

RHIZINATE® DEGLYCYRRHIZINATED LICORICE

Deglycyrrhizinated licorice (DGL) provides effective nutritional support for the mucosal lining of the stomach and intestines.* DGL supports the production of mucin, a compound that coats and protects the digestive tract to provide relief for occasional stomach discomfort.* To promote a healthy microbial defense, the stomach must sustain a healthy pH and epithelial tissues to support against acidic conditions. Digestion is often compromised due to undigested food particles, spicy or fried foods, stress, and aging. Licorice root is commonly used herb and staple within Traditional Chinese Medicine.

Effective Gastrointestinal Support

GutGard® Clinical Trial Studies					
Author	Design	N	Duration	Dose	Outcome
Ravendra et al ¹	Randomized double blind control trial	50	30 days	75 mg GutGard BID or placebo	Compared to placebo, those receiving GutGard had a significantly significant effect ($P \leq .05$), on both day 15 and day 30. GutGard was well tolerated for duration of study and shown to support digestive comfort.
Puram et al ²	Randomized double blind control trial	100	60 days	150 mg GutGard BID or placebo	Both groups completed 13c-urea breath tests and stool antigen tests at days 0, 30, and 60. GutGard was given at a single oral dose of 150mg. On day 60, the GutGard group 24 subjects (48%) had a negative breath test and 28 subjects (56%) receiving GutGard had a negative stool test. The findings suggested GutGard supports a healthy microbial balance in the stomach.

Rhizinate, now featuring GutGard®, is available in three formulas: Rhizinate Original, Rhizinate Fructose Free, and Rhizinate 3x. Each formula is designed to meet your patients' individual needs through.

- Featuring GutGard®, the polyphenic plant compound, flavonoids
- Chewable tablets which allow DGL to mix with saliva for faster action on the gastric mucosa*
- Taken after food rather than before.
- Contains less than 1% glycyrrhizin. Glycyrrhizin may elevate blood pressure in some individuals.
- Supporting digestion and help soothe and relieve occasional stomach discomfort.*
- Added glycine to keep stomach lining strong*



¹ Kassir ZA. Endoscopic controlled trial of four drug regimens in the treatment of chronic duodenal ulceration. *Irish Med J.* 1985; 78:153-6.



RHIZINATE®

How It Works

Licorice (*Glycyrrhiza* sp.) is one of the oldest medicinal plants in the world. While its origins are in the Mediterranean, Middle East, and central Asia, it has been cultivated virtually everywhere from Spain to China for centuries.^{1,2} Licorice root contains glycyrrhizic acid, which has many beneficial properties but can lead to high blood pressure if consumed in large quantities over an extended period of time.^{*3,4} Glycyrrhizic acid has been used to support immunity and liver function for many years.^{*5} However, because the beneficial effects of licorice on the stomach lining are not dependent upon glycyrrhizic acid, it has been removed to facilitate long-term use.*

Deglycyrrhized Licorice

Rhizinate, utilizing the extract of *Glycyrrhiza glabra*, GutGard®, helps support healthy mucosal lining by stimulating the stomach's natural protective factors.^{*2,6} The stomach and upper sections of the small intestine are lined with thin layers of tissue called the mucosa. This lining must function in the stomach's extreme acid environment of pH levels ranging around 2.0 to 3.0.

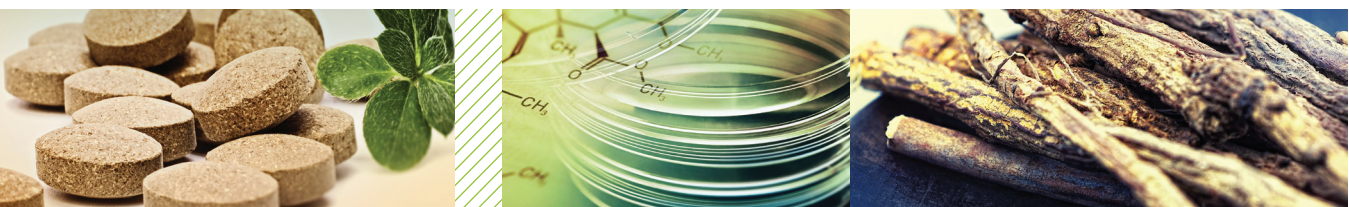
Unlike antacids, DGL does not suppress gastric acid, which is needed for the absorption of calcium and for the maintenance of healthy gut flora.* Rather, it protects the stomach lining by stimulating increased mucous production and blood supply to the mucosa.^{*7,8} With 30 years of use and scientific and clinical studies showing gastrointestinal support, DGL has been recommended for both short-term and long-term use.^{*2,9}

Additional Benefits of Licorice:

- Licorice is a rich source of flavonoids and isoflavonoids.^{*9}
- Licorice has been shown to support a healthy cytokine response, healthy immune response, cellular metabolism and liver and heart health.^{*10}

Glycine

Glycine is a stable amino acid that has the ability to support healthy mucosal lining of the stomach.^{*12} It is also a glutathione precursor.*



RHIZINATE® ORIGINAL FLAVOR

Rhizinate® Original flavor is a unique extract of deglycyrrhizinized licorice (DGL) formulated to provide soothing, digestive relief* in a delicious chewable licorice flavor.



RHIZINATE® FRUCTOSE FREE

Rhizinate Fructose-Free is DGL formulated to provide the same relief from occasional stomach discomfort as Rhizinate Original flavor, but without the fructose.*



RHIZINATE® 3X GERMAN CHOCOLATE FLAVORED

Rhizinate 3X is a triple strength deglycyrrhizinized licorice (DGL) in a delicious, German Chocolate flavor. People prefer the taste of Rhizinate 3X over other leading competitors.



Supplement Facts

Serving Size 3 chewable tablets		Servings per container 33
Amount per 3 chewable tablets		%DV*
Calories	10	
Total Carbohydrate	2 g	1%*
Sugars	1 g	**
Includes 1 g Added Sugar		2%*
Deglycyrrhizinized Licorice (DGL) (Glycyrrhiza glabra) Root Extract	150 mg	**
Glycine	75 mg	**

*Percent Daily Values (DV) are based on a 2,000 calorie diet.

**Daily Value not established.

Other ingredients: fructose, mannitol, sorbitol, stearic acid, natural flavor, cellulose, silicon dioxide, and magnesium stearate.

Recommendations: Chew 3 tablets after food in the morning. Chew 3 tablets after food in the evening or as recommended by your healthcare professional.

If pregnant, nursing, or taking prescription drugs, consult your healthcare professional prior to use.

Contains No: Salt, yeast, wheat, gluten, soy, dairy products, artificial coloring, flavoring, preservatives, or ingredients of animal origin.

Integrative Therapeutics

100 CT - 79001

Supplement Facts

Serving Size 3 chewable tablets		Servings per container 33
Amount per 3 chewable tablets		%DV*
Calories	5	
Total Carbohydrate	3 g	<1%†
Total Sugar	0 g	**
Includes 0 g Added Sugars		0%†
Deglycyrrhizinized Licorice (DGL) (Glycyrrhiza glabra) Root Extract	150 mg	**
Glycine	75 mg	**

†Percent Daily Values (DV) are based on a 2,000 calorie diet.

**Daily Value not established.

Other ingredients: Sorbitol, mannitol, stearic acid, natural flavor, cellulose, silicon dioxide, magnesium stearate

Recommendations: Chew 3 tablets after food in the morning. Chew 3 tablets after food in the evening or as recommended by your healthcare professional.

If pregnant, nursing, or taking prescription drugs, consult your healthcare professional prior to use.

Contains No: Salt, sugar, yeast, wheat, gluten, soy, dairy products, artificial colors, flavors, preservatives or ingredients of animal origin.

Integrative Therapeutics

100 CT - 79021

Supplement Facts

Serving Size 1 chewable tablet		
Amount per 1 chewable tablet		%DV*
Total Carbohydrate	<1 g	<1%†
Deglycyrrhizinized Licorice (DGL) (Glycyrrhiza glabra) Root Extract	75 mg	**
Glycine	50 mg	**

†Percent Daily Values (DV) are based on a 2,000 calorie diet.

**Daily Value not established.

Other ingredients: Fructose, organic inulin, coconut milk powder, natural flavors, cocoa bean powder, rice starch, silicon dioxide, organic gum acacia, luo han guo.

Contains milk and tree nuts (coconut).

Recommendations: Chew 1 extra-strength tablet twenty minutes after food in the morning. Chew 1 extra-strength tablet after food in the evening.

If pregnant, nursing, or taking prescription drugs, consult your healthcare professional prior to use.

Contains No: salt, yeast, wheat, gluten, soy, artificial colors or preservatives.

Integrative Therapeutics

90 CT - 79101

References

1. Blumenthal M., ed. "Licorice." In: *Herbal Medicine: Expanded Commission E Monographs*. American Botanical Council. Austin, TX. 2000; 233-239.
2. Turpie AGG, Runcie J, Thomson TJ. Clinical trial of deglycyrrhizinized liquorice in gastric ulcer. *Gut*. 1969;10:299-302.
3. Stormer FC, Reistad R, Alexander J. Glycyrrhizic acid in liquorice— Evaluation of health hazard. *Food Chem Toxicol*. 1993;31:303-312.
4. Heikens J, Fliers E, Ender E, Ackermans M, van Montfrans G. Liquorice-induced hypertension—a new understanding of an old disease: case report and brief review. *Netherlands J Med*. 1995;47:230-234.
5. Murray MT, Pizzorno JE. Ulcers (Duodenal and Gastric). In: *Encyclopedia of Natural Medicine Revised 2nd Edition*. Rocklin, Calif: Prima Publishing; 1998:516-517, 208-209.
6. Morgan AG, et al. Comparison between Cimetidine and [deglycyrrhizinized licorice] in the treatment of gastric ulceration and subsequent maintenance therapy. *Gut*. 1982;23:545-51.
7. Whiting B, Thomson TJ. Deglycyrrhizinized liquorice in duodenal ulcer. *Br Med J*. 1971 Oct 2;4(5778):48.
8. Van Marle J, Aarsen PN, Lind A, van Weeren-Kramer J. Deglycyrrhizinized liquorice (DGL) and the renewal of rat stomach epithelium. *Eur J Pharmacol*. 1981 Jun 19;72 (2-3):219-25.
9. Licorice. In: Gruenwald J, Brendler T, Jaenicke C, Engel K, Murray L, Borza S et al. eds. *PDR® for Herbal Medicines*. Montvale, NJ: Thomson Healthcare Inc. 2007; 522-530. Fourth Edition
10. Asl MN, Hosseinzadeh H. Review of pharmacological effects of Glycyrrhiza sp. and its bioactive compounds. *Phytother Res*. 2008 Jun;22(6):709-24.
11. Das SK, Das V, Gulati AK, Singh VP. Deglycyrrhizinized liquorice in aphthous ulcers. *J Assoc Physicians India*. 1989 Oct;37(10):647.
12. Tariq M, Al Moutaery AR. Studies on the antisecretory, gastric anti ulcer and cytoprotective properties of glycine. *Res Commun Mol Pathol Pharmacol*. 1997;97(2):185-98.