CANDICID FORTE

Ortho Molecular Products®
Because Efficacy Matters®

CLINICAL APPLICATIONS

- *Promotes Microbial Balance*
- *Helps Maintain Gastrointestinal Comfort*
- *Provides Nutrients that Increase Antioxidant Protection*
- *Enhances Immune Function*

GASTROINTESTINAL SUPPORT

Candicid Forte provides a blend of nutrients, fatty acids, potent botanicals and essential oils that promotes healthy microbial balance and immune support. Formulated with the goal of building a healthy gastrointestinal (GI) flora, Candicid Forte includes biotin, a nutrient that inhibits yeast from converting into the more aggressive fungal form, as well as fatty acids like undecylenic and caprylic acid to disrupt the metabolism of candida and create a hostile environment for colonization. It also utilizes potent botanicals, such as berberine, Pau D'arco, oregano, rosemary, cinnamon and ginger, to sooth the GI tract, provide potent antioxidant support and ensure microbial balance.

Overview

Gastrointestinal health is directly affected by factors like poor diet and a stressful lifestyle. The prevalence of refined sugars and carbohydrates and lack of fiber in modern diets have been directly linked to changes in the intestinal and colonic environments.[1] Since more than 70% of the body's immune system resides in the gut, establishing a healthy microbial balance is critical in reducing immune challenges and maintaining inflammatory balance.

Biotin†

Biotin is a water-soluble vitamin and cofactor for carboxylases. The nutrient affects several key systemic functions such as tissue growth, development, immunity and metabolism. Deficiencies in biotin have also been linked with mild immune impairment.[2] Biotin establishes microflora balance in the GI tract by preventing yeast, especially *Candida albicans*, from converting to its more invasive fungal form. In the presence of biotin, yeast is unable to change into the mycelium form.

Oregano†

Phytonutrients from oregano, such as rosmarinic acid and quercetin, have been shown to play a role in supporting antioxidant mechanisms and healthy microbial balance in the body.[3,4] In addition, the high ORAC (oxygen radical absorbance capacity), on a scale developed by scientists at the National Institute of Aging) value of oregano, indicates its significant antioxidant-scavenging capacity to combat free radicals that cause oxidative stress. Oregano oil also contains two naturally occurring microbial balancing agents, named carvacrol and thymol. Research suggests that these compounds relieve GI dysbiosis and promote a healthy GI microflora.

Pau D'Arco†

The inner portion of the Pau D'Arco bark has been used by Native Americans for thousands of years to support intestinal microbial health.[5] The botanical has been shown to be effective in promoting healthy intestinal flora and is recommended by herbalists for a wide variety of GI challenges. Studies have shown that Pau d'Arco may also balance musculoskeletal inflammation[6] and invitro studies have shown fractions from Pau D'Arco support microbial balance.[7]

Zinc Undecylenate†

Undecylenic acid has been used to support microbial and immune balance in a variety of different microbial challenges.[8,9] Studies show undecyclenic acid to inhibit morphogenesis

† 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.

eFFICACY the power of e

of *Candida albicans*; the compound also appears to interfere with fatty acid biosynthesis, inhibiting germ tube (hyphae) formation and disrupting the pH in yeast cells.[10] Of the medium chain fatty acids, undecylenic acid has also been shown to provide strong support for microbial balance and is approximately six times more potent than caprylic acid.[11]

Sodium Caprylate†

Sodium caprylate is the stable sodium salt of caprylic acid, a fatty acid found in coconuts. In vitro studies show that sodium caprylate inhibits aerobic and anaerobic growth, provokes loss of cytoplasm organization and organelles, inhibits budding, triggers potassium loss and is destructive to the cellular integrity of *Candida albicans*.[12,13] Caprylic acid has been shown to contribute to microbial balance[14] and to increase cell telomere size to a desirable 750 ng BDORT.[15]

Berberine HCl†

An alkaloid extracted from plant roots, berberine has been found to express strong microbe balancing activity In vitro, and was found to be the best of four agents studied in inhibition of *Candida albicans'* adherence to HT-29 epithelial cells. Berberine was also found to inhibit SAP (secreted aspartyl proteinases) activity by 70.2% +/-6%, a marker of yeast conversion to the aggressive fungal form.[16] In one invitro study, mice given 1 mg/kg body weight of berberine saw an increase in microbial balance[17] and displayed synergistic effects with fungal balancing agents.[18]

Rosemary†

The essential oil of rosemary has been shown to exhibit broad-spectrum microbial balancing effects. The oil was analyzed in vitro microbial balancing and antioxidant was found to have strong activity.[19] Rosemary extract has also been shown to decrease oxidative stress in various tissues.[20]

Cinnamon Bark Extract†

In an invitro study looking at different strains of microbes, including MRSA and *Candida* species, the essential oil of cinnamon showed consistent ability to maintain microbial balance.[21,22] Invitro research has shown that cinnamon extract causes a change in cell morphology, destruction of organelles and cellular burst in microbes.[23]

Directions

2 capsules three times per day or as recommended by your health care professional.

Does Not Contain

Gluten, corn, yeast, artificial colors and flavors.

Cautions

Do not consume this product if you are pregnant or nursing. Consult your physician for further information.

Supplement Facts V6

Serving Size 2 Capsules
Servings Per Container 45 & 90

2 capsules contain	Amount Per Serving	% Daily Value
Biotin	300 mcg	100%
Zinc (as Zinc Undecylenate USP)	20 mg	133%
Sodium Caprylate	150 mg	*
Zinc Undecylenate USP	150 mg	*
Berberine Hydrochloride	100 mg	*
Cinnamon Bark Extract	100 mg	*
Ginger Root	100 mg	*
Oregano Leaf Extract 10:1	100 mg	*
Pau D'Arco Inner Bark Extract 5:1	100 mg	*
Rosemary Leaf Extract 10:1	100 mg	*
German Chamomile Flower	50 mg	*

* Daily Value not established

ID# 510090 90 Capsules
ID# 510180 180 Capsules

† 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.

eFFICACY the power of e

References

1. Frizelle F. Constipation in adults. *Clin Evod* (online). 2007;0413(August 1).
2. Cowan MJ, Wara DW, Packman S, Ammann AJ, Yoshino M, Sweetman L, Nyhan W. Multiple biotin-dependent carboxylase deficiencies associated with defects in T-cell and B-cell immunity. *Lancet*. 1979 Jul 21;2(8134):115-8.
3. Chun SS, Vattem DA, Lin YT, et al. Phenolic antioxidants from clonal oregano (Origanum vulgare) with antimicrobial activity against Helicobacter pylori. *Process Biochem*. 2005;40(2):809-16.
4. Tampieri MP, Galuppi R, Macchioni F, et al. The inhibition of Candida albicans by selected essential oils and their major components. *Mycopathologia*. 2005 Apr;159(3):339-45. [PMID: 15883716].
5. Gomez, Castellanos, Jr., Prieto, J. M. et al. Red Lapacho (Tabebuia impetiginosa)--a global ethnopharmacological commodity? *J Ethnopharmacol*. 2009; 121(1):1-13.
6. http://www.umm.edu/altmed/articles/pau-darco000268.htm#Overview
7. Gomez, Castellanos, Jr., Prieto, J. M. et al. Red Lapacho (Tabebuia impetiginosa)--a global ethnopharmacological commodity? *J Ethnopharmacol*. 2009; 121(1):1-13.
8. Undecylenic acid. Monograph. *Altern Med Rev*. 2002; 7(1):68-70.
9. Chretien, J. H., Esswein, J. G. et al. Efficacy of undecylenic acid-zinc undecylenate powder in culture positive tinea pedis. *Int J Dermatol*. 1980; 19(1):51-54.
10. McLain N, Ascanio R, Baker C, et al. Undecylenic acid inhibits morphogenesis of Candida albicans. *Antimicrob Agents Chemother.* 2000;44:2873-2875.
11. Neuhauser I. Successful treatment of intestinal moniliasis with fatty acid-resin complex. *AMA Arch Intern Med* 1954;93:53-60.
12. Payne, W. J. and Bannister, E. R. Effects of Sodium Caprylate on Candida Albicans. Influence of Various Concentrations on Biochemical Changes. *J Bacteriol.* 1963; 86:558-562.
13. Dams, JN., Painter, BG. et al. Effects of Sodium Caprylate on Candida Albicans. Influence of Concentration on Ultrastructure. *J Bacteriol*. 1963; 86:548-557.
14. Takahashi M, Inoue S, Hayama K, Ninomiya K, Abe S. [Inhibition of Candida mycelia growth by a medium chain fatty acids, capric acid in vitoro and its therapeutic efficacy in murine oral candidiasis]. *Med Mycol J.* 2012;53(4):255-61. [Article in Japanese].
15. Omura Y, O'Young B, Jones M, Pallos A, Duvvi H, Shimotsuura Y. Caprylic acid in the effective treatment of intractable medical problems of frequent urination, incontinence, chronic upper respiratory infection, root canalled tooth infection, ALS, etc., caused by asbestos & mixed infections of Candida albicans, Helicobacter pylori & cytomegalovirus with or without other microorganisms & mercury. Acupunct Electrother Res. 2011;36(1-2):19-64.
16. Yordanov, M., Dimitrova, P. et al. Inhibition of Candida albicans extracellular enzyme activity by selected natural substances and their application in Candida infection. *Can J Microbiol.* 2008; 54(6):435-440.
17. Han, Y. and Lee, JH. Berberine synergy with amphotericin B against disseminated candidiasis in mice. *Biol Pharm Bull.* 2005; 28(3):541-544.
18. Quan, H., Cao, Y. Y. et al. Potent in vitro synergism of fluconazole and berberine chloride against clinical isolates of Candida albicans resistant to fluconazole. Antimicrob *Agents Chemother*. 2006; 50(3):1096-1099.
19. Bozin, B., Mimica-Dukic, N. et al. Antimicrobial and antioxidant properties of rosemary and sage (Rosmarinus officinalis L. and Salvia officinalis L., Lamiaceae) essential oils. *J Agric Food Chem*. 2007; 55(19):7879-7885.
20. Afonso MS, de O Silva AM, Carvalho EB, Rivelli DP, Barros SB, Rogero MM, Lottenberg AM, Torres RP, Mancini-Filho J. Phenolic compounds from Rosemary (Rosmarinus officinalis L.) attenuate oxidative stress and reduce blood cholesterol concentrations in diet-induced hypercholesterolemic rats. *Nutr Metab (Lond)*. 2013 Feb 2;10(1):19.
21. Warnke, P. H., Becker, S. T. et al. The battle against multi-resistant strains: Renaissance of antimicrobial essential oils as a promising force to fight hospital-acquired infections. *J Craniomaxillofac Surg*. 2009; 37(7):392-397.
22. Singh, H. B., Srivastava, M. et al. Cinnamon bark oil, a potent fungitoxicant against fungi causing respiratory tract mycoses. *Allergy*.1995; 50(12):995-999.
23. Wang GS, Deng JH, Ma YH, Shi M, Li B. Mechanisms, clinically curative effects, and antifungal activities of cinnamon oil and pogostemon oil complex against three species of Candida. *J Tradit Chin Med*. 2012 Mar;32(1):19-24.