

# Elevating Women's Health:

Solutions for Every Step



# Women's Evolving Health Needs

On an individual basis, each woman's health needs change dramatically as she progresses through various life stages, from puberty to postmenopause and beyond. Additionally, on a global level, the ways in which we address women's health needs are constantly evolving, with women's health trends moving from a current focus on inclusive, tailored care toward even more bespoke products in the near future. As we approach 2030, highly personalized, proactive care is forecasted to be a top priority in women's health.<sup>1</sup>



## THE SHAPE OF THE MARKET: NOW AND IN THE FUTURE

Depending on her life stage, a woman's propensity can increase for certain health-related concerns, which can impact bone health, cardiovascular health, metabolic health and mental health. Consequently, these key areas remain a continual focus in women's health. But three trends are likely to shape the market going forward:



### PERSONALIZATION BY LIFE STAGE

Women are experiencing the onset of puberty earlier and living longer, resulting in an expanded continuum of wellness needs. To encourage loyalty and engage consumers throughout their lives, brands are moving beyond a one-size-fits-most approach, offering solutions that cater to women in specific life stages.<sup>1</sup>



### A PROACTIVE, HOLISTIC APPROACH

Rather than responding to chronic or acute health concerns as they arise, women are taking control of their health with preventive care. This view treats wellness as a lifelong pursuit, with physical health, mental well-being and a sense of community all playing critical roles.<sup>1</sup>



### EVIDENCE-BASED SOLUTIONS

In the health and wellness sector—and particularly in women's health—misinformation abounds, leading consumers to treat grandiose health claims with skepticism. Brands have an opportunity to earn trust by involving medical experts in product development, offering transparent, scientifically backed information and promoting educational resources.<sup>1</sup>

One thing remains constant: Women are always seeking support for their health and wellness goals. ADM seeks to meet that need with a broad, varied portfolio of ingredients and solutions.

# Health Concerns From Puberty Onward



## 12-21

### Puberty

- Mood & Stress (Hormonal Balance)
- Mental Health/Wellness
- Urinary Tract Health
- Skin Health/Acne
- Building Bones
- UTIs & Related Issues

## 22-39

### Young Adults

- Mood & Stress
- Vaginal Health
- Urinary Tract Health
- Prenatal Care
- Metabolic Health
- Reproductive Health/Fertility
- Hair, Skin & Nails
- Energy
- Detox/Cleanse
- UTIs & Related Issues
- Bacterial Vaginosis

## 40-49

### Perimenopause

- Hormonal Balance
- Mood & Stress
- Energy
- Vaginal Health
- Skin Vitality
- Weight Gain
- Bone Health
- Muscle Mass
- Sleep

## 50-59

### Menopause

- Hormonal Balance
- Vaginal Health/Dryness
- Cognition/Mood
- Energy
- Hot Flashes
- Skin Quality
- Muscle Health
- Thinning/Gray Hair
- Weight Gain
- Sexual Libido

## 60-74

### Postmenopause

- Vaginal Health
- Skin Health/Wrinkles/Dryness
- Thinning/Gray Hair
- Sexual Libido
- Cardiovascular/Heart Health
- Bone Support
- Joint Support
- Cognitive Health
- Urinary Health
- Mental Health

## 75+

### Elderly

- Vaginal Health
- Skin Health/Wrinkles/Dryness
- Thinning/Gray Hair
- Cardiovascular/Heart Health
- Nutrition Absorption
- Muscle Health
- Bone Support
- Joint Support
- Memory Support

## Women say they're managing energy levels, navigating functional foods and looking for tailored support.

### TOP WOMEN'S HEALTH PRIORITIES



Managing energy levels & fatigue



Support for each life stage: pregnancy, postpartum, fertility & menopause



Seeking functional foods & practicing intuitive eating



High-impact ingredients like protein, fiber & collagen

Source: <https://tastewise.io/blog/womens-health-trends>

# Managing Monthly Cycles

An estimated 1.8 billion people across the world menstruate each month.<sup>2</sup> However, despite the number of women experiencing menstruation—as well as symptoms and health issues associated with it—it is an area where more research, education and products targeted toward women are needed.



of women see hormone balance as a concern



of women globally consume some form of nutritional supplement regularly

>1/3

of global female consumers are using vitamin and mineral supplements to address the symptoms of their natural hormonal cycles or menopause



of women are increasing their supplement use to maintain their health

Source: Innova. Women's Health Supplements – Global report, 2025.



## Common Menopausal Symptoms

According to the World Health Organization, more than 1.2 billion people worldwide will be menopausal or post-menopausal by 2030.<sup>3</sup> Common symptoms that menopausal women may experience include:

- Hot flashes occur in up to 80% of women and lasting a mean of 7 to 10 years.<sup>4</sup>
- In a survey of more than 3,000 menopausal women globally, weight gain was reported as the most bothersome experience overall.<sup>5</sup>
- During menopausal transition, women lose an average of 2-5% bone mineral density/year.<sup>7</sup>
- Globally, approximately 1 in 10 women over the age of 60 are affected by osteoporosis.<sup>8</sup>
- Menopausal hormonal changes are known to lead to bone loss and potentially also to loss of muscle mass.<sup>9</sup>
- Other symptoms women may experience during menopause include sleep problems, mood changes and brain fog.<sup>10</sup>

5 lbs

Many women gain an average of 5 pounds after menopause.<sup>6</sup>



Globally, approximately 1 in 10 women over the age of 60 are affected by osteoporosis.<sup>8</sup>



While 40% of global female consumer respondents seek medical advice to treat or prevent associated conditions, around a third opt for supplementation in their diet or seek natural and traditional remedies respectively.

Source: Euromonitor International's Health and Nutrition Survey

## Opportunities in Women's Health

The global women's health market size is expected to reach \$75.42 billion by 2033, registering a CAGR of 5.1% from 2026 to 2033.<sup>11</sup> In addition, the global menopause market was estimated at \$17.79 billion in 2024 and is projected to reach \$24.35 billion by 2030.<sup>12</sup>

Women tend to adopt a holistic approach to health, focusing on both mental and physical well-being. Generally, women are motivated by improving their quality of life and self-worth, seeking products that claim to help them feel happier, live longer, relieve stress and look better, which reflects their focus on internal health for external benefits.<sup>11</sup>

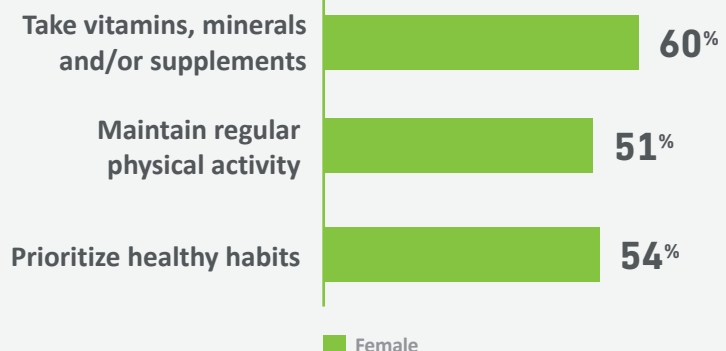
Women are also more likely than men to say that a healthy lifestyle consists of good mental health.

52% of women describe a healthy lifestyle as having good mental/emotional health compared to 41% of men. Women are also more likely than men to feel eating a well-balanced diet defines a healthy lifestyle, suggesting that women recognize a correlation between mental health and nutrition. Given that women are most likely to be prioritizing healthy eating, companies will see gains by elevating the connection consumers already draw between food and their emotional wellness.<sup>13</sup>

"Naturally functional" is a key nutrition trend, and new product development that utilizes natural ingredients to deliver functional benefits may perform well. Additionally, women are seeking natural supplements that target health needs unique to their specific life stages.<sup>14</sup>

## Wellness Activities, 2025

WHICH OF THE FOLLOWING ACTIVITIES DO YOU DO TO ADDRESS YOUR WELLNESS NEEDS/GOALS?

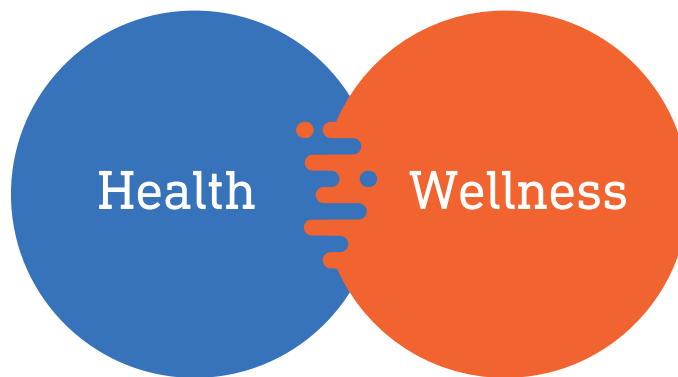


# Empowering Women

ADM offers supplement ingredients and full turnkey solutions, with unique backed-by-science ingredients, that may provide holistic well-being during the many steps through women's life stages. These solutions focus on targeted lifestyle changes that may help women feel better, so they can thrive.

## PURPOSEFUL NUTRITION TO SUPPORT WELL-BEING THROUGH CHANGING LIFE STAGES

- Bone
- Metabolic
- Gastrointestinal
- Cognitive
- Cardiovascular
- Skin
- Vaginal
- Bladder



- Mood
- Sleep
- Energy/Libido
- Fatigue
- Brain Fog
- Emotional Well-being

INDIVIDUAL RESPONSES, INDIVIDUAL NEEDS

## Biotics

ADM offers prebiotics, probiotics and postbiotics to holistically aid a woman in her wellness journey. These ingredients may help women, from adolescence to beyond menopause, address physical and mental changes experienced through all life stages, including body composition, weight management, immune health, stress, mood changes, cognition and sleep issues.



## Lactobacillus gasseri CP2305 POSTBIOTIC

*Lactobacillus gasseri* CP2305 Postbiotic leverages the potential of the gut-brain axis by modulating the gut microbiome, maintaining levels of beneficial bacteria in individuals under stressful conditions.<sup>15</sup> Studies show supplementing with *Lactobacillus gasseri* CP2305 Postbiotic may support key aspects relating to sleep, stress and mood. This in turn may help prepare women of all ages to handle day-to-day challenges and when faced with stressful situations.

Exploratory research suggests supplementing diet with *Lactobacillus gasseri* CP2305 Postbiotic may be associated with:<sup>15-17</sup>

- Better sleep efficiency
- Reduced time to fall asleep/reduced sleep latency
- Healthy overall sleep quality
- Improved total duration of sleep
- Significant improvement in self-reported assessments of mental well-being

*Lactobacillus gasseri* CP2305 Postbiotic May Benefit:

- Emotional well-being
- Reduced stress

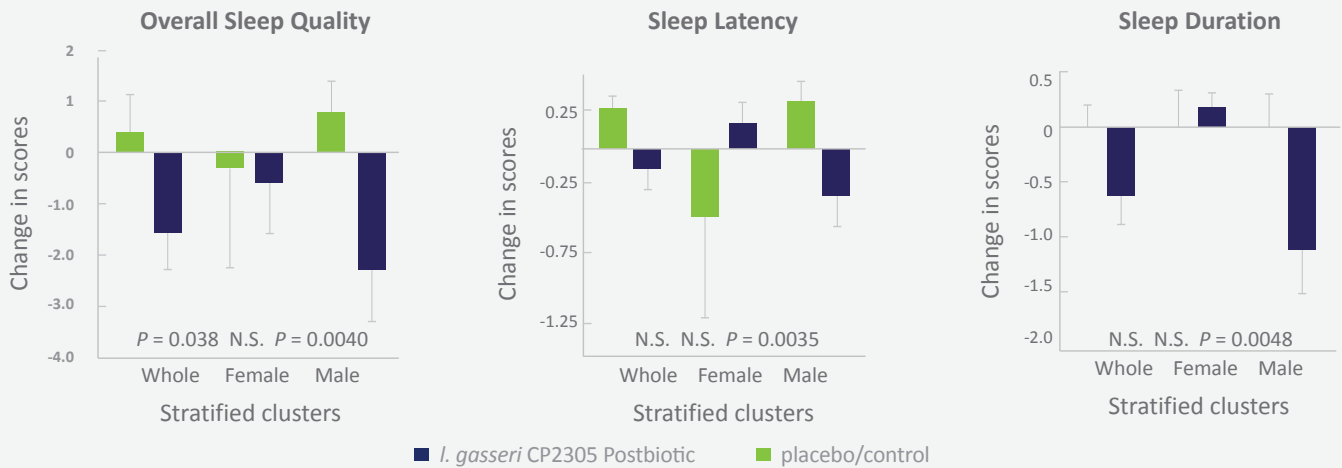
8 Human Clinical Trials

500B CFU equiv./g

Daily Intake: 10B cells/20mg

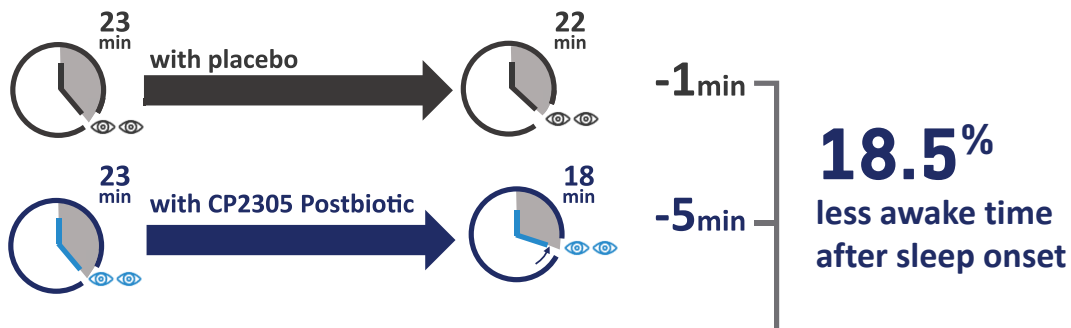
In a human clinical trial, *Lactobacillus gasseri* CP2305 Postbiotic supplementation reduced State-Trait Anxiety Inventory (STAI) self-reported scores in individuals experiencing stress when compared to the placebo intake.<sup>15</sup> The STAI is a commonly used measure of trait and state anxiety.

## IMPROVEMENTS IN SLEEP<sup>17</sup>



## ADULTS PREPARING FOR NATIONAL EXAMINATION (24 WEEKS)<sup>15</sup>

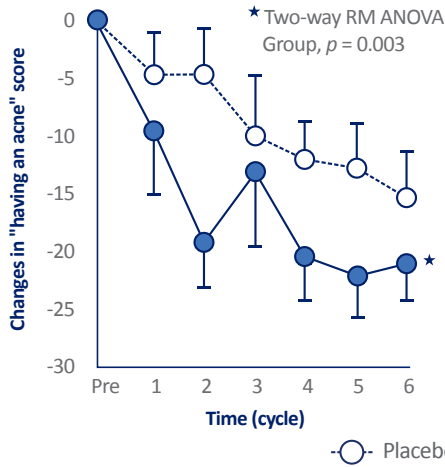
Wake time after sleep onset (wakefulness time occurring after sleep onset)



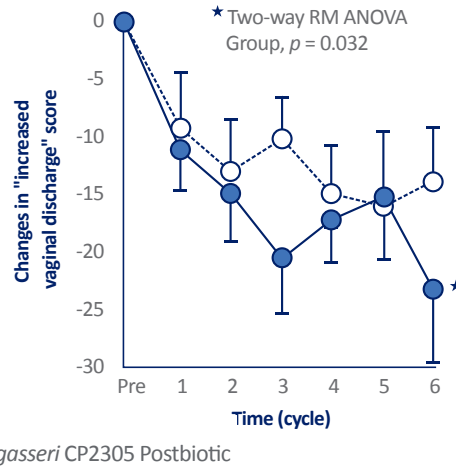
\* Significant difference between CP2305 Postbiotic and placebo group ( $p < 0.05$ ) by analysis of covariance (ANCOVA) with each initial value as a covariate.

# Lactobacillus gasseri CP2305 Postbiotic & Women's Health

## Improved Skin Appearance



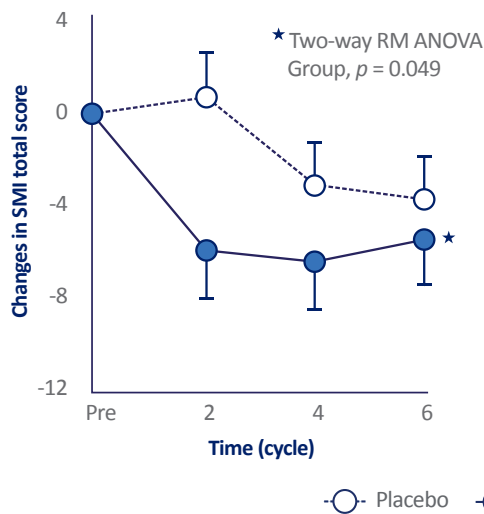
## Reduced Vaginal Discharge



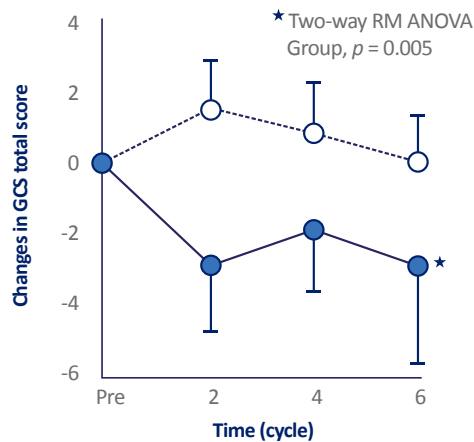
\*2-arm, randomized, double-blind, placebo-controlled parallel trial *L. gasseri* CP2305 Postbiotic at 20mg/day

Nishida et al., (2021) Journal of Functional Foods 80:104426

## SMI total



## GCS total



\*2-arm, randomized, double blind, placebo-controlled trial *L. gasseri* CP2305 Postbiotic tablets at 20mg/day

SMI: Simplified Menopausal Index. GCS: Greene Climacteric Scale  
Sawada et al., (2022) Nutrients, 14:1695

In healthy young women experiencing premenstrual symptoms, exploratory research suggests supplementing the diet with *Lactobacillus gasseri* CP2305 Postbiotic may be associated with:<sup>18</sup>

- Positive moods
- Reduced stress/anxiety
- Improved vaginal discharge
- Improved skin appearance
- Reduced occasional constipation
- Positive support of mitochondrial function

For women experiencing menopause, *Lactobacillus gasseri* CP2305 Postbiotic offers relief by supporting:<sup>19</sup>

- Positive changes in physiological and emotional parameters





## BPL1™\* PROBIOTIC & POSTBIOTIC

BPL1™ (*Bifidobacterium animalis* subsp. *lactis* CECT8145) is ADM’s proprietary, award-winning probiotic strain with clinically documented results in aspects related to metabolic health. Emerging clinical evidence suggests that BPL1™ Probiotic, in combination with diet and exercise, may help support weight management and a healthy body mass index (BMI).

### BPL1™ Probiotic May Benefit:

- Weight management
- Healthy BMI

12 Scientific Papers - 1 Clinical Trial

Daily Amount: 10B CFU/day

## BPL1™ POSTBIOTIC

(*Bifidobacterium animalis* subsp. *lactis* CECT8145)

BPL1™ is also backed with clinically documented results in aspects related to metabolic health. Emerging clinical evidence suggests BPL1™ Postbiotic, in combination with diet and exercise, may help support visceral fat reduction and a healthy waist circumference. Pre-clinical evidence suggests BPL1™ Postbiotic may help support metabolic health pathways. Metabolic health refers to how the body processes food into energy and is measured by factors like waist circumference, blood pressure, blood sugar levels, cholesterol levels and triglyceride levels. Keeping these factors in healthy ranges is important for all women to maintain overall health.

### BPL1™ Postbiotic May Benefit:

- Visceral fat reduction, healthy waist circumference
- Metabolic health pathways (pre-clinical evidence)

8 Scientific Papers - 1 Randomized Controlled Trial

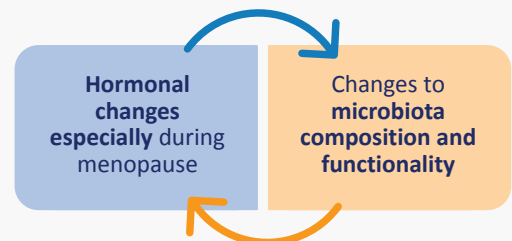
Daily Amount: 34mg (Dietary Supplement) & 100mg (Food & Beverage)



The global microbiome ingredients market for human health & nutrition was \$9.272 billion in 2024 and is expected to grow at a compound annual growth rate (CAGR) of 8.3% during the forecast period 2023 to 2030. This includes probiotics, prebiotics, postbiotics, phages and digestive enzymes.

Within this market, women’s health is projected to be a \$279 million market, with a 4.5% CAGR through 2030 (Frost & Sullivan Analysis for ADM).

Microbiome health can play a role in women’s life stages. The gut microbiome is intrinsically linked to estrogen metabolism, menopausal state and systemic inflammation in women.<sup>20</sup>



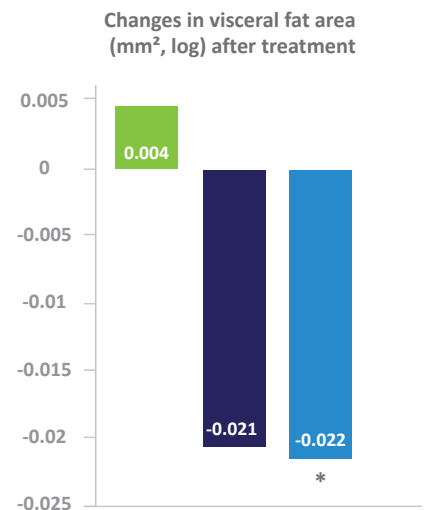
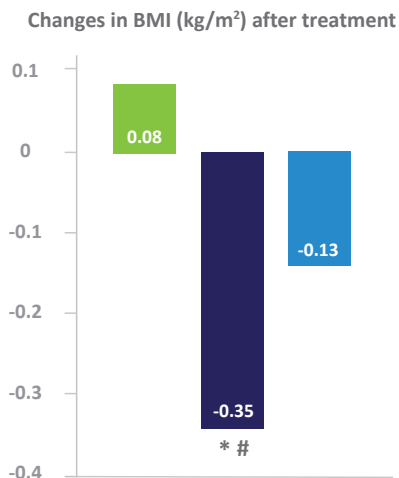
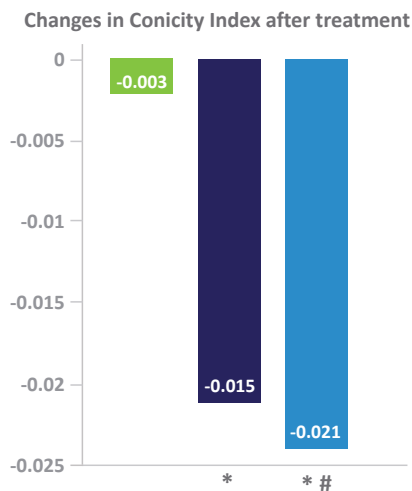
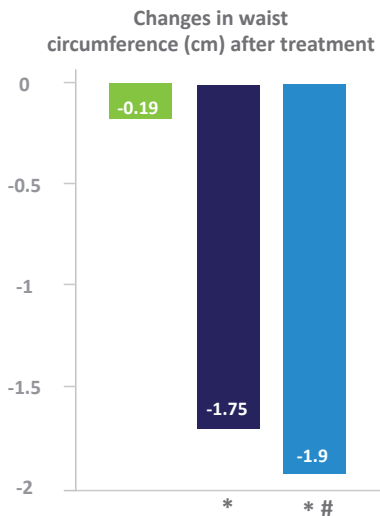
\*BPL1™ is a trademark of ADM Biopolis

# Randomized double-blind, placebo-controlled design



Inclusion: aged > 18 with a waist circumference (WC)  $\geq 102$  cm for men and  $\geq 88$  cm for women  
 Exclusion: WC < 102 cm for men and < 88 cm for women, and > 150 cm for both gender; BMI  $\geq 40$  kg/m<sup>2</sup>, antibiotic treatment, diabetes, pregnancy, abnormal thyroid, anemia, alcoholism, hypocaloric diet, intake of food supplements, intestinal disease

## BPL1™ IMPROVES MEASURE OF METABOLIC HEALTH IN HEALTHY HUMANS<sup>21</sup>



■ Placebo ■ BPL1™ Probiotic ■ BPL1™ Postbiotic  
 \*Versus Baseline # Versus Placebo



## DE111® PROBIOTIC

DE111® Probiotic (*Bacillus subtilis*) is a spore-based probiotic strain that may help support digestive health, healthy immune function and improved body composition (more lean muscle mass, less fat) in female athletes.

Muscle mass development and muscle strength is important for girls and young women, but older women need to focus on maintaining lean muscle mass. Everyone loses muscle with age, typically about 3%-5% each decade after age 30. Less muscle mass can lead to weakness and less mobility.<sup>22</sup>

Healthy immune systems help protect women from getting sick and promote healing if sick. Proper digestion is also linked to overall wellness. More

(DE111® is a registered trademark of Deerland Probiotics & Enzymes, Inc.)

and more, it is understood that a healthy digestive system may affect mood, cognition, energy, immune health and overall well-being.

DE111® Probiotic has clinically documented results showing that it supports digestive health<sup>23</sup> and healthy immune function.<sup>24,25</sup> It can also survive through the stomach and germinate in the small intestine<sup>26</sup> and supplementing with DE111® Probiotic can support a healthy gastrointestinal (GI) tract, gut function and microbiome diversity within the gut.

Backed by clinical science, DE111® Probiotic may improve body composition in female athletes and may support healthy body fat percentage in women in combination with strength training.

**DE111® Probiotic  
May Benefit:**

- Digestive health
- Immune function
- Body composition

**9 Clinical Trials  
Clinical Dose:  
1B-5B CFU/day**



# DE111® Probiotic significantly improves body fat percentage compared to control<sup>27</sup>

**RANDOMIZED DOUBLE-BLIND, PLACEBO-CONTROLLED DESIGN**

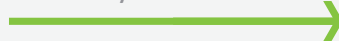


**23 Healthy Division I  
Female Athletes**

DE111® Probiotic (5B CFU)



Hydration Drink



**10 Weeks**

**RESULT:**

DE111® significantly improved body fat percentage compared to control (p=0.018).



## ESFLORIN1™ PROBIOTIC & POSTBIOTIC

Esflorin1™ Pro-and Postbiotic (*Bifidobacterium longum* CECT 7347) provides gut and digestive health benefits. And proper digestion is also linked to overall wellness. More and more, it is understood that a healthy digestive system may affect mood, cognition, energy, immune health and overall well-being.

Supplementing with Esflorin1™ Probiotic or Postbiotic may support:

- Overall gut health
- Digestive health
- Reduced bloating
- Gastrointestinal health in gluten-sensitive individuals

A recent study indicates that Esflorin1™ Probiotic and Postbiotic may support overall gut and digestive health.<sup>28</sup> This randomized, double-blind placebo-controlled human clinical trial included 200 adults with mild-moderate IBS-D (irritable bowel syndrome that causes increased diarrhea). A daily intake (1B CFU) of the Esflorin1™ Probiotic or Postbiotic was administered over a period of 12 weeks.

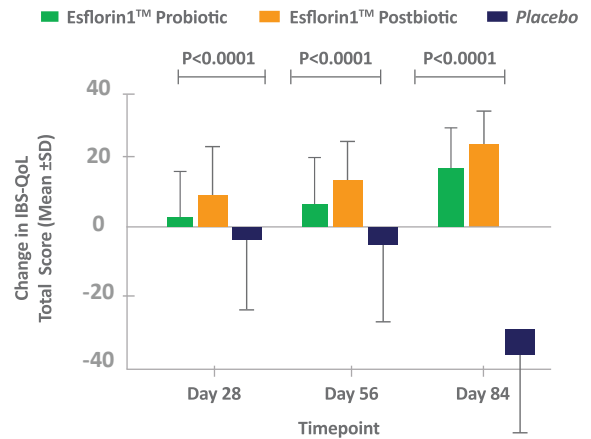
Both groups taking the Esflorin1™ Probiotic or the Esflorin1™ Postbiotic experienced ~3x better IBS-SSS (IBS severity scoring system) score compared to the placebo group. Both groups also exhibited significant reduction of their mean abdominal pain severity-numeric rating score.

### Esflorin1™ Pro- and Postbiotic May Benefit:

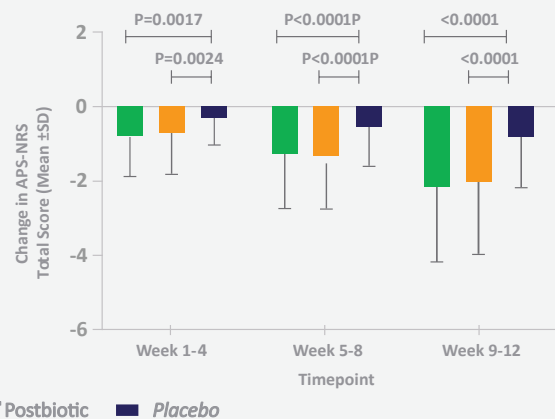
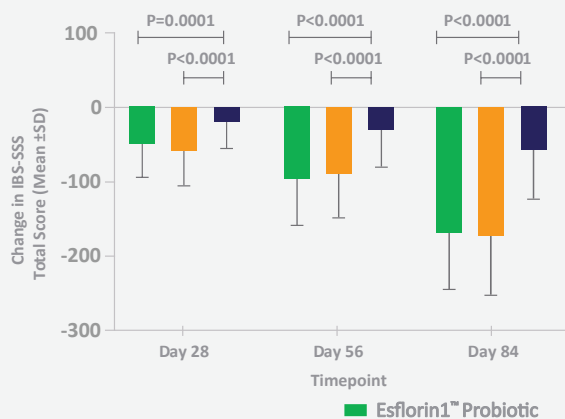
- Digestive health
- Gut health

### 12 Scientific Papers - 4 Clinical Trials

**Daily Intake:**  
**Probiotic: 1B CFU/day**  
**Postbiotic: 25mg/day**



Change in the mean IBS-QoL total score in the two groups. The mean change in IBS-QoL total score compared to baseline for each treatment group on Days 28, 56 and 84 are presented. Error bars represent the SD. p-values were calculated using paired t-test (T).



In addition, IBS-QoL (IBS-quality of life) scores showed significant improvements in the Esflorin1™ Probiotic group compared to the placebo. This group showed an improvement of frequency of watery stools compared to placebo and significant reduction in stress versus placebo.<sup>28</sup>



## FIBERSOL® PREBIOTIC FIBER

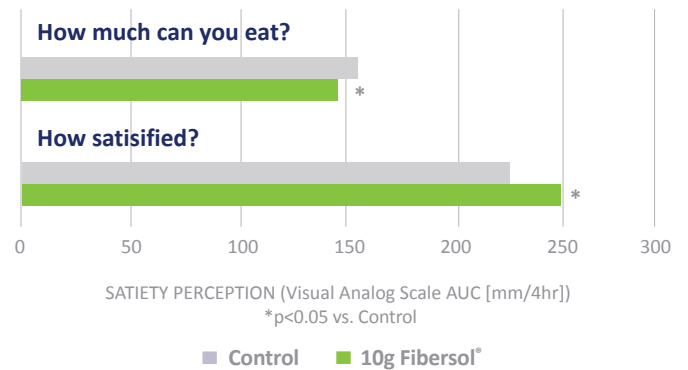
Fibersol® is a premier line of well-tolerated soluble prebiotic dietary fiber ingredients backed by more than 30 years of clinical research and more than 100 published studies—some of which demonstrate its prebiotic and physiological benefits, including:

- Prebiotic Benefits - May help nourish the intestinal flora and maintain a healthy intestinal tract environment (at 3.75g per serving, for a total of 15g per day over 3 weeks)
- Satiety - Clinically documented to increase appetite-regulating hormones, including GLP-1
- Post-meal Benefits - Reduced blood glucose, insulin and triglyceride levels

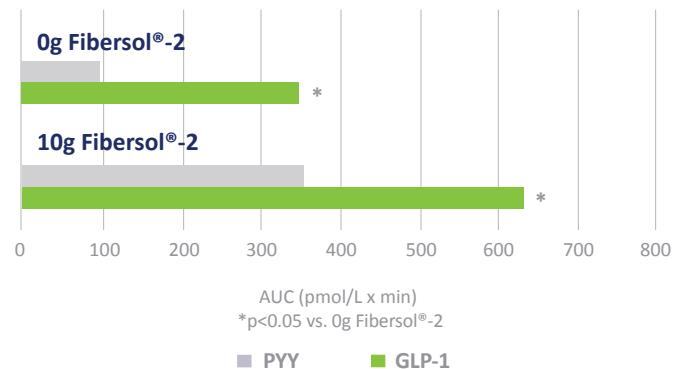
### Fibersol® Prebiotic Fiber May Support:

- Healthy gut microbiome
- Satiety
- Digestive health

## APPETITE SENSATIONS OVER 4 HOURS<sup>29</sup>

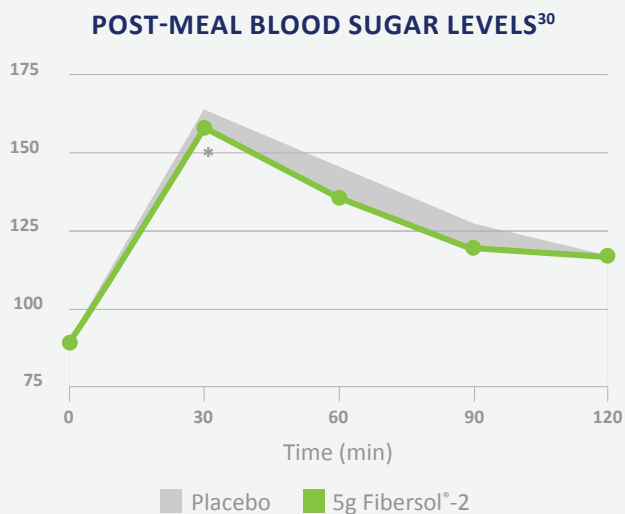


## APPETITE-REGULATING HORMONES OVER 4 HOURS



### At 10g with a meal, Fibersol®:

- May delay hunger
- May stimulate appetite-regulating hormones
- May increase GLP1 as a part of a normal physiological response in healthy individuals



\*p<0.05 significant difference to placebo at the specific time points indicated

### At 4-6g with a meal, Fibersol®:

- Helps reduce blood sugar levels/minimize blood sugar spikes after a meal that are within the normal range in healthy individuals
- Helps reduce blood insulin response/the rise in blood insulin after a meal that are within the normal range in healthy individuals

### At 5-6g with a meal, Fibersol®:

- Helps attenuate the rise in blood triglycerides after a meal that are within the normal range in healthy individuals
- Helps retain healthy blood triglyceride levels

### At 3.75g per serving\*, Fibersol®: (\*15g/day for 3 weeks)

- May help nourish the intestinal flora and maintain a healthy intestinal tract environment
- Is a well-tolerated prebiotic

### At 4-8g per serving\*, Fibersol®: (\*for 2 weeks)

- Helps support/maintain intestinal regularity
- Helps relieve occasional constipation
- May support gut health
- Improves stool consistency



## PREFORPRO® PREBIOTIC

PreforPro® Prebiotic applies targeted bacteriophage technology to control microbial populations and enable a more precise path to gut balance. PreforPro® Prebiotic helps support beneficial microbes by eradicating competing bacteria like *E. coli*.

### PreForPro® Prebiotic May Benefit:

- **Balanced gut bacteria environment (good for overall digestive health)**
- **Stomach comfort (good for overall well-being)**

**Daily Amount = 15mg**

**Backed by Human Clinical Trials**

### CLINICALLY SUPPORTED FUNCTIONAL BENEFITS:<sup>31,32</sup>

- **May support the beneficial effects of select probiotics for GI support**
- **May support stomach comfort when combined with a probiotic**

### Encourages growth of selected bacteria

- **Supports the growth of selected beneficial bacteria, which naturally limits the growth of other bacteria**
- **May displace unwanted bacteria within the gut**

### Supports microbiome harmony and digestive comfort

- **May positively modulate the gut microbiome and support GI comfort when combined with key probiotic strains**
- **May support a healthy GI tract when used with select *B. lactis* probiotic strains**



Women are up to twice as likely to be diagnosed with Irritable Bowel Syndrome (IBS) compared to men.<sup>33</sup>



Disclaimer: Ingredients may not be available in all markets. Compliance for ingredient use, permitted product types and product claims remains the responsibility of the finished product producer.



## NOVASOY®

Novasoy® is a soy isoflavone concentrate that delivers high levels of genistein. Plant estrogens like soy isoflavones are considered selective estrogen receptor modulators, which have specifically demonstrated benefits for women experiencing menopause.

NovaSoy soy isoflavones may reduce the number and frequency of hot flashes and may help maintain healthy bones following the transition into menopause. Research in nutrition science shows women who take a daily oral supplement of 50mg (106-230mg/day) of soy isoflavones benefit from maximum genistein intake, which improves bone calcium retention.

Soy isoflavones, like NovaSoy may help support aspects of cognitive health. Additionally, Novasoy® is now being examined for the potential to support beauty and skin health. Initial results have been extremely positive.

## ISOFLAVONE SAFETY

- 10,000+ publications and hundreds of efficacy clinical trials
- Demonstrated safety: A recent review publication summarized the safety of isoflavones, stating that evidence does not support classifying isoflavones as endocrine disruptors<sup>34</sup>
- Favorably assessed by EFSA for safe use in pre- and post-menopausal women at 35-100mg/day<sup>35</sup>



**67%**  
of the global  
population do not  
consume enough  
vitamin E from food<sup>37</sup>



### **NOVATOL® VITAMIN E**

Novatol® naturally derived vitamin E is a powerful and plant-based antioxidant—ideal for supporting skin, eye and heart health while also protecting cells from oxidative stress. Further, Novatol® vitamin E features twice the bioavailability of synthetic vitamin E offerings. This increased bioavailability enables users to get 100% of the RDA in a smaller dosage level, or twice the absorbable vitamin E in their current dosage level. This increased efficacy is crucial in regions like the U.S. where vitamin E is one of the most underconsumed micronutrients.<sup>36</sup>

With more than 50 years of scientific research, vitamin E has long been celebrated for its ability to soften skin. However, recent advances show that it is capable of benefiting us in many more ways.

**Novatol® Vitamin E May Benefit:**

- Cardiovascular/heart health
- Eye health
- Healthy immune system
- Cognitive function

**Daily Amount:**


**15mg/day provides 100% recommended daily allowance (RDA)**

# ADM for Market-Pleasing Microbiome Solutions

ADM IS A GLOBAL LEADER IN END-TO-END MICROBIOME SOLUTIONS.

We can help differentiate your brand with clinically studied and consumer-driven formulations using our diverse portfolio of prebiotics, probiotics and postbiotics.

Even better? ADM can help you get your novel dietary supplement and food & beverage offering to market, faster. Not only because we deliver the ingredients you need—all from one supplier—but we also help you create solutions that actually work to meet consumer demands, are backed by science and have minimal sensory impact due to our gentle extraction methods and flavor and formulation expertise.



ADM delivers the ability to help you achieve your sustainability and sourcing goals and address your scope 3 emissions.

## ADM's Expansive Global Network and Industry Experts

- 140** scientists, technicians and employees devoted to microbiome R&D
- 40+** partnerships with universities in 17 countries
- 13** R&D and applied research centers
- 5,800** research reports included in our database
- 40+** years of experience in studying raw materials

### YOUR PARTNER IN SUSTAINABILITY

ADM continues to scale up sustainability efforts to develop new solutions for our customers, making us uniquely positioned to be your sustainability partner.

Combined with ADM's unparalleled scale, integrated supply chain, transport and logistic capabilities, and our deep-rooted relationships in agriculture, we connect you back to the fields and farmers where ingredients are sourced.

## SOURCES

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