**Natural D-Hist**

**Product Rationale:**
Natural D-Hist is a synergistic formula having mast cell stabilizing activity combined with agents that inhibit the mediation of allergies. Natural D-Hist can be used for seasonal support.

**Research Findings:**

**Quercetin:**
Among the flavonoids, quercetin is one of the most biologically active. It is widely distributed in plants including Oak trees (Quercus spp.), onions (Allium cepa) and tea (Camellia sinensis).
- Quercetin inhibits histamine release from antigen-induced (IgE-induced) mast cells and basophils\(^1,2\) – related to its ability to block Calcium influx by inhibiting calmodulin activity\(^3\).
- Quercetin has in vitro mast cell stabilizing activity greater than sodium cromolyn\(^4\) (synthetic pharmaceutical mast cell stabilizer).
- Quercetin inhibits lipoxygenase (LOX), platelet aggregation, and mast cell and basophil degranulation. Quercetin is a mast cell stabilizer, keeping histamine and other preformed mediators from being released\(^5\).

**Stinging Nettles:**
- Randomized, Double-Blind Study with Placebo: 98 allergy sufferers given placebo or Stinging Nettles: Urtica dioica was rated higher than placebo by patients\(^6\).
- Positive Commission E monograph for use as supportive therapy for rheumatic ailments.
- Potential Mechanisms include:
  1. Inhibition of inflammatory enzymes 5-lipoxygenase and cyclooxygenase\(^7\).
  2. Inhibition of the pro-inflammatory transcription factor NF-kappaB\(^8\).

**Bromelain:**
Bromelain is the term used to describe a group of enzymes derived from the stem and fruit of the pineapple plant (Ananas comosus). As a plant enzyme, bromelain has many advantages and uses as a supplement ingredient.
- Bromelain is considered an anti-inflammatory agent due to its ability to inhibit arachidonic acid formation by Phospholipase A\(^2\). An activity related to its enzymatic degradation of the proinflammatory Bradykinin molecule\(^9\).
- Bromelain is believed to increase absorption of other molecules\(^10\), including bioflavonoids like quercetin\(^11\).

**N- Acetyl Cysteine (NAC):**
NAC is used primarily as a precursor to the important antioxidant glutathione\(^12\); and is also a mucolytic agent able to breakdown the viscosity of mucus within the lungs- a common cause of allergy related asthma\(^13,14\).

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**Dose Form:**
- **Natural D-Hist, Product #524:** Two-piece Vegetable Capsule
- **D-Hist Jr., Product #855:** Chewable Tablet

**Other Ingredients:**
Natural D-Hist, Product #524: Natural Vegetable Capsules. This product may contain one or more of the following: Calcium Silicate, Magnesium Stearate, Microcrystalline Cellulose and Silicon Dioxide.
- **D-Hist Jr., Product #855:** Natural Cane Sugar, Lemon-Lime Flavoring, Vanilla Flavoring, Xylitol, Magnesium Stearate, Stevia Leaf Extract and Cabosil. This product may contain Croscarmellose Sodium.

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**Supplement Facts**

**Natural D-Hist, Product #524: Two-piece Vegetable Capsule**
- **Serving Size:** 1 Capsule
- **Servings Per Container:** 120
- **1 capsule contains**: Amount Per % Daily Serving Value
  - Vitamin C (as Ascorbic Acid) 150 mg 250%
  - Quercetin 200 mg *
  - Stinging Nettles Leaf Powder 200 mg *
  - Bromelain (2400 GDU/g) 50 mg *
    + (from Pineapple)
  - N-Acetyl Cysteine USP\(^*\) 25 mg *
  - * % Daily Value not established

**D-Hist Jr., Product #855: Chewable Tablet**
- **Serving Size:** 1 Tablet
- **Servings Per Container:** 60
- **1 capsule contains**: Amount Per % Daily Serving Value
  - Vitamin C (as Ascorbic Acid) 75 mg 125%
  - Quercetin 100 mg *
  - Stinging Nettles Leaf 100 mg *
  - Bromelain (2400 GDU/g) 25 mg *
    + (from Pineapple)
  - N-Acetyl Cysteine USP\(^*\) 12 mg *
  - * % Daily Value not established

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**Additional Information:**

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease. The information provided is intended to help health care professionals make informed decisions about recommending this product safety and effectively.
**Dose:**

**Natural D-Hist, Product #524:**
Loading Dose: 2-3 capsules three times per day for 7-10 days
Maintenance Dose: 1 or more capsules per day
Acute Flair-up: 2-3 capsules as needed

**D-Hist Jr., Product #855:**
1-2 tablets two times per day

**Contraindications, Adverse or Other Reactions:**
Mild stomach upset or allergic reaction may occur with any herbal product, move dose closer to meals or cease product if symptoms persist. Patients should ingest a single capsule before ingesting large doses to ensure no reaction will occur with higher doses.

Patients on blood-thinning drugs such as warfarin (coumadin) or heparin should use caution as bromelain may amplify their effects.

**References:**