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**GI Revive™** is a synergistic formula offering comprehensive support for optimal gastrointestinal health and function. It provides therapeutic levels of nutrients that support the repair of gastrointestinal mucosa and help fight inflammation along with ingredients to promote intestinal regularity.\*

## GI Revive™ Ingredient Highlights:

### Zinc Carnosine

Zinc carnosine has been shown to have impressive mucosal-protective and anti-ulcerative properties, including combating *H. pylori*, protecting the intestinal lining and supporting the integrity of tight junctions against intestinal mucosal damage caused by intense exercise or certain anti-inflammatory medications.<sup>1,2</sup> Compared to placebo, zinc carnosine was shown to neutralize the effect of the NSAID indomethacin on increasing gut permeability in healthy human subjects.<sup>3</sup> (The placebo arm experienced a three-fold increase in gut permeability while the zinc-treated group showed no significant change.) In a trial of patients with small bowel injury induced by extended use of low-dose aspirin, compared to untreated controls, subjects taking zinc carnosine for four weeks showed significant reductions in the number of reddened lesions and erosions/ulcers, confirmed by capsule endoscopy before and after.<sup>4</sup> Zinc carnosine—zinc complexed with the amino acid L-carnosine in a 1:1 chelate—is the preferred form of zinc for this formula because it remains in stomach juice without rapid dissociation and adheres to ulcerous lesions more effectively, after which the L-carnosine and zinc are separated and have healing effects on the affected tissue.<sup>5,6</sup>

### L-Glutamine

Glutamine is critically important for healthy intestinal cells. It is their primary fuel and is also needed for repair and maintenance of high-turnover tissues such as the epithelial cells of the intestinal lining. Glutamine is the body's most abundant amino acid; however, prolonged physiological and metabolic stress may deplete glutamine stores, making it a conditionally essential amino acid.<sup>7</sup> Supplemental L-glutamine has been shown to have immunomodulatory, anticatabolic/anabolic and gastrointestinal mucosal-protective actions. As a building block for glutathione, it may also contribute to the body's antioxidant status. Trauma, infections, burns, and other physiological stressors and catabolic states increase the need for glutamine. Glutamine deficiency can cause severe intestinal degradation and thus, supplementation may enhance intestinal healing and repair.<sup>8,9</sup> Glutamine supplementation has been shown to reduce the exercise-induced increase in small intestinal permeability, which typically leads to inflammation and GI distress post-intense effort.<sup>10</sup> It is essential in maintaining proper intestinal permeability and protecting against "leaky gut." Increased intestinal permeability is believed to result in systemic inflammation and possibly contribute to the etiology of autoimmune and chronic inflammatory diseases as a result of incompletely digested proteins, peptides and other compounds gaining access to the systemic circulation.<sup>11-13</sup>

### Methylsulfonylmethane (MSM) and Quercetin

These anti-inflammatory substances may help protect against increased intestinal permeability by reducing the chronic inflammation that may contribute to this compromised intestinal integrity. Quercetin may also provide direct anti-inflammatory action by stabilizing intestinal mast cells as well as supporting tissue health through its antioxidant functions.<sup>14-17</sup> Human and animal studies support a role for MSM in reducing inflammation, supporting the immune system, and having indirect antioxidant effects by inhibiting NF-κB activity and reducing expression of enzymes and cytokines involved in production of reactive oxygen species. MSM has been shown to downregulate expression of COX-2 and inducible nitric oxide synthase (iNOS), thereby reducing generation of superoxide and nitric oxide free radicals.<sup>17</sup>

### N-Acetyl Glucosamine

N-acetyl glucosamine (GlcNAc) aids in structural support of the cells of the intestinal lining and plays a role in regulating inflammation in mucosal cells. The increased production of glycosaminoglycans (GAGs) that may occur as a result of supplementation with GlcNAc may help support mucosal health and reduce intestinal permeability. Research shows that GlcNAc has the ability to reduce biofilm formation of different *E. coli* pathogens, which is often a consequence of dysbiosis in inflammatory bowel disease and celiac disease.<sup>18</sup> In animal models, GlcNAc reduced the pro-inflammatory activity of NF-κB, TNF-alpha, and IL-6, and also demonstrated vaso-protective effects during acute vascular injury.<sup>19</sup>

### Benefits of GI Revive™\*:

- Rejuvenates intestinal mucosal health
- Supports integrity of the small intestine for proper intestinal permeability
- Provides support for a healthy mucosa and a normal inflammatory response
- Promotes regularity and healthy bowel function
- Supports gut-associated immune function

## DGL, Aloe Vera, Slippery Elm, Marshmallow, Chamomile, Okra, and Cat's Claw

Each of these botanicals has a long history of use in gastrointestinal disorders. These mucilaginous and relaxing herbs can provide support for healthy intestinal function by coating and soothing the intestinal lining, promoting the healing of ulcers and inflamed tissue, and reducing cramping by relaxing the intestines.<sup>20-27</sup>

## Mucin

Mucin is a glycoprotein normally secreted by intestinal epithelial cells. Coating the intestinal lining, it is a key part of the innate immune system at the “front line” of host defense, as well as being the site of colonization by commensal or “beneficial” intestinal microbes.<sup>28</sup> By contributing to a healthy mucosal layer, it may help neutralize intestinal antigens and reduce the inflammation and tissue damage caused by food allergy, intestinal infection and dysbiosis.<sup>29</sup> Mucin also helps protect epithelial cells against physical or chemical injury and serves as lubrication to aid the passage of materials through the GI tract.<sup>30</sup>

## Prune Powder and Citrus Pectin

These two ingredients are included to safely aid in regularity without the caustic and damaging effects of commonly used herbal laxatives such as senna.<sup>31,32</sup> Prunes are naturally high in sorbitol and chlorogenic acid, which support healthy bowel function.<sup>33-35</sup>

### GI Revive™ Powder

#### Supplement Facts

Serving Size 8 grams (approx. one tablespoon)  
Servings Per Container 28

| Amount Per Serving                                                       | % Daily Value | Amount Per Serving                                       | % Daily Value |
|--------------------------------------------------------------------------|---------------|----------------------------------------------------------|---------------|
| Zinc<br>(from Zinc L-Carnosine 75 mg)                                    | 17 mg 155%    | Chamomile<br>( <i>Matricaria chamomilla</i> )(flower)    | 100 mg *      |
| L-Glutamine                                                              | 1.5 g *       | Okra Extract<br>( <i>Abelmoschus esculentus</i> )(fruit) | 100 mg *      |
| N-Acetyl-D-Glucosamine                                                   | 1 g *         | Cat's Claw<br>( <i>Uncaria tomentosa</i> )(bark)         | 100 mg *      |
| Citrus Pectin                                                            | 1 g *         | Methylsulfonylmethane<br>(MSM)                           | 100 mg *      |
| Deglycyrrhizinated Licorice<br>(DGL) ( <i>Glycyrrhiza glabra</i> )(root) | 400 mg *      | Quercetin                                                | 100 mg *      |
| Aloe Vera Extract<br>( <i>Aloe barbadensis</i> )(leaf)                   | 300 mg *      | Prune Powder                                             | 100 mg *      |
| Slippery Elm<br>( <i>Ulmus rubra</i> )(bark)                             | 200 mg *      |                                                          |               |
| Mucin                                                                    | 200 mg *      |                                                          |               |
| Marshmallow<br>( <i>Althea officinalis</i> )(root)                       | 100 mg *      |                                                          |               |

**Other Ingredients:** Tapioca dextrin, natural flavors, certified organic stevia leaf extract powder (*Stevia rebaudiana*), citric acid, cellulose gum, silicon dioxide, decaffeinated black tea (*Camellia sinensis*)(leaf).

### GI Revive™ Capsules

#### Supplement Facts

Serving Size 7 capsules  
Servings Per Container 30

| Amount Per Serving                                                       | % Daily Value | Amount Per Serving                                       | % Daily Value |
|--------------------------------------------------------------------------|---------------|----------------------------------------------------------|---------------|
| Zinc (from Zinc L-Carnosine 75 mg)                                       | 17 mg 155%    | Marshmallow ( <i>Althea officinalis</i> )(root)          | 100 mg *      |
| L-Glutamine                                                              | 1.5 g *       | Okra Extract<br>( <i>Abelmoschus esculentus</i> )(fruit) | 100 mg *      |
| N-Acetyl-D-Glucosamine                                                   | 1 g *         | Cat's Claw<br>( <i>Uncaria tomentosa</i> )(bark)         | 100 mg *      |
| Citrus Pectin                                                            | 1 g *         | Methylsulfonylmethane (MSM)                              | 100 mg *      |
| Deglycyrrhizinated Licorice (DGL)<br>( <i>Glycyrrhiza glabra</i> )(root) | 400 mg *      | Quercetin                                                | 100 mg *      |
| Aloe Vera Extract<br>( <i>Aloe barbadensis</i> )(leaf)                   | 300 mg *      | Prune Powder                                             | 100 mg *      |
| Slippery Elm ( <i>Ulmus rubra</i> )(bark)                                | 200 mg *      |                                                          |               |
| Mucin                                                                    | 200 mg *      |                                                          |               |
| Chamomile<br>( <i>Matricaria chamomilla</i> )(flower)                    | 100 mg *      |                                                          |               |

**Other Ingredients:** Cellulose (capsule,) vegetable stearate.

\*Daily Value not established.

## Recommended Use

- **Powder:** Mix 8 grams (approx. one tablespoon) in water or other liquid per day, or as directed by your health care practitioner.
- **Capsules:** Take 7 capsules per day, or as directed by your health care practitioner.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/techsheet-references/gi-revive-references.pdf>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Healthcare practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities. Individual monitoring, including liver function tests, may be appropriate.

\*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.

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