

Used in herbal medicine to help relieve seasonal allergy symptoms

RxBalance™ Aller-Plex combines the best available ingredients aimed at allergic rhinitis, allergies, and adjuvant symptoms. The primary ingredient in the formulation, fully supporting the claim, is nettle leaf, whereas the efficacy of the other two components is supported by animal, in vitro, and human clinical studies. Nettle aerial parts have been traditionally used for the relief of seasonal allergy symptoms. Quercetin acts as an inhibitor of mast cell secretion; causes a decrease in the release of tryptase, MCP-1, and IL-6; and downregulates histidine decarboxylase mRNA from mast cell lines. Bromelain, an anti-inflammatory proteolytic enzyme thought to inhibit the generation of bradykinin at the inflammatory site via depletion of the plasma kallikrein, activates quercetin.

Ingredients: Medicinal

Each capsule contains:

Quercetin (<i>Sophora japonica</i>) bud	350 mg
Nettle (<i>Urtica dioica</i>) aerial parts 2:1 extract (equivalent to 500 mg raw herb)	250 mg
Bromelain (<i>Ananas comosus</i> , pineapple fruit), providing 200 GDU*	100 mg

* Gelatin Digesting Units

Ingredients: Non-medicinal

Hypromellose, silicon dioxide, stearic acid.

This product does not contain dairy, egg, gluten, shellfish, soy, sulfites, animal derivatives or artificial colours, flavours or preservatives.

Recommended Use

Used in herbal medicine to help relieve seasonal allergy symptoms.

Recommended Dose

Adults take 1 capsule three times daily or as directed by a health care practitioner.

Risk Information

Do not use if you are pregnant, breastfeeding, allergic to pineapple or if you are taking blood thinners. Consult a health care practitioner if symptoms persist or worsen. Hypersensitivity (e.g. allergy) has been known to occur; in which case, discontinue use.

Interactions with Drugs/Supplements

Caution should be exercised with people using quercetin in combination with anticoagulants, busulphan, cisplatin, cyclosporine, CYP450-metabolized drugs/herbs, estradiol, quinolone antibiotics, and/or nifedipine medication. Caution should be exercised with people using quercetin in combination with bilberry/ligonberry/black currants, and vitamin C supplements. Use of bromelain and/or papain may potentiate the effects of quercetin, therefore any adverse reactions should be reported to a health care practitioner. People consuming foods with high content of quercetin should consult a health care practitioner due to additive effects. Caution should be exercised with people using nettle in combination with alpha-1 adrenergic blockers, antihypertensive/diuretic medication and/or supplements, anti-inflammatory medication, diuretic medication, finasteride, and/or hypoglycemic medication and/or supplements. Caution should be exercised with people using nettle in combination with dong quai, horse chestnut, kava, niacin, pygeum, saw palmetto, and/or soy isoflavone supplements. Caution should be exercised with

people using bromelain in combination with ACE inhibitors, antibiotic medication and/or supplements, anticoagulant/antiplatelet medication/supplements, NSAIDs, chemotherapeutic agents, heart rate-regulating medications and/or supplements, magnesium-containing medications, sedative medication and/or supplements, and/or trypsin-containing supplements.

Dosage Form Description

A clear, hard vegetable capsule containing a yellowish green coloured powder fill.

Packaging

Available in bottles of 120 capsules.

Stability

A shelf life of 3 years when stored in a cool, dry location.

Ingredient Description

Quercetin is thought to affect membrane permeability and inhibit membrane-associated enzymes such as ATPases, phospholipase A2, and prostaglandin cyclooxygenase. Quercetin stimulates Ca²⁺-ATPase activity at low concentration, whereas it inhibits it at high concentration, modifies eicosanoid biosynthesis, prevents platelet aggregation, promotes relaxation of cardiovascular smooth muscle, inhibits reverse transcriptase, and promotes vasodilatation and platelet disaggregation. Quercetin decreases histamine release from basophils, mast cells proliferation, and secretory granule development.^{1,2} There is preliminary evidence that nettle above-ground parts might improve symptoms of allergic rhinitis. Starting nettle at the first sign of symptoms seems to provide subjective improvement. The leaves also contain beta-sitosterol and the flavonoids quercetin, rutin, kaempferol, and others. The aerial parts of nettle have a variety of pharmacological effects, including analgesic, anti-inflammatory, local anesthetic, hemostatic antibacterial, and antiviral.^{1,3}

Bromelain is thought to inhibit the biosynthesis of pro-inflammatory prostaglandins by lowering kininogen and bradykinin in serum and tissues and may alter prostaglandin synthesis. It may activate plasmin production from plasminogen and reduce kinin via inhibition of the conversion of kininogen to kinin. This anti-inflammatory activity hypothesis is supported by the observation that bromelain at 5 mg/kg and 7.5 mg/kg doses caused a dose-dependent decrease of bradykinin levels in rats at the inflammatory site, and a parallel decrease of the pre kallikrein levels in sera, as well as a dose-dependent reduction in plasma exudation. The bradykinin-degrading activity in sera was elevated after the bromelain treatment, although it was unchanged in the pouch fluid. These data are indicative that bromelain inhibits plasma exudation through inhibiting the generation of bradykinin at the inflammatory site via depletion of the plasma kallikrein system.⁴

Reason for Combination

RxBalance™ Aller-Plex combines the best available ingredients aimed at allergic rhinitis, allergies, and adjuvant symptoms. The primary ingredient in the formulation fully supporting the claim is nettle leaf. The remaining two ingredients, quercetin and bromelain, are supportive of the nettle and its seasonal allergy relief properties as supported by the animal, in vitro, and human clinical studies cited. Nettle aerial parts have been traditionally used for the relief of seasonal allergy symptoms. Quercetin is a natural compound that: blocks substances involved in allergies and is able to act as an inhibitor of mast cell secretion; causes a decrease in the release of tryptase, MCP-1, and IL-6; and promotes the down-regulation of histidine decarboxylase (HDC) mRNA from mast cell lines. Evidence indicates that bromelain's action is, in part, a result of inhibiting the generation of bradykinin at the inflammatory site via depletion of the plasma kallikrein system, as well as limiting the formation of fibrin by reduction of clotting cascade intermediates. Bromelain has also been shown to stimulate the conversion of plasminogen to plasmin, resulting in increased fibrinolysis.^{1-3,5-7}

Research Synopsis

1. Nettle is used in herbal medicine to help relieve seasonal allergy symptoms.⁸
2. In allergic rhinitis, metachromatic cells in the nasal epithelium increase in number and are thought to play an important role in nasal allergic manifestation. To determine immunohistochemical and functional characteristics of the metachromatic cells, nasal scrapings and their dispersed cells from patients with perennial allergic rhinitis were studied. Eighty-three percent of all metachromatic cells in dispersed cell preparations were tryptase-positive mast cells (MCT), 10% were tryptase-chymase-positive cells (MCTC), and 7% were negative. The mean histamine content per metachromatic cell was 1.9 +/- 2 pg. The histamine content and histamine release from nasal surface scrapings of patients sensitized with mite antigen were strongly correlated with the level of serum IgE antibody for mite antigen. The net histamine release from nasal scraping was antigen-dose-dependent (1:2 x 10(7) to 1:2 x 10(3) dilution), and the antigen stimulated release of up to 17% of cell-associated histamine within 5 to 7 minutes. Histamine release from nasal scrapings induced by calcium ionophore A23187 was up to 21% of cell-associated histamine within 2 to 4 minutes, but no histamine release was stimulated by compound 48/80, substance P, or poly-L-lysine. Histamine release from nasal scrapings was inhibited 46% (10(-5) mol/L) to 96% (10(-4) mol/L) by quercetin and 58% (10(-4) mol/L) to 72% (10(-3) mol/L) by sodium cromoglycate. These findings show the predominant characteristics of mast cells in the nasal epithelium in allergic rhinitis, and this information may be useful in relation to a therapeutic approach.⁶
3. Considerable attention has been devoted to the clinical effects of proteases in recent years. The ability of these agents to reduce inflammation, swelling, and pain in traumatic and inflammatory disorders has aroused much interest in many areas of medical practice, including that of otolaryngology. The bromelains in particular have demonstrated a number of properties that would appear useful in the

adjunctive treatment of sinusitis. From a representative sampling of the accumulated literature, evidence has been presented that reflects an ability of the bromelains to resolve inflammation, control edema, digest protein, modify tissue permeability, and, as has also been suggested, to indirectly mediate vasodilation. Generally, these observations tend to support the recently proposed concept of inflammation and further clarify the role of the bromelains in inflammation. This concept maintains that during the inflammatory reaction, plasma proteins and fluids exude into the intravascular spaces from the blood vessels. The subsequent polymerization of these proteins increases the viscosity of the exudates. The fibrinogen of the plasma is converted into a soft, partially polymerized fibrin that occludes the pores of the vessels, and edema results. By direct action, and by a multiplicity of actions initiated by the bromelains, and involving other enzyme systems, proteolytic depolymerization reactions occur that reduce the viscosity of the inflammatory exudates and lyse the fibrin clots of the capillary spaces and lumens of the vessels. As a consequence, permeability is increased, drainage is facilitated, and biologic continuity is restored.³

References

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