

# ProbioMed™ 50

50B CFU Shelf-Stable, Broad-Spectrum Probiotics



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This information is provided as a medical and scientific educational resource for the use of physicians and other licensed health-care practitioners ("Practitioners"). This information is intended for Practitioners to use as a basis for determining whether to recommend these products to their patients. All recommendations regarding protocols, dosing, prescribing, and/or usage instructions should be tailored to the individual needs of the patient considering their medical history and concomitant therapies. This information is not intended for use by consumers.

Designs for Health's ProbioMed™ 50 consists of 10 highly researched probiotic strains in a unique moisture-resistant, desiccant-lined packaging to ensure strain survivability without the need for refrigeration. The diversity and clinically significant quantities of these specific strains target gastrointestinal (GI) health to support common GI conditions, bowel function, and varying degrees of dysbiosis associated with lifestyle or life stage, antibiotic therapy, dietary imbalance, or stress.\* This family of products also possesses specific strains that have strong immunomodulatory actions to mature and enhance the immune system during all life stages. ProbioMed™ 50 provides high-potency probiotics for the maintenance of a healthy microbiota balance.\*

Common problems associated with probiotic supplementation include strain identification and disclosure of individual counts, strain integrity and stability during storage and internal delivery, resistance/tolerance to stomach acid and bile salts, adherence to intestinal walls, and antibiotic resistance. These highly potent formulations have been developed to address these common challenges and maximize their effectiveness. Each probiotic strain and count have been carefully selected after an extensive review of scientific literature to ensure superior viability in low pH conditions and the presence of bile salts, with proven adherence to human epithelial and mucosal surfaces, and antibiotic resistance.

## Highlights

- Combines 10 boutique strains at therapeutically significant dosages
- Evidence-based formulations using researched and validated strains
- Specific strain identification with disclosed colony-forming unit (CFU) count
- Significant overage ensures long shelf life and guarantees delivery of stated CFU count
- State-of-the-art moisture, oxygen, and light-resistant, desiccant-lined packaging to protect probiotics and extend shelf life, and to eliminate the need for refrigeration
- Superior tolerance and resistance to stomach acid and bile salts
- Capsules featuring delayed-release technology for optimal survivability from stomach acid and properly timed release of the probiotics in the lower GI tract
- Strong adherence to intestinal epithelial and mucosal walls
- Does not cause antibiotic resistance
- Dairy-free formulations

## Ingredient Highlights

***Lactobacillus acidophilus* (DDS®-1)** is a potent immunomodulatory probiotic strain shown to promote immune activity by increasing regulatory T cells, inducing chemokine and cytokine response, stimulating dendritic cells to promote T helper type (Th)1/Th2/Th3 immunity, and improving immunoglobulin (Ig)A response. It also supports butyrate and other short-chain fatty acid (SCFA) production, downregulates inflammatory cytokines, supports the abundance of other beneficial bacteria, and enables immune maturation in fetal enterocytes. Additionally, studies have found it to have superior survival and adhesion rates.<sup>1-7</sup>

*L. acidophilus* has also been shown to improve microbiome diversity after antibiotic therapy. Studies demonstrate that *L. acidophilus* DDS®-1 alone or as part of a probiotic combination significantly improves colitis and abdominal pain, normalizes bowel movements in irritable bowel syndrome (IBS), improves abdominal symptoms of lactose intolerance, improves atopic dermatitis in children, supports faster improvement in functional constipation, shortens acute respiratory infections in children, reduces incidence and duration of cold and flu symptoms, and moderates the effects of anticipatory stress due to night shift work.<sup>7-19</sup>

***Lactobacillus plantarum* (UALp-05™)** significantly inhibits the invasion of pathogenic *E. coli*, especially when combined with other probiotic strains, and it effectively reduces disturbance of the microbiome resulting from antibiotic therapy.<sup>19,20</sup>

## Benefits\*

- High-potency maintenance for healthy microbiota balance
- Supports a healthy immune response
- Supports normal bowel movements
- Supports a healthy GI system
- Supports recovery from antibiotic treatment

Supplement Facts		
Serving Size 1 capsule		
Amount Per Serving		% Daily Value
Probiotic Blend	279 mg (50 billion CFU)	*
<i>Bifidobacterium lactis</i> (UABla-12™)	17.8 billion CFU	*
<i>Lactobacillus acidophilus</i> (DDS®-1)	5.7 billion CFU	*
<i>Lactobacillus plantarum</i> (UALp-05™)	8.6 billion CFU	*
<i>Lactobacillus casei</i> (UALc-03™)	3.5 billion CFU	*
<i>Bifidobacterium breve</i> (UABbr-11™)	3.5 billion CFU	*
<i>Bifidobacterium bifidum</i> (UABb-10™)	1.0 billion CFU	*
<i>Bifidobacterium longum</i> (UABl-14™)	1.0 billion CFU	*
<i>Lactobacillus salivarius</i> (UALs-07™)	2.9 billion CFU	*
<i>Lactobacillus rhamnosus</i> (GG)	3.0 billion CFU	*
<i>Lactobacillus paracasei</i> (UALpc-04™)	3.0 billion CFU	*

\*Daily Value not established.

**Other Ingredients:** Microcrystalline cellulose, delayed release capsule (hydroxypropyl methylcellulose, gellan gum), vegetable stearate, silica.

Studies show it reduces abdominal pain, bloating, and other GI symptoms associated with IBS and colitis.<sup>21,22</sup> It has also been shown to have good resistance in the digestive tract, along with adhesion and immunomodulatory effects, including upregulating anti-inflammatory interleukin (IL)-10 and downregulating IL-8 cytokine production.<sup>4</sup> As an immunomodulatory agent, *L. plantarum* enhances the IgG response and improves the body's response to influenza, especially in elderly.<sup>23,24</sup>

***Bifidobacterium lactis* (UABla-12™)** has been present in human food for decades and is broadly recognized for its key role in the human intestinal microflora throughout life. Its anti-inflammatory properties are useful in attenuating the symptoms of colitis and supporting the body against allergies and allergic rhinitis.<sup>22,25</sup> It protects and restores the microbiome after antibiotic therapy and boosts the body's IgG response.<sup>11,25</sup> It has been found to support colitis, atopic dermatitis, acute respiratory infections in children, the stress associated with night shifts, functional constipation, and IBS, especially in combination with *L. acidophilus* DDS-1.<sup>7,14-18</sup>

***Lactobacillus casei* (UALc-03™)** improves systemic and mucosal immune responses, reducing the occurrence of infections, especially in the elderly.<sup>26,27</sup> Its anti-inflammatory properties are noted, as it lowers high-sensitivity C-reactive protein (hsCRP), reduces the occurrence of necrotizing enterocolitis, modifies expression of the toll-like receptor in ulcerative colitis, and repairs aspirin-induced bowel injury.<sup>28-31</sup> *L. casei* may also help improve insulin sensitivity and support healthy glucose metabolism.<sup>32</sup>

***Bifidobacterium breve* (UABbr-11™)** is a normal commensal microorganism that prevents and improves constipation, abdominal bloating, and anal itch, burn, and pain. It also helps to improve other symptoms of ulcerative colitis and necrotizing enterocolitis.<sup>31,33,34</sup> It may also support healthy fasting glucose and hsCRP while increasing plasma glutathione.<sup>35</sup>

***Lactobacillus paracasei* (UALpc-04™)** can inhibit pathogenic salmonella, *S. aureus*, *E. coli*, and listeria while protecting and restoring the microbiome after antibiotic therapy.<sup>11</sup> As an immunomodulatory agent, it induces IL-10, tumor necrosis factor-alpha (TNF- $\alpha$ ), interferon- $\gamma$ , and IL-12, and it enhances the IgG and IgM responses.<sup>23</sup> Studies have found that the immunomodulating properties may support atopic dermatitis and peripheral immune responses in celiac disease.<sup>36,37</sup> Colitis models show a significant reduction in intestinal inflammation with *L. paracasei* therapy.<sup>38,39</sup> It has also been shown to benefit IBS.<sup>40</sup>

***Lactobacillus salivarius* (UALs-07™)** mitigates inflammatory symptoms and modulates cytokine production and the cellular response to pathogenic challenges while restoring a disrupted microbiome.<sup>11,41</sup> It also improves oral health by reducing gum bleeding and physiologic halitosis while increasing resistance to dental caries.<sup>42,43</sup>

***Lactobacillus rhamnosus* (GG)** is a potent immunomodulatory strain that increases interleukin and cytokine production, inhibits TNF- $\alpha$ , phagocytosis and natural killer cell activity, IgA secretion, and inhibits the production of lipopolysaccharides (LPS) or endotoxins. It also supports fetal immunity and imparts some of the immunomodulatory components of breast milk. *L. rhamnosus* produces a beneficial biofilm that can protect the mucosa to support intestinal epithelial integrity.<sup>44</sup> Studies have found *L. rhamnosus* to be beneficial for IBD and diarrhea, especially in children, acute gastroenteritis in children, functional GI disorders, antibiotic-associated diarrhea, allergies, IBS, and upper respiratory infections in children.<sup>44-50</sup>

***Bifidobacterium bifidum* (UABb-10™)** improves functional constipation and symptoms of IBS, including abdominal pain, bloating, belching, flatulence, and diarrhea. The improvement in functional constipation was also observed when used in combination with *L. acidophilus* DDS-1®, *B. lactis* UABla12™, and *B. longum* UABl-14™.<sup>7</sup> Upper GI symptoms associated with *H. pylori* infections also benefit from *B. bifidum*.<sup>51</sup>

***Bifidobacterium longum* (UABl-14™)** improves the composition and metabolic activities of colonic bacterial communities and immune parameters, helping the symptomatic effects of celiac disease, IBS, and functional constipation.<sup>52,53</sup> Studies show *B. longum* significantly reduces TNF- $\alpha$ , C-reactive protein, serum aspartate aminotransferase, insulin resistance, serum endotoxin, and steatosis in patients with nonalcoholic steatohepatitis.<sup>54</sup> The improvement in functional constipation was also observed when used in combination with *L. acidophilus* DDS-1®, *B. lactis* UABla12™, and *B. bifidum* UABb-10™.<sup>7</sup>

**Recommended Use:** Take 1 capsule per day with a meal or as directed by your health-care practitioner.

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