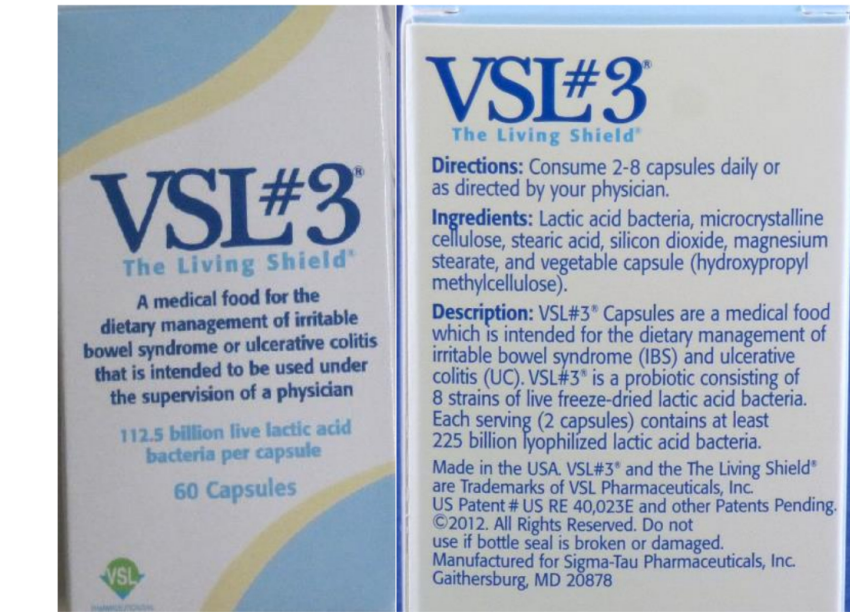




VSL#3 capsules

The Living Shield®

A medical food for the dietary management of irritable bowel syndrome (IBS) or ulcerative colitis (UC).¹⁻⁵

Description

VSL#3® Capsules are a medical food for the dietary management of irritable bowel syndrome (IBS) or ulcerative colitis (UC).¹⁻⁵ VSL#3® is a probiotic consisting of 8 strains of live freeze-dried lactic acid bacteria. Each serving (2 capsules) contains at least 225 billion lyophilized lactic acid bacteria.

Directions

Consume 2-8 capsules daily or as directed by your physician. Adjustment of the intestinal flora can take a few days or weeks; it may take up to one month for the colonization of the gut to become optimally stable.

Ingredients

VSL#3® Capsules contain eight strains of lactic acid bacteria (*Streptococcus thermophilus*, *Bifidobacterium breve*, *Bifidobacterium longum*,* *Bifidobacterium infantis*,* *Lactobacillus acidophilus*, *Lactobacillus plantarum*, *Lactobacillus paracasei*, *Lactobacillus delbrueckii* subsp. *bulgaricus*), microcrystalline cellulose, stearic acid, magnesium stearate, and vegetable capsule (hydroxypropyl methylcellulose), silicon dioxide. Some dairy ingredients are used in the culture medium but are removed during manufacturing. Product may contain trace amounts of dairy ingredients at very low levels.

*Recently reclassified as *B. lactis*.

Medical Food Use

As a medical food VSL#3® is specially formulated and processed to provide a precise mixture of certain bacterial species with potential synergistic relationships.

The importance of the gastrointestinal microflora in the normal functioning of the human gastrointestinal tract is well recognized.⁶⁻⁹ Several studies demonstrate that patients with IBS or UC may have decreased luminal concentrations of lactobacilli and bifidobacteria compared with normal individuals.¹⁰⁻¹⁵ Hence, IBS and UC patients may have a distinct nutritional requirement that differs from normal individuals. Daily consumption of extremely high levels of probiotic bacteria, which cannot be achieved simply by modification of the normal diet, is needed to maintain adequate and balanced colonization in the gastrointestinal tract in these patients. Patients with IBS or UC may therefore benefit from consuming high levels of probiotic bacteria so as

References:

1. Kim HJ, Camilleri M, McKinzie S, et al. A randomized controlled trial of a probiotic, VSL#3®, on gut transit and symptoms in diarrhoea-predominant irritable bowel syndrome. *Aliment Pharmacol Ther.* 2003; 17:895-904. The sponsored research clinical trials were conducted at the Mayo Clinic College of Medicine, Rochester, Minn.
2. Kim HJ, Vazquez Roque MI, Camilleri M, et al. A randomized controlled trial of a probiotic combination VSL# 3® and placebo in irritable bowel syndrome with bloating. *Neurogastroenterol Motil.* 2005;17:1-10. The sponsored research clinical trials were conducted at the Mayo Clinic College of Medicine, Rochester, Minn.
3. Bibiloni R, Fedorak RN, et al. VSL#3® probiotic-mixture induces remission in patients with active ulcerative colitis. *Am J Gastroenterol.* 2005;100:1539-1546.
4. Venturi A, et al. Impact on the composition of the faecal flora by a new probiotic preparation: Preliminary data on maintenance treatment of patients with ulcerative colitis. *Aliment Pharmacol Ther.* 1999; 13(8):1103-1108.
5. Tursi A, et al. Low-dose balsalazide plus high-potency probiotic preparation is more effective than balsalazide alone or mesalazine in the treatment of acute mild-to-moderate ulcerative colitis. *Med Sci Monit.* 2004;10:126-131.
6. Holzapfel WH, et al. Overview of gut flora and probiotics. *Int J Food Microbiol.* 1998;41(2):85-101.
7. McNaught CE, MacFie J. Probiotics in clinical practice: A critical review of the evidence. *Nutr Res.* 2001; 21(1&2):343-353.
8. Heller F, Duchmann R. Intestinal flora and mucosal immune responses. *Int J Med Microbiol.* 2003; 293(1):77-86.
9. Sanders ME. Probiotics: Considerations for human health. *Nutr Rev.* 2003;61(3):91-99.
10. Fabia R, et al. Impairment of bacterial flora in human ulcerative colitis and experimental colitis in the rat. *Digestion.* 1993;54(4):248-255.
11. Ruseler-van Embden JG, et al. Inability of *Lactobacillus Casei* strain GG, *L. Acidophilus*, and *Bifidobacterium bifidum* to degrade intestinal mucous glycoproteins. *Scand J Gastroenterol.* 30(7):675-680.
12. Bullock, et al. Comparative composition of bacteria in the human intestinal microflora during remission and active ulcerative colitis. *Curr Issues Intest Microbiol.* 2004;5:59-64.

to maintain the appropriate quantity and balance of beneficial microflora in their gastrointestinal tract.

VSL#3® Capsules are intended for use only by IBS or UC patients under the care of a physician.

Drug Interactions

Avoid taking with antibiotics. Some antibiotics may inactivate certain strains of bacterium in VSL#3®.

Side Effects

Mild abdominal bloating has been reported in the first few days of consuming VSL#3®.

Precautions

Please keep this product out of reach of children. Pregnant or lactating women should consult with a physician or healthcare professional before using this or any other medical food product.

Clinical Experience

VSL#3® Capsules (reported as VSL#3®) has been the subject of extensive clinical research in the dietary management of IBS or UC.

The consumption of VSL#3® has been shown to be effective in the management of gas and bloating associated with IBS in two placebo-controlled randomized trials conducted at the Mayo Clinic.^{1,2} In one study, the consumption of VSL#3® reduced bloating by 39% in patients with diarrhea-predominant IBS.¹ In the same study, fecal urgency scores showed a trend toward reduction vs placebo. In a second study, the consumption of VSL#3® reduced flatulence (gas) by 25% vs placebo.² In both IBS studies the consumption of VSL#3® was well tolerated with no adverse events reported.

In a study evaluating the efficacy of VSL#3® consumption in UC patients intolerant or allergic to 5-ASA, 75% of patients maintained remission for 12 months.³

Recommended Daily Intake

*1 serving = 2 capsules containing 225 billion bacteria

For Dietary Management of	Capsules Per Day*
Irritable Bowel Syndrome ^{1,2}	2-4 (225-450 billion)
Ulcerative Colitis ³⁻⁵	4-8 (450-900 billion)

13. Balsari, et al. The faecal microbial population in the irritable bowel syndrome. *Microbiologica.* 1982; 5(3):185-194.

14. Madden, Hunter. A review of the role of the gut microflora in irritable bowel syndrome and the effects of probiotics. *Br J Nutr* 2002;88(Suppl.1):S67-S72.

15. Malinen, et al. Analysis of the fecal microbiota of irritable bowel syndrome patients and health controls with real-time PCR. *Am J Gastroenterol* 100(2):373-382.

16. Saarela M, et al. Safety aspects of Lactobacillus and Bifidobacterium species originating from human orogastrintestinal tract or from probiotic products. *Microb Ecol Health Dis.* 2002;14:233-240.

17. Borriello, et al. Safety of probiotics that contain lactobacilli or bifidobacteria. *Clin Infect Dis.* 2003; 36(6):775-780.

18. Horowitz S. Promoting gut health with probiotics. Living medicines for treating digestive disorders. *Altern Complement Ther.* 2003;9(5):219-224.

19. Reuter G. The Lactobacillus and Bifidobacterium microflora of the human intestine: Composition and succession. *Curr Issues Intest Microbiol.* 2001;2(2):43-53.

20. Mountzouris K, et al. Intestinal microflora of human infants and current trends for its nutritional modulation. *Br J Nutr.* 2002;87(5):405-420.

21. Borriello, et al. Safety of probiotics that contain lactobacilli or bifidobacteria. *Clin Infect Dis.* 2003; 36(6):775-780.

22. Saxelin M, et al. Lactobacilli and bacteremia in southern Finland, 1989-1992. *Clin Infect Dis.* 1996a; 22(3):564-566.

23. Saarela M, et al. Safety aspects of Lactobacillus and Bifidobacterium species originating from human orogastrintestinal tract or from probiotic products. *Microb Ecol Health Dis.* 2002;14:233-240.

24. Oggioni MR, et al. Recurrent septicemia in an immunocompromised patient due to probiotic strains of *Bacillus subtilis*. *J Clin Microbiol.* 1998;36(1):325-328.

25. Mackay AD, et al. Lactobacillus endocarditis caused by a probiotic organism. *Clin Microbiol Infect.* 1999;5 (5):290-292.

26. Rautio M, et al. Liver abscess due to a *Lactobacillus rhamnosus* strain indistinguishable from *L. rhamnosus* strain GG. *Clin Infect Dis.* 1999;28(5):1159-1160.

27. Marteau PR. Probiotics in clinical conditions. *Clin Rev Allergy Immunol.* 2002;22(3):255-273.

Storage

VSL#3® Capsules should be refrigerated (39-46°F, 4-8°C). If stored under refrigeration, the product is guaranteed through "Best if used by" date. VSL#3® Capsules can be stored at room temperature for up to one week without adversely affecting potency of bacteria.

Dairy Status

Some dairy ingredients are used in the culture medium but are removed during manufacturing. There might be trace amounts at very low levels. For this reason VSL#3® is not defined as a dairy-free product but as a non-dairy product.

Gluten Status

VSL#3® is gluten-free.

Kosher/Halal Status

VSL#3® is Kosher and Halal certified.

Safety

Probiotics have generally been associated with a long history of safe use.^{16,18} In fact, many probiotic species are integral to the production of fermented foods and have been consumed safely as part of these foods for millennia.¹⁸ Furthermore, many bifidobacteria and lactobacilli species are normal, nonpathogenic inhabitants of the human gastrointestinal tract, oral cavity, skin, and vagina.^{8,9,21} While, theoretically, probiotic species may act as opportunistic pathogens, epidemiological surveillance data indicate that the risk of infection from consumption of lactobacilli is negligible.^{22,23} In the available literature, documented cases of infection attributable to probiotic treatment are extremely rare and limited to a few individual case reports.²⁴⁻²⁷ Each strain of probiotic bacteria is nonpathogenic and nontoxicogenic. An independent panel of food safety experts concluded that VSL#3® is Generally Recognized As Safe (GRAS) for medical food use.

How Supplied

VSL#3® Capsules is supplied as an encapsulated powder.

UPC	Size
7-45749-01781-9	60 Capsule Bottle (225 billion per 2 capsules)

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VSL#3

VSL#3
The Living Shield®
Capsules

 **sigma-tau**
PHARMACEUTICALS, INC.
Rare dedication

Product of USA.

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US Patent # US RE 40,023E and other Patents Pending.

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Manufactured for Sigma-Tau Pharmaceuticals, Inc. Gaithersburg, MD 20878