lead to a form of damage to bones called "aseptic necrosis" - the death of parts of bone. This can occur in a number of bones, but the bone at the hip joint is the most common.

Self-care tips:
Hip pain, especially if you have no hip arthritis, could be an early sign of this damage. Remember, *your hip joint is actually in your groin* - so that's where the pain would occur - not on your outer buttocks. If you develop groin pain, report it to your doctor immediately so tests can be done to detect the problem.

Posted: 9/20/2002
Reviewed: 7/17/2009

Appendix C

Liz Lipski's Elimination / Provocation Diet

This diet is used to determine whether or not you have food allergies which may be causing some of all of your symptoms. During a period of two to three weeks you eliminate foods from your diet which are the most likely culprits. If your symptoms improve during the three week period, you'll carefully add foods back into your diet one at a time to see which foods may be triggering symptoms. Make sure to read all labels carefully to find hidden allergens. Eat a wide variety of foods and do not try to restrict your calorie intake. If you find no improvement within three weeks either you do not have any food allergies, or you may have food allergies but there is yet another factor complicating the picture. There are no magical answers here, this is a journey of self exploration and discovery.

ALLOWED FOODS: PLEASE READ ALL INGREDIENTS CAREFULLY. YOU WANT TO EAT ONLY THOSE INGREDIENTS THAT ARE SPECIFICALLY ALLOWED.

RICE: all types, 100% rice cakes, 100% rice crackers, rice noodles, Dry cereals: puffed rice cereal, rice milk (read all ingredients, do not use if has corn or other prohibited ingredients) Crispy Brown Rice, 100% rice bread

ADDITIONAL GRAINS: If desired you can add these specific grains: Quinoa, Buckwheat, Millet, Amaranth.

FRUITS: All fruits are allowed except for citrus fruits. Avoid: oranges, lemons, grapefruits, tangerines, tangelos, etc. If you suspect Candida, limit fruits or avoid completely during these initial three weeks. Use fresh, canned in own juices, and you can also cook or poach fruits. You can use a limited amount of dried fruit, unsulfured only.

VEGETABLES; Use a wide variety. All vegetables except corn are allowed. If you have arthritis, you may want to also eliminate the nightshade family foods: tomatoes, peppers(green, red, yellow, chili peppers, cayenne, chili powder, etc.), eggplant, potatoes. You can use vegetables any way: steamed, raw, juiced, salads, stir-fried, grilled.

FISH: All fresh/wild fish are okay. Canned tuna packed in water only. Canned fish okay. Avoid shellfish, swordfish, shark, tile fish, king mackerel.

POULTRY: Use organic chicken, turkey.

OILS AND FATS: Sunflower, safflower, olive, sesame. Use cold-pressed or expeller-pressed, or virgin olive oils only.

BEVERAGES: Water is the best beverage, carbonated water (no flavorings), pure fruit juices without sugar or additives(dilute 50% with water), herbal teas without caffeine.

SPICES AND CONDIMENTS: Salt in moderation, pepper, herbs either fresh or dried (without preservatives, citrus or sugar), garlic, ginger, onions, mustard. If you are a Vegetarian, replace fish with Legumes.

LEGUMES: Lentils, navy beans, black beans, split peas, string beans. Dried beans should be soaked overnight. Pour off the water and rinse before cooking. Canned beans often contain

added sugar or other potential allergens. If you want to use canned beans, look to health food store brands.

TIPS: The first 2-3 days are the hardest. It's important to go shopping to get all of the foods you are allowed to have. Plan your meals and have a pot of rice available.

- Eat regular meals. You may also want to snack to keep your blood sugar levels normal. It is important to keep blood sugar stable.

- Avoid any foods that you know or believe you may be sensitive to, even if they are on the "allowed" list.

- Try to eat at least three servings of fresh vegetables each day. Choose at least one serving of dark green or orange vegetables (carrot, broccoli, winter squash) and one raw vegetable each day. Vary your selections.

- This is NOT a weight loss program. If you need to lose or gain weight, work with your practitioner on a program.

- Buy organic produce when possible.

Possible Problems: Most people feel better and better each day during the allergy elimination diet. However, if you are used to using caffeine, you may get withdrawal symptoms the first few days which may include: headaches, fatigue irritability, malaise, or increased hunger. If you find your energy lagging, you may need to eat frequently to keep your blood sugar levels (thinking, energy) level. Be sure to drink plenty of water.

Testing Individual Foods: Once you have completed three weeks you can begin to add foods back into your diet. KEEP A JOURNAL OF ALL FOODS EATEN AND ALL SYMPTOMS. Be sure to add foods one at a time, one every two days. Eat the test food at least twice a day and in a fairly large amount. Often an offending food will provoke symptoms quickly—within in 10 minutes to 12 hours. Signs to look for include: headache, itching, bloating, nausea, dizziness, fatigue, diarrhea, indigestion, anal itching, sleepy 30 minutes after a meal, flushing rapid heart beat. If you are unsure, take the food back out of your diet for at least one week and try it again. Be sure to test foods in a pure form: for example test milk or cheese or wheat, but not macaroni and cheese that contains milk, cheese and wheat!

The Results: By avoiding symptom provoking foods and taking supportive supplements to restore gut integrity, most food allergies/sensitivities will resolve within 4-6 months. This mean that in most cases you will then be able to again eat foods that formerly bothered you. In some cases, you will find that the allergy doesn't go away. In this case either you must wait longer or it may be a "fixed" allergy that will remain lifelong.

After the Testing: It would be advisable to return to your health practitioner for a follow up visit to determine next steps. If you find allergies to many foods, you may want to explore a 4-day food rotation diet.

Source: Liz Lipski, PhD, CCN, 2006

Appendix B

Food Diary Week of _____

	SUN	MON	TUE	WED	THU	FRI	SAT	SYMPTOMS
BREAKFAST Time: _____								Time: _____
SNACK Time: _____								Time: _____
LUNCH Time: _____								Time: _____
SNACK Time: _____								Time: _____
DINNER Time: _____								Time: _____
SNACK Time: _____								Time: _____

Example:

	SUN	MON	TUE	WED	THU	FRI	SAT	SYMPTOMS
BREAKFAST Time: *7 a.m.*	2 eggs, bacon, toast & butter, orange juice							Time: _____
SNACK Time: *10 a.m.*	Candy bar, water							Time: *11 a.m.* *Stomach cramps, diarrhea*