Dynamic Chiropractic

Eczema: Nutrition and Supplementation Protocol for Afflicted Adults

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Eczema encompasses a number of skin conditions that may present as a dry, scaly rash or weepy, oozing blisters. It is a type of dermatitis that literally means "inflamed skin." Chronic eczema causes dry, red, flaky patches on the skin, most frequently involving the face; neck; scalp; arms; elbows; wrists; and knees. Ten percent to 15 percent of individuals start life affected by this condition; some outgrow it as they become adults, but many do not.

Eczema is divided into two main types: contact and atopic.

Contact eczema (contact dermatitis) occurs when an irritating substance comes into contact with the skin. The offending irritant may be a chemical; cosmetics; wool; lanolin; rubber shoes, etc. Nickel in jewelry is a common cause, as is poison ivy.

Atopic eczema is usually caused by inhaled or ingested allergins, such as foods, pollen, dust or animal dander. Some experts indicate that intestinal dysbiosis (disruption of the normal bacterial flora of the gut with a disproportionately high concentration of unfriendly bacteria) can promote atopic eczema, as supplementation with probiotics has been shown to improve this condition.

There are three main objectives in the treatment of eczema: reducing inflammation, relieving skin itching, and moisturizing dry patches. Attention to diet and supplementation can help accomplish all three main objectives.

Dietary and Lifestyle Considerations

1. Avoid known dietary or environmental irritants or allergins.
2. Reduce the buildup of arachidonic acid within skin cells, as arachidonic acid, a polyunsaturated fat, is the direct building block of inflammatory prostaglandin hormones (PG-series 2). To accomplish this, reduce consumption of the following foods:

- high-fat meat and dairy products;
- corn oil, sunflower seed oil, safflower seed oil, and mixed vegetable oils; and
- alcohol, hydrogenated fats (e.g., margarine, commercial peanut butter, shortenings).

1. Replace the above foods with the following:

    - chicken, turkey, fish, Cornish hen;
    - 1 percent milk or yogurt; no cheese above 3 percent milk fat; and
    - olive, canola or peanut oil (use only for salad dressings, to sautŽ vegetables or stir-fry).[1,2]

Important Supplements

1. Omega-3 Fats provide the building blocks for the production of prostaglandin hormones that reduce inflammatory activity of skin cells. They also reduce the buildup of arachidonic acid in

skin cells by blocking the enzyme (delta-5 desaturase enzyme) that converts linoleic acid and gamma-linolenic acid to arachidonic acid. Examples of omega-3 fats important to skin health include eicosapentaenoic acid (EPA, found in fish) and alpha-linolenic acid (ALA, found primarily in flaxseed oil). Clinical trails have shown that omega-3 fats can be effective in the treatment of eczema. Epidermal cells are known to be very active in the conversion of essential fatty acids into prostaglandin hormones, which determine, to a very significant degree, the smoothness and moistness of the skin, and influence skin conditions such as eczema. Essentially, omega-3 fatty acids (EPA and ALA) provide skin cells with the precursors from which they synthesize PG-series 3, derived from gamma-linolenic acid. Gamma-linolenic acid is converted to dihommo-gamma-linolenic acid by epidermal cells, then to anti-inflammatory prostaglandin hormone (PG-1), which also improves skin texture and has been used successfully to treat eczema.[3,4]

2. Gamma-Linolenic Acid (GLA) has been shown to help in cases of eczema. Studies reveal that many patients with eczema lack delta-6 desaturase, the enzyme that converts linoleic acid to GLA, an important component of PG-1. Supplementation with an essential oil high in gamma-linolenic acid, such as borage oil (22 percent GLA content, whereas evening primrose oil is only 9 percent GLA content) has been shown to favorably affect cases of eczema.[5,6]

3. B Vitamins: A number of B vitamins (especially B6 and niacin) are necessary cofactors to speed up the enzymes that produce anti-inflammatory prostaglandins in the skin. Essentially, the developing skin cells in the deep layers of the epidermis (basal layer) obtain essential fatty acids, B vitamins, antioxidants and other nutrients, such as selenium, magnesium and zinc, from the bloodstream. These nutrients are all important to the production of PG-1 and PG-2 hormones. Therefore, with the correct amount and type of essential oils, patients also should consume a high-potency multiple vitamin and mineral that provides the right levels of B vitamins, antioxidants and other minerals.

4. Antioxidants: Vitamins C and E, magnesium, selenium and zinc also are required to support various enzymes within skin cells that promote the formation of prostaglandins, which reduce skin inflammatory conditions, including eczema. These, along with certain B vitamins, act as cofactors that speed up the activity of specific enzymes that convert essential fatty acids into PG-1 and PG-3 hormones.[7-11]

5. Detoxification Nutrients and Immune Regulators: Milk thistle and indole-3-carbinol work in the liver to enhance detoxification and purify the blood of toxins and various allergins that can aggravate various skin conditions, including eczema. The silymarin flavonoid, found in milk thistle, and indole-3 carbinol, derived from cruciferous vegetables (broccoli; brussel sprouts; cabbage; cauliflower; and bok choy), have been shown to enhance the efficacy of phase I and phase II detoxification enzymes in the liver and epithelial cells of the intestinal tract (the primary detoxification centers of the body), and are responsible for neutralizing and eliminating the buildup of foreign chemicals and end-products of metabolism.

An unhealthy buildup of certain chemicals in the bloodstream can aggravate skin conditions, including eczema, by triggering immune inflammatory reactions. Thus, patients may benefit from a supplement that includes an optimal dosage and standardized grade of milk thistle, indole-3 carbinol, and proven immune modulators, such as astragalus and reishi mushroom extract.[12-16] Prebiotics (fructo-oligosaccharides and inulin) and digestive enzymes act in concert to detoxify bowel toxins, regulate immune function and prevent partially digested proteins from entering the bloodstream, where they may otherwise induce immune inflammatory reactions that aggravate eczema. Prebiotics help increase the concentration of the friendly gut bacteria at the expense of the unfriendly gut bacteria. These are food sources for the friendly bacteria, allowing the friendly gut bacteria to proliferate rapidly, crowding out the unfriendly bacteria. Clinical trials have shown

that by improving the ratio of friendly-to-unfriendly bacteria in the large intestine, cases of eczema have been improved to a significant degree, when used as singular therapeutic intervention for this condition.[17-20]

Supplement Considerations

1. A high-potency multivitamin and mineral supplement that provides a daily B-50 complex; vitamin C (1,000 mg); vitamin E (400 IU, all-natural); selenium (100-200 mcg); zinc (15 mg); and magnesium (200 mg).

2. An essential fatty-acid supplement that provides 400 mg of flaxseed oil; 400 mg of borage oil; and 400 mg of a high-yield fish oil (30 percent EPA/20 percent DHA) per capsule. Three to four capsules should be taken per day until skin is clear, followed by a maintenance dosage of two to three capsules per day, as required.

3. A detoxification and immune modulating supplement that provides milk thistle (standardized to 80 percent or more silymarin content, 125-175 mg per capsule); indole-3 carbinol (standardized to 97 percent grade of pure indole-3 carbinol content, 20-30 mg per capsule); astragalus (2:1 extract, 75-175 mg per capsule); and reishi mushroom extract (standardized to 10 percent polysaccharide content, 20-50 mg per capsule); or a product with similar profile and proof of therapeutic action for detoxification and immune modulation. Three to four capsules per day of this type of formulation is prudent; once skin has improved, a maintenance dosage of two capsules per day should suffice.

4. A combination digestive enzyme/prebiotic supplement that provides a high-potency, full-spectrum complement of digestive enzymes, and at least 1,000 mg of prebiotics (combination FOS and inulin) per day.

(Note: All of these supplements represent adult dosages and should be taken with meals.)

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