

## Your Monthly Update

*Dear Colleague*

Welcome to the March 2008 newsletter from Pure Bio Ltd.

### **Please note:**

Pure Encapsulations have discontinued their Folic Acid Liquid, with immediate effect. PE are dedicated to maintaining optimum standards and quality and were not satisfied that their liquid formula could maintain these exacting standards. Pure Bio continues to stock PE's Folate capsules and we hope that you will find these to be a satisfactory alternative.

### **Additionally, we have excellent news to share with you:**

Pure Encapsulations was **#1 Rated Healthcare Practitioner Brand for Customer Satisfaction\*\***

*\*\* Ratings based on results of the 2008 ConsumerLab.com survey of supplements users. More info at [www.consumerlab.com](http://www.consumerlab.com)*

This award is the result of PE's dedication to quality, excellence and commitment to provide their customers with the most effective science-based products.

Since we are heading into the seasonal time of peak allergic reactions, our topic for this month is:

## Allergic Bronchitis

Ranking	Nutritional Supplements	Botanical Medicine
Primary	NAC Thymus extracts Vitamin C	
Secondary	Vitamin A (for deficiency only) Vitamin E Probiotics (food allergy) Thymus extracts	Geranium ( <i>Pelargonium sidoides</i> ) Ivy leaf Plantain
Other	Betaine hydrochloride (food allergy) Enzymes (food allergy) Flavonoids Quercetin	Anise Chinese scullcap Echinacea Elecampane Eucalyptus Horehound Horseradish Lobelia Mullein Pleurisy root Thyme
<b>Primary</b> – Reliable and relatively consistent scientific data showing a substantial health		

benefit.

**Secondary** – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.

**Other** – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.

## Dietary Modification

Dietary factors can influence both inflammatory activity and antioxidant status in the body. Increased inflammation and decreased antioxidant activity may each lead to an increased incidence of chronic diseases, such as chronic bronchitis. People suffering from chronic bronchitis may experience an improvement in symptoms when consuming a diet high in anti-inflammatory fatty acids, such as those found in fish. In a double-blind study of children with recurrent respiratory tract infections, a daily essential-fatty-acid supplement (containing 855 mg of alpha-linolenic acid and 596 mg of linoleic acid) reduced both the number and the duration of recurrences.

In people with bronchitis, lipids in the lung tissue may undergo oxidative damage (i.e. free-radical damage), particularly when the bronchitis is a result of exposure to environmental toxins or cigarette smoke. A diet high in antioxidants may protect against the free radical-damaging effect of these toxins. Studies comparing different populations have shown that increasing fruit and vegetable (and therefore, antioxidant) consumption can reduce the risk of developing chronic bronchitis.

Food and environmental allergies may be triggering factors in some cases of chronic bronchitis. Cows' milk allergy has been associated with bronchitis in children, and some practitioners believe that dairy products may increase mucous production and, therefore, that people suffering from either acute or chronic bronchitis should limit their intake of dairy products. Ingestion of simple sugars (such as sucrose or fructose) can lead to suppression of immune function; therefore, simple sugars should be avoided during illness.

If there is suspicion of underlying food allergies, a low-allergen diet, or hypoallergenic diet should be recommended to find out if avoiding certain foods will provide relief from symptoms. Such diets would commonly eliminate foods and food additives considered to be common allergens, such as wheat, dairy, eggs, corn, soy, citrus fruits, nuts, peanuts, tomatoes, food colouring and preservatives, coffee, and chocolate. The low-allergen diet is not a treatment and is maintained only until a reaction to a food or foods has been diagnosed or ruled out. Once food reactions have been identified, only those foods that are causing a reaction are subsequently avoided; all other foods that had previously been eaten are once again added to the diet. A two-week trial is generally sufficient for the purpose of diagnosing food reactions.

Strict avoidance of allergenic foods for a period of time (usually months or years) sometimes results in the foods no longer causing allergic reactions. Restrictive elimination diets and food reintroduction should be supervised by a qualified healthcare professional.

## Lifestyle Modification

Breast-feeding provides important nutrients to an infant and improves the functioning of the immune system. Studies have shown that breast-feeding prevents the development of lower respiratory tract infections during infancy. Exposure to environmental chemicals, including passive smoke, can increase the incidence of respiratory illness among children.

Chronic bronchitis is frequently associated with smoking and/or environmental exposure to chemicals or allergens. These exposures should be avoided to allow the

cells of the bronchi to recover from chronic irritation and to decrease the burden on the immune system.

People with inhalant allergies should be advised to reduce exposure to common household allergens like dust, mould and animal dander; in the hope that this will reduce symptoms even if other, non-household allergens cannot be avoided. Strategies include removing carpets, frequent cleaning and vacuuming, using special air filters in the home heating system, choosing allergen-reducing bed and pillow coverings, and limiting household pets' access to sleeping areas. See [www.healthy-house.co.uk](http://www.healthy-house.co.uk) for more details.

## Other therapies

Rest and increased fluid intake are recommended in the fever stage of acute bronchitis. Mainstream treatment of chronic bronchitis includes smoking cessation and a variety of drugs directed at relieving symptoms and treating superimposed bacterial infections.

## Nutritional Supplement Treatment Options

**Vitamin C** - In a double-blind study of elderly patients hospitalized with acute bronchitis, those who were given 200 mg per day of vitamin C improved to a significantly greater extent than those who were given a placebo. The common cold may lead to bronchitis in susceptible people, and numerous controlled studies - some double-blind - have shown that vitamin C supplements can decrease the severity and duration of the common cold in otherwise healthy people.

Vitamin C and **vitamin E** may prevent oxidative damage to the lung lipids by environmental pollution and cigarette smoke exposure. It has been suggested that amounts in excess of the RDA are necessary to protect against the air pollution levels currently present in the UK, although specific amounts have not been produced.

- **Pure Ascorbic Acid powder/capsules PE**
- **Buffered Ascorbic Acid powder/capsules PE**
- **Vitamin E 400i.u. PE**
- **Tocotrienols PE**

**NAC** - A review of 39 clinical trials of NAC (N-acetyl cysteine) found that 400 to 600 mg per day was a safe and effective treatment for chronic bronchitis. NAC supplementation was found to reduce the number of aggravations of the illness in almost 50% of people taking the supplement, compared with only 31% of those taking placebo. Smokers have also been found to benefit from taking NAC. In addition to helping break up mucous, NAC may reduce the elevated bacterial counts that are often seen in the lungs of smokers with chronic bronchitis. In another double-blind study, people with chronic bronchitis who took NAC showed an improved ability to expectorate and a reduction in cough severity. These benefits may result from NAC's capacity to reduce the viscosity of sputum - **NAC PE**

**Vitamin A** - A number of studies have shown that supplementation with vitamin A decreased complications and deaths from respiratory infections in children living in developing countries where deficiencies of vitamin A are common. However, this has not been replicated in countries where most people consume adequate amounts of vitamin A. Therefore, vitamin A supplements may only be useful for people with bronchial infections who are known to be deficient in vitamin A – **Vitamin A PE**

**Thymus Extract** - The thymus gland plays a number of important roles in the functioning of the immune system. Thymus extract from calves, known as Thymomodulin®, has been found, in a double-blind study, to decrease the frequency of respiratory infections in children who were prone to such infections. The amount of Thymomodulin used in that study was 3 mg per kg of body weight per day.

**Probiotics** may be important in the control of allergic reactions, by helping the intestinal tract control the absorption of food allergens and/or by changing immune system responses to foods. Probiotics may also be important in non-allergy types of infection caused by imbalances in the normal host flora.

- [Lactobacillus Acidophilus PE](#)
- [Lactobacillus Sporogenes PE](#)
- [Probiotic-5 PE](#)
- [Saccharomyces boulardii PE](#)

**Proteolytic enzymes** may reduce allergy symptoms by further breaking down undigested protein to sizes that are too small to cause allergic reactions. Preliminary human evidence supports this theory.

- [A. I. Enzymes PE](#)
- [Pancreatic Enzyme Formula PE](#)
- [Pancreatic VegEnzymes L PE](#)

**Hydrochloric acid** also helps the digestion of protein, and preliminary research suggests that some people with allergic reactions may not produce adequate amounts of stomach acid – [Betaine HCl Pepsin PE](#)

**Bioflavonoids** - Many of the effects of allergic reactions are caused by the release of histamine, which is the reason antihistamine medication is often used so successfully by these sufferers. Some natural substances, such as vitamin C and flavonoids, including quercetin and hesperidin, have demonstrated antihistamine effects in *in vitro*, animal, and other preliminary studies.

- [Hesperidin Plus PE](#)
- [Quercitin PE](#)
- [Pycnogenol PE](#)

## Botanical Treatment Options

Several types of herbs may help people with bronchitis, either by treating underlying infection, by relieving inflammation, or by relieving symptoms such as cough. For clarity, the table below summarizes which herbs are in each category of action. Some herbs have more than one action.

Action	Botanicals Supported by Clinical Trials	Botanicals Used Traditionally
<b>Expectorant</b> (helps remove mucus)		Anise, horehound, horseradish, mullein, pleurisy root
<b>Anti-inflammatory</b>	Chinese scullcap, ivy leaf, plantain	Elecampane, marshmallow, mullein, slippery elm
<b>Fights infection</b>	Echinacea (by stimulating immune system), lavender, thyme	Eucalyptus, horseradish
<b>Antitussive</b> (relieves cough)		Lobelia, marshmallow
<b>Relieves bronchospasms or spasmodic cough</b>		Lobelia, thyme

**Expectorant herbs** help loosen bronchial secretions and make elimination of mucous easier. Numerous herbs are traditionally considered expectorants, though most of these have not been proven to have this effect in clinical trials.

- [Anise](#) contains a volatile oil that is high in the chemical constituent *anethole* and acts as an expectorant.
- [Horehound](#) has expectorant properties, possibly due to the presence of a *diterpene lactone* in the plant, which is known as marrubiin.
- [Mullein](#) has been used traditionally as a remedy for the respiratory tract, including bronchitis. The *saponins* in mullein may be responsible for its expectorant actions.
- [Pleurisy root](#) is an expectorant and is thought to be helpful against all types of respiratory infections. It is traditionally employed as an expectorant for bronchitis. However, owing to the cardiac glycosides it contains, pleurisy root may not be safe to use if one is taking heart medications. This herb should not be used by pregnant women.

**Anti-inflammatory herbs** may help people with bronchitis. Often these herbs contain complex polysaccharides and have a soothing effect; they are also known as demulcents.

- [Plantain](#) is a demulcent that has been documented in two preliminary trials conducted in Bulgaria to help people with chronic bronchitis. Other demulcents traditionally used for people with bronchitis include [mullein](#), [marshmallow](#) and [slippery elm](#). Because demulcents can provoke production of more mucous in the lungs, they tend to be used more often in people with dry coughs.
- [Elecampane](#) is a demulcent that has been used to treat coughs associated with bronchitis, asthma, and whooping cough. Although there have been no modern clinical studies with this herb, its use for these indications is based on its high content of soothing mucilage in the forms of *inulin* and *alantolactone*.
- [Geranium](#) (*Pelargonium sidoides*) is an herbal remedy used in Germany, Mexico, Russia, and other countries for the treatment of respiratory tract and ear, nose, and throat infections. In a double-blind study of adults with acute bronchitis, participants given an extract of geranium had a significantly shorter duration of illness, compared with those given a placebo. No serious side effects were seen. The amount of the geranium extract used in this study was 30 drops TID, taken before or after meals for seven days.
- [Ivy leaf](#) is approved in the German Commission E monograph for use against chronic inflammatory bronchial conditions. One double-blind human trial found ivy leaf to be as effective as ambroxol for chronic bronchitis. Ivy leaf is a non-demulcent anti-inflammatory.
- [Chinese scullcap](#) might be useful for bronchitis as an anti-inflammatory. However, the research on this herb is generally of low quality.

**Antimicrobial and immune stimulating herbs** may also potentially benefit people with bronchitis.

- [Echinacea](#) is widely used by herbalists for people with acute respiratory infections. This herb stimulates the immune system in several different ways, including enhancing macrophage function and increasing T-cell response. Therefore, echinacea may be useful for preventing a cold, flu, or viral bronchitis from progressing to a secondary bacterial infection.
- [Thyme](#) contains an essential oil (*thymol*) and certain flavonoids. This plant has antispasmodic, expectorant, and antibacterial actions, and it is considered helpful in cases of bronchitis. One preliminary trial found that a mixture containing volatile oils of thyme, mint, clove, cinnamon, and lavender diluted in alcohol, at a dose of 20 drops TID, reduced the number of recurrent infections in people with chronic bronchitis.
- [Horseradish](#) contains substances similar to mustard, such as *glucosinolates* and *allyl isothiocyanate*. In addition to providing possible antibacterial actions, these substances may also have expectorant properties that are supportive for persons with bronchitis.
- [Eucalyptus leaf](#) tea is used to treat bronchitis and inflammation of the throat, and is considered antimicrobial. In traditional herbal medicine, eucalyptus tea or volatile oil is often used internally as well as externally over the chest; both uses are approved for people with bronchitis by the German Commission E.

- **Lobelia** contains many active alkaloids, of which *lobeline* is considered the most active. Very small amounts of this herb are considered helpful as an antispasmodic and antitussive agent (a substance that helps suppress or ease coughs). Anti-inflammatory properties of the herb have been demonstrated, which may be useful, since bronchitis is associated with inflammation in the bronchi. Lobelia should be used cautiously, as it may cause nausea and vomiting.

## **Integrative Options**

Acupuncture may be helpful in the treatment of some types of allergic bronchitis. Studies of mice treated with acupuncture provide evidence of an anti-allergic effect with results similar to treatment with corticosteroids. A preliminary trial found a significant decrease in allergy symptoms following acupuncture treatment. It was found that the decline in symptoms coincided with a decline in laboratory measures of allergy. Relief persisted for two months following the treatment. Other preliminary trials have also demonstrated positive results.

*For further information, contact:*

**Tracy S Gates**

**Director, PURE BIO LTD.**

**01403 730342**

**[info@purebio.co.uk](mailto:info@purebio.co.uk)**