

**GI Revive**<sup>™</sup> is a synergistic formula offering comprehensive support for optimal gastrointestinal health and function. It provides optimal levels of nutrients which support gastrointestinal mucosal repair and help fight inflammation along with ingredients to promote intestinal regularity.

# GI REVIVE<sup>™</sup> FEATURES:

#### **Zinc Carnosine**

Zinc carnosine is included in this formulation due to its impressive mucosal-protective including the ability to help protect the intestinal lining against damage due to indomethacin and other supportive anti-inflammatory medications often associated with intestinal mucosal damage.

#### **L-Glutamine**

Glutamine is the most important nutritional substance for healthy intestinal cells. It is one of the most commonly used amino acids in the body to rebuild tissues, particularly high turnover tissue such as the epithelial cells of the intestinal lining. Supplemental L-glutamine has been shown to have immunomodulatory, anticatabolic/anabolic and gastrointestinal mucosal-supportive actions. It may also have antioxidant activity as it is a precursor for glutathione synthesis. Under stress, the body relies on glutamine to help meet its extra energy needs. Supplemental L-glutamine is used in medical foods for such stress situations as trauma, infections and burns. Glutamine deficiency can cause severe intestinal degradation and supplementation can support intestinal mucosal health. It is essential in maintaining proper intestinal permeability and avoiding "leaky gut syndrome." Leaky gut syndrome can result in increased toxic and allergy exposure, systemic inflammation, and autoimmune disease.

#### **MSM and Quercetin**

These subtances have anti-inflammatory properties and can help reduce the persistent inflammation which is often the reason why the intestinal lining becomes damaged and "leaky." Quercetin can also help with stabilizing intestinal mast cells and can improve tissue health through its antioxidant functions.

#### **N-Acetyl Glucosamine**

N-Acetyl Glucosamine aids in the production of health supportive structures for the cells of the intestinal lining. The increased production of glycosaminoglycans (GAGs), which can occur as a result of supplementation of these nutrients, can help support proper mucosal health and reduce intestinal permeability. In studies on mice, Dr. Michael Demetriou and colleagues with the UC Irvine Center for Immunology found that N-Acetyl Glucosamine (GlcNAc), which is similar but more effective than the widely available glucosamine, shows potential to help those suffering from autoimmune diseases by inhibiting the growth and function of abnormal T-cells that incorrectly direct the immune system to attack specific tissues in the body, such as brain myelin in MS and insulin-producing cells of the pancreas in diabetes. Study results appear a 2007 paper in the Journal of Biological Chemistry. This study comes on the heels of others showing the potential of GlcNAc in humans.

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

These mucilaginous and relaxing herbs can provide comprehensive support of intestinal function by coating and soothing the intestinal lining, supporting the renewal of inflamed tissue, and reducing cramping by relaxing the intestines. GI Revive™ contains this impressive comprehensive blend of botanicals that have a long traditional use in gastrointestinal disorders.

# Mucin

Mucin is a glycoprotein, normally secreted by the intestinal epithelial cells, containing sialic acid and N-neurominic acid. It can serve to coat the intestinal lining and to neutralize intestinal antigens, along with sIgA, supporting a healthy inflammatory response to food allergy, intestinal infection and dysbiosis.

## **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 *Cassia marilandica* (senna) and *Rhamnus purshiana* (cascara sagrada).

# **BENEFITS OF GI REVIVE™:**

Rejuvenates intestinal mucosal health Promotes proper intestinal ability (appropriate for "Leaky Gut") Promotes regularity and healthy bowel function

# Medicinal Ingredients (per 8g/1 tbsp):

Glutamine 1500 mg   N-Acetylglucosamine (N-Acetyl-beta-D-glucosamine-Shellfish/crustacean free) 1000 mg   Deglycyrrhizinated licorice ( <i>Glycyrrhiza glabra</i> -Root) (8:1) 400 mg   Aloe vera (Leaf gel) (8:1) 300 mg   Mucins 200 mg   Slippery elm bark powder ( <i>Ulmus rubra</i> -Stem bark inner) 200 mg   Cat's Claw ( <i>Uncaria tomentosa</i> -Aged bark) 100 mg   Chamomile ( <i>Matricaria chamomilla</i> -Flower) 100 mg   Marshmallow ( <i>Althaea officinalis</i> -Root) 100 mg   VRM (Methylsulfonylmethane) 100 mg   Dkra ( <i>Abelmoschus esculentus</i> -Fruit) 100 mg   Quercetin 100 mg   Recommended Dose: Adura extract powder, citric acid, vegetable cellulose, natural flavour, silicon dioxide, decafieinated black tea ( <i>Camellia sinsensis</i> -Leaf).   Recommended Dose: Adults: Add approx. 1 tbsp (8 g) to water or juice, stir briskly and consume immediately once daily, or as directed by your health care practitioner. Take a few hours before or after taking ot	L-Glutamine	1500 mg
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#### REFERENCES

- 1. Klimberg, V. Suzanne, M.D., et al. Prophylactic Glutamine protects the intestinal mucosa from radiation injury. Cancer 1990, July 1;66(1):62-68.
- 2. Hickson R, et al. Glutamine prevents downregulation of myosin heavy chain synthesis and muscle atrophy from glucocorticoids. Am J Physiol 1995 Apr;268(4 Pt 1):E730-E734.
- 3. Noyer CM, Simon D, Borczuk A, Brandt LJ, Lee MJ, Nehra V. A double-blind placebo-controlled pilot study of glutamine therapy for abnormal intestinal permeability in patients with AIDS. Am J Gastroenterol 1998;93(6):972-5.
- 4. Foitzik T, Stuffer M, Hotz HJ, Klinnert J, Wagner J, Warshaw AL, Schulzke JD, Fromm M, Buhr HJ. Glutamine stabilizes intestinal permeability and reduces pancreatic infection in acute experimental pancreatitis. J Gastrointest Surg. 1997;1(1):40-47.
- 5. Herschler RJ. Dietary and pharmaceutical uses of methylsulfonylmethane and compositions comprising it. United States Patent 4,514,421: April 30, 1985.
- 6. Hutter JA et al., Anti-inflammatory C-glucosyl chromone from Aloe barbadensis. In: JNP 59(5):541-543, 1996.
- 7. Langmead L, et al. Antioxidant effects of herbal therapies used by patients with inflammatory bowel disease: an in vitro study. Aliment Pharmacol Ther., 2002 Feb;16(2):197-205.
- 8. Hough L, Jones JK, Hirst EL. Chemical constitution of slippery elm mucilage; isolation of 3-methyl d-galactose from hydrolysis products. Nature, 1950 Jan; 165(4184):34.
- 9. Lengsfeld C, Titgemeyer F, Faller G, Hensel A. Glycosylated compounds from okra inhibit adhesion of Helicobacter pylori to human gastric mucosa. J Agric Food Chem. 2004; Mar 2a4;52(6):1495-503.
- 10. Nichols TW, Faass N. Optimal Digestion, New Strategies for Achieving Digestive Health. Avon, New York, 1999.
- 11. Lipski E. Digestive wellness. New Canaan, CT: Keats, 1996: 200-03.

- 13. PDR for Herbal Medicines 1st Ed., Medical Economics Co., Montvale, New Jersey, 1998.
- 14. Fetrow CW, Avila JR. Complimentary & Alternative Medicines: Professional's Handbook. Springhouse, Springhouse, PA, 1999.
- 15. Werbach MR, Murray, MT. Botanical Influences on Illness: A sourcebook of clinical research. Third Line Press, Tarzana, California, 1994.
- 16. Bascom A. Incorporating Herbal Medicine Into Clinical Practice. F.A. Davis Co., Philadelphia, 2002.
- 17. Cheallier A. Encyclopedia of Herbal Medicine. Dorling Kindersley, London, 2000.
- 18. PDR for Nutritional Supplements 1st Ed., Medical Economics Co., Montvale, New Jersey, 2001.

- 21. Odashima M. Zinc L-carnosine protects colonic mucosal injury through induction of heat shock protein 72 and suppression of NF-kappaB activation. Life Sci. 2006 Nov 10;79(24):2245-50. Epub 2006 Aug 2.
- 22. Mikami K, Otaka M, Watanabe D. Zinc L-carnosine protects against mucosal injury in portal hypertensive gastropathy through induction of heat shock protein 72. J 22. Gastroenterol Hepatol. 2006 Nov;21(11):1669-74.
- 23. Morgan R, Gao G, Pawling J, Dennis JW, Demetriou M, Li B. N-acetylglucosaminyltransferase V (Mgat5)-mediated N-glycosylation negatively regulates Th1 cytokine production by T cells. J Immunol. 2004 Dec 15; 173(12):7200-8.

<sup>12.</sup> Pizzorno JE, Murray MT. Textbook of Natural Medicine (2nd Ed.), Churchill Livingstone, New York, 1999.

<sup>19.</sup> Robbers JE, Speedie MK, Tyler VE. Pharmacognosy and Pharmacobiotechnology. Williams & Wilkins, Baltimore, 1996.

<sup>20.</sup> Mahmood A, FitzGerald AJ. Zinc carnosine, a health food supplement that stabilizes small bowel integrity and stimulates gut repair processes. Gut. 2007 Feb;56(2):168-75. Epub 2006 Jun 15.

# **GI Revive™ Powder**

GI Revive<sup>™</sup> contains a blend of ingredients that offer comprehensive support for optimum gastrointestinal (GI) health and function. Gastrointestinal, or 'gut' health, is very important to a person's overall health and well-being. Although the process of digestion begins in the mouth, it is within the gut where the absorption of nutrients must take place. The lining of the gut must have proper permeability and integrity so that it can absorb nutrients and prevent toxins, allergens and microbes from gaining access to the bloodstream. Therefore, it is critical to our overall health to support the health of the intestinal mucosa.

# Highlights

**L-Glutamine** – one of the most commonly used amino acids in the body for supporting the health of tissues -particularly the tissues within the gut. It is essential for maintaining proper intestinal permeability and the healthy functioning of the lining of the intestines.

**MSM** – sulfur-containing compound that supports a healthy inflammatory response as well as the structure, integrity and permeability of cell walls

**N-Acetyl Glucosamine** – compound that aids in the production of health-supportive structures for the cells in the intestinal lining

### **Benefits**

- Rejuvenates intestinal mucosal health
- Promotes proper intestinal function
- Supports a healthy inflammatory response
- Promotes regularity and healthy bowel function

**DGL**, **Slippery Elm**, **Marshmallow**, **Chamomile**, **Okra Extract and Cat's Claw** – herbs which provide comprehensive enhancement of gut function by coating and soothing the intestinal lining; they also help relax the intestines, which aids in alleviating occasional cramping

**Aloe Vera** – promotes the growth of a variety of 'good' bacteria in the gut. Fostering the growth of this 'good' bacteria also helps promote overall health.

**Quercetin** – highly concentrated bioflavonoid found in citrus fruits, red wine, and tea which supports a healthy inflammatory response by stabilizing intestinal cells and can also improve overall tissue health

**Mucin** – classified as a glycoprotein -a protein with a carbohydrate group attached to it; mucin is normally secreted by the intestinal cells and can foster overall integrity of the gut

Prune Powder and Citrus Pectin – aid in bowel regularity

**Recommended Dose: Adults:** Add approx. 2 teaspoons to water or juice, stir briskly and consume immediately once daily, or as directed by your health care practitioner. Take a few hours before or after taking other medications or health products. Maintain adequate liquid intake. For use beyond 12 weeks, consult a health care practitioner. **Does not contain gluten.** 



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