



# Nutritional Influences on Illness

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## Nutrients to Reduce Allergic Symptoms

Many nutrients appear to affect atopic allergic reactions.  
We will review some highlights from the literature.

### Vitamins

#### Niacin

Both niacin and niacinamide inhibit mast cell degranulation and histamine release, events that promote allergic symptoms.<sup>1</sup> Pruritus (itchiness), when caused by chloroquine treatment for malaria, is prevented about half of the time by a concurrent antihistamine,<sup>2</sup> and 50 mg of niacin has been shown under double-blind conditions to substitute for the antihistamine in reducing pruritus in these patients.<sup>3</sup> In addition, a 1944 open trial noted rapid improvement in patients with bronchial asthma or hay fever following niacinamide injections.<sup>4</sup>

#### Pantothenic Acid

Anecdotal reports suggest that pantothenic acid, 250 mg daily, may treat allergic rhinitis and possibly other allergic conditions.<sup>5,6</sup> Controlled trials are needed to confirm this.

#### Vitamin B<sub>12</sub>

Preliminary research suggests that regular vitamin B<sub>12</sub> injections may relieve a number of allergic conditions. In an open trial, 18 out of 20 patients with intractable asthma, nine out of ten patients with chronic urticaria, and all six patients with chronic contact dermatitis improved following weekly vitamin B<sub>12</sub> injections.<sup>7</sup> Jonathan Wright has treated about 100 patients and reported excellent results, particularly in children who, he found, almost always responded. He gives intramuscular B<sub>12</sub> (1-3 cc depending upon age) daily for the first month, then three times weekly for two weeks, then once weekly.<sup>8</sup>

#### Vitamin C

Low plasma ascorbate levels are correlated with elevated blood histamine,<sup>9</sup> and supplementation with vitamin C reduces blood histamine in subjects with either low plasma ascorbate or elevated blood histamine.<sup>10</sup> Anecdotal reports of patients with allergic rhinitis suggest that ascorbate supplementation is effective, with a greater percentage of patients responding to higher doses.<sup>11</sup> However, in doses up to four grams daily, ascorbic acid failed to suppress both the histamine skin response and the nasal response to allergens,<sup>12</sup> thus higher doses are probably indicated.

#### Vitamin E

Higher concentrations of vitamin E intake appear to be associated with lower serum concentrations of immunoglobulin E (a protein associated with atopic allergy) and a lower frequency of allergen sensitization.<sup>13</sup> Moreover,

when vitamin E was given to volunteers for five to seven days prior to the injection of histamine, there was far less swelling around the injection site.<sup>14</sup>

### Minerals

#### Calcium

For several decades, calcium administration has been used to treat allergic disorders of the skin and respiratory tract. In a double-blind, crossover study, oral supplementation with one gram of calcium significantly inhibited allergen-induced swelling of the nasal mucosa.<sup>15</sup> Moreover, in a double-blind crossover study of asthma patients with airway obstruction, calcium combined with calciferol [vitamin D<sub>2</sub>] was effective in improving various breathing measures.<sup>16</sup>

#### Magnesium

Intracellularly, magnesium inhibits the action of calcium in releasing chemical mediators of allergic reactions from basophils and mast cells.<sup>17</sup> Chronic magnesium deficiency may provoke allergic reactions,<sup>18</sup> and animal work has demonstrated a synergistic effect of antigen challenge and severe magnesium deficiency on blood and urinary histamine levels.<sup>19</sup>

### Other Nutrients

#### Essential Fatty Acids

The higher the intake of linoleic acid (an omega-6 essential fatty acid), as compared to alpha-linolenic acid (an omega-3 essential fatty acid), the greater the prevalence of atopic diseases.<sup>20</sup> Moreover, allergic individuals may demonstrate abnormal levels of omega-6 essential fatty acids, with elevated levels of linoleic acid and depressed levels of the products of linoleic acid metabolism.<sup>21</sup> Levels of omega-3 essential fatty acids may also be depressed.<sup>22</sup>

Since the essential fatty acids are precursors to the prostaglandins, these abnormalities may result in prostaglandin deficiencies and imbalances that could affect the allergic response.<sup>22</sup> In fact, anecdotal reports suggest that essential fatty acid supplementation may reduce allergic symptoms in individuals whose allergic symptoms are part of essential fatty acid deficiency.

#### Quercetin

The flavonoid quercetin is a known histamine inhibitor.<sup>23</sup> In a clinical setting, it appeared to be a safe and effective therapy for atopic nasal allergies, either alone or in conjunction with conventional pharmaceuticals.<sup>24</sup> Five hundred milligrams, three times daily, is a reasonable dosage.

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## Black Cohosh

and another symptom-specific approach. For example, if among symptoms of hot flashes, mood swings, and insomnia, a patient has intense night sweats that wake her up, I will use the black cohosh extract 40 mg twice daily, along with red clover extract 40 mg twice daily, to address the intense night sweats. Black cohosh can also be safely and effectively used with hormone therapy. Lower doses of hormone therapy are often achieved by also using them with black cohosh extract. With black cohosh among our most important available therapies, treating menopausal women is rewarding,

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Based on the *Textbook of Nutritional Medicine* by Melvyn R. Werbach with Jeffrey Moss. Tarzana, California: Third Line Press, Inc., 1999. Allergy is only one of the 82 illnesses discussed in Dr. Werbach's *Textbook of Nutritional Medicine*. For information or a free brochure on all of his books, contact Third Line Press Inc., 4751 Viviana Drive, Tarzana, California 91356, USA; 818-996-0076; Fax: 818-774-1575; www.third-line.com; e-mail: tlp@third-line.com.

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