



— VEGETARIAN —

**COMPREHENSIVE
POLLEN RELIEF +™**

— GLUTEN FREE —

HEALTHY SINUS FORMULA
With Butterbur, Freeze-Dried Nettles & Bioflavonoids

Meaningful amounts of freeze-dried nettles, quercetin and a synergistic complement of researched ingredients join forces to help make Pollen Relief +™ a premium option for individuals who are sensitive to environmental irritants.

For most people, irritants like pollen (from grasses, trees or weeds), animal dander or household dust are cleared from the body with ease. For others, these small particles are far from benign. Contact may result in mild to severe physical discomforts, typically expressed as itchiness, watery eyes, congestion or persistent runny nose. Hypersensitivity to irritants that come in contact with the body is caused by an overactive *histamine* response to these substances.

Histamine is a chemical contained within *mast cells*, a type of white blood cell. As part of the immune system, mast cells are found in body surfaces that interface with the external environment, notably skin and mucosal tissues. One important role of mast cells is to release histamine in response to foreign bodies or physical injury, for instance, following a mosquito bite. Histamine causes blood vessels to dilate, which leads to redness, itchiness and swelling.

No one knows why some people develop an overactive histamine response to pollens, dander or dust. Fortunately, a number of botanical compounds may help provide nutritive support for healthy sinuses, and normal eye, nose and mucous membrane comfort. PIONEER® *Pollen Relief +™* offers a premium selection of well-researched plant compounds plus naturally buffered vitamin C, all in amounts suggested to be clinically meaningful.

CONSIDER THESE PIONEER® ADVANTAGES:

1. Freeze Dried Nettles for a Healthy Histamine Response. Long-revered by traditional herbalists for its nutritive properties, nettle plant is increasingly the subject of modern clinical trials. The leaf contains a wide range of naturally occurring vitamins, minerals and amino acids plus numerous phytochemicals, including acetylcholine and serotonin, all of which are better retained in freeze dried nettles than in ordinary, dried nettle leaf. Research in people with seasonal pollen sensitivities suggests freeze dried nettles may help provide nutritive support for healthy sinuses, superior to placebo.¹

2. Astringent Eyebright. A time-honored favorite of both herbalists and naturopathic physicians, eyebright contains up to twelve percent tannins (naturally “drying” compounds). Traditionally, eyebright is considered specific for excessive tearing in the eyes, and for nasal catarrh (copious mucus discharge).

3. Hesperidin Methyl Chalcone to Help Support Capillary Integrity. Histamine is known to dilate blood vessels and increase capillary permeability. This allows fluids to leak into surrounding tissues and cause swelling. Hesperidin, a flavonoid naturally found in paprika and tangerine peels, is suggested to help provide nutritive support for healthy capillary permeability. Chalcone forms are thought to be better absorbed than hesperidin alone, and have been researched in people with pollen sensitivities.²

4. Antioxidant Quercetin. The most abundant flavonoid in the plant kingdom, quercetin is a powerful antioxidant, especially when paired with vitamin C. Research suggests that quercetin may help provide nutritive support for healthy sinuses and mucous membrane comfort. Quercetin also has been studied for its purported ability to help support capillary strength.^{3,4}

5. Calming Butterbur. Named for its gigantic, three-foot diameter leaves (handily used for wrapping butter in olden times), butterbur has been long recognized by traditional herbalists for its purported smooth muscle tissue support. Modern research focuses on the herb’s active *sesquiterpene* compounds, notably *petasin* and *isopetasin*, which have been studied for their reputed relaxing effect on smooth muscle and vascular walls.⁵

6. Buffered Vitamin C. Noted environmental health pioneer Theron Randolph was among the first to suggest that naturally buffered vitamin C could help provide nutritive support for healthy sinuses. Based on his research, buffered C has become a standard component of the naturopathic protocol for addressing the needs of people sensitive to pollens and other irritants.

Bottles of 60 Vegetarian Capsules Serving Size 3 Capsules	
	AMOUNT PER SERVING %DV
Total Carbohydrate	<1 g <1%†
Dietary Fiber	<1 g 4%†
Vitamin C (as magnesium ascorbate)	.150 mg 250%
Freeze Dried Nettles (<i>Urtica dioica</i>) Aerial	.450 mg *
Eyebright (<i>Euphrasia officinalis</i>) Aerial	.450 mg *
Hesperidin Methyl Chalcone (HMC) Concentrate	.300 mg *
Butterbur (<i>Petasites hybridus</i>) Root Extract (supplying 31.5 mg [15%] sesquiterpenes)	.105 mg *
Quercetin	.75mg *

† Percent Daily Value based on a 2,000 calorie diet. *Daily Value (DV) not established.
Other ingredients: vegetarian capsule (cellulose), cellulose, vegetable magnesium stearate, silica. 1.09
NOTE: Some ingredient details may be abbreviated on actual product labels.

REFERENCES

- Mittman P. Randomized, double-blind study of freeze-dried *Urtica dioica* in the treatment of allergic rhinitis. *Planta Med.* 1990 Feb;56(1):44-7.
- Saylor BW. Treatment of allergic and vasomotor rhinitis with hesperidin chalcone sodium. *Arch Otolaryngol.* 1949 Dec;50(6):813-20.
- To learn more about eicosanoids, see *Understanding Fatty Acids & Eicosanoids* from the PIONEER® HEALTH EDUCATION LIBRARY.
- Monograph: Quercetin. *Alt Med Rev.* 1998 Vol 3, No 2 pp. 140-143.
- Monograph: *Petasites hybridus* (Butterbur). *Altern Med Rev.* 2001 Apr;6(2):207-9.

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