Vascuzyme

Product #126

Supplement Facts
Serving Size: 3 Tablets
Servings Per Container: 60

<table>
<thead>
<tr>
<th></th>
<th>Amount Per Serving</th>
<th>% Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium (from Carbonate)</td>
<td>120 mg</td>
<td>12%</td>
</tr>
<tr>
<td>Enzyme Blend</td>
<td>705 mg</td>
<td></td>
</tr>
<tr>
<td>Providing:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudo (from Pancreatin)</td>
<td>90,000 USP Units</td>
<td>*</td>
</tr>
<tr>
<td>Amylase (from Pancreatin)</td>
<td>90,000 USP Units</td>
<td>*</td>
</tr>
<tr>
<td>Papain</td>
<td>1,080,000 USP Units</td>
<td>*</td>
</tr>
<tr>
<td>Trypsin</td>
<td>18,000 USP Units</td>
<td>*</td>
</tr>
<tr>
<td>Lipase (from Pancreatin)</td>
<td>7,200 USP Units</td>
<td>*</td>
</tr>
<tr>
<td>Chymotrypsin</td>
<td>2,025 USP Units</td>
<td>*</td>
</tr>
<tr>
<td>Bromelain (from Pineapple)</td>
<td>324 GDU</td>
<td></td>
</tr>
<tr>
<td>Quercetin</td>
<td>75 mg</td>
<td>*</td>
</tr>
<tr>
<td>Rutin</td>
<td>75 mg</td>
<td>*</td>
</tr>
</tbody>
</table>
* % Daily Value not established

Dose Form: Tablet

Other Ingredients:
Microcrystalline Cellulose USP, Stearic Acid USP, Croscarmellose Sodium USP, Magnesium Stearate USP, Silicon Dioxide USP, NS Enteric Coating and Surelease.

Formula Rationale:
Polyenzyme therapy is widely used in Europe and other countries. Current day, the value of enzyme supplementation is becoming more recognized in the United States. Vascuzyme is an enteric coated blend of high potency enzymes with the addition of two well known flavonoids.

Research Findings:
- In vitro, animal, and human data show enzyme therapies are capable of cleaving immune complexes, known inflammatory mediators.¹ ² ³
- 4 different types of immune complexes were prepared in vitro. The immune complexes included high and moderate antigen and antibody excess. The immune complexes were incubated with different concentrations of an enzyme mixture or papain or pancreatin. Aprox. 90% of the antigen complexes were cleaved by low doses of enzymes. Antibody complexes were gradually cleaved by concentrations increasing from 5-80 mg%. The single enzymes showed less cleavage activity.²
- Transforming growth factor-beta (TGF-beta) is a known agent in some illnesses. Proteolytic enzymes have been shown to reduce TGF-beta levels by converting the protease inhibitor alpha2M from the slow form into the fast form, where the fast form binds and inactivates TGF-beta. In a study investigating oral proteolytic enzyme therapy in healthy volunteers, those with rheumatoid arthritis, osteomyelofibrosis, and herpes zoster, it was found that the enzyme therapy reduced TGF-beta in those patients with an elevated level including those in the disease groups.¹⁴
- Children who had recently undergone abdominal surgery were given either a polyenzyme mixture or a monoenzyme agent. Those receiving the polyenzyme mix had reduced levels of pro-inflammatory cytokines (IL-2, IL-6, and TNF-alpha) and increased levels of the anti-inflammatory cytokine IL-4.⁵
- 60 patients who had had fractured long bones were given either enzyme therapy or standard antiedematous drugs for postoperative swelling. In the group receiving the enzyme therapy, reduction of swelling was continuous and significantly faster compared to the control group.⁶
- 90 patients with osteoarthritis of the hip were given either enzyme therapy or the NSAID diclofenac (45 in each group). Those receiving the enzyme therapy reported greater improvements in pain, stiffness and physical function according to the WOMAC scale.⁷
- 103 patients with osteoarthritis of the knee were given either enzyme therapy (n=52) or the NSAID diclofenac. The Lequesne’s Algofunctional Index (LFI) was used along with a complaint index. Both treatments resulted in improvements. In the enzyme group LFI decreased from 13.0 to 9.4, while in the diclofenac group LFI decreased from 12.5 to 9.4.⁸
- Flavonoids such as Quercetin have been found to regulate inflammatory responses. They have been found to suppress the production of TNF-alpha by macrophages, microglial cells and mast cells stimulated by lipopolysaccharide and other toll-like receptors.⁹

• The antioxidant effect of rutin was examined in a randomized single-blind study. 500 mg of rutin were given to volunteers. At the end of 6 weeks those receiving the rutin had significantly elevated plasma flavonoids (Quercetin, kaemperol, and isorhamnetin) but no change in plasma antioxidant status.\(^\text{10}\)
• The effect of Quercetin on the expression of pro-inflammatory cytokines in human mast cells (HMC-1) was investigated. It was found that Quercetin decreased the expression and production of TNF-alpha, IL-1 beta, IL-6, and IL-8.\(^\text{11}\)

**Dose:**
Three tablets 1-3 times per day on an empty stomach or as recommended by your health care professional.

**Contraindications, Adverse or Other Reactions:**
Class 2. This product contains bromelain and plant and animal enzymes.

**References:**