



## Scientific Evidence for Bellavie WOMAN

The WOMAN Synbiotic from Bellavie is a broad-spectrum, high-CFU, multispecies probiotic supplement containing 7 probiotic microbial species, prebiotic, and supplement, each selected for well-documented supportive health benefits.

The formula has been developed with essential intestinal bacteria to support a more favorable balance of the intestinal microbiota and reduces the risk of urinary tract infections. The formula is completed with prebiotics and nutraceuticals which work in synergy with probiotics and enhance their activity.

### Importance of a Healthy Vaginal Microbiota

A healthy vaginal microbiota is essential for several different reasons. The vaginal microbiome forms a homeostatic and mutualistic relationship with the woman host and plays an important role in vaginal health and disease.

The change in the normal vaginal flora results in a variation in pH, which allows a variety of anaerobes and facultative bacteria to proliferate and causes chronic infections as well as abnormal vaginal discharge.

Some species associated with non-Lactobacillus vaginal microbiota may trigger immune responses as well as degrade the host mucosa, processes that ultimately increase susceptibility to infections and contribute to negative reproductive outcomes such as infertility and preterm births.

Dysbiosis in the vaginal microbiota may present itself in many ways such as vaginal infections such as bacterial vaginosis, vulvovaginal candidiasis or Leucorrhoea, urinary infections such as urinary tract infections, cystitis or urethritis or breast infections such as human mastitis.

### Probiotics and the Vagina

Probiotics are becoming a tool in helping to prevent vaginal dysbiosis and the many adverse outcomes associated with this condition as probiotics can help to restore the balance of the vaginal microflora without the use of pharmacological drugs.

Benefits of probiotics on the vaginal microflora include:

- Probiotics can survive through the gastrointestinal system and to ascend to the vaginal tract after their excretion from the rectum.
- Probiotics are well known for their ability to lower intravaginal pH, thus establishing a barrier effect against many types of yeasts and other pathogens.

- Some strains are also able to exert additional and more focused antagonistic activities mediated by specific molecules such as hydrogen peroxide and bacteriocins.
- Probiotics supplementation can significantly improve the cure rate in adult bacterial vaginosis patients and other vaginal infections.
- Probiotics have been reported to be beneficial in preventing UTIs in women which has been proven by several in vivo and in vitro studies.

### Bellavie WOMAN Capsule Composition

Each Bellavie WOMAN capsule contains a symbiotic element (Probiotic and Prebiotic) along with a nutraceutical element to give the overall term 'synbiocetical'. Within the probiotic element of the capsule, there are 7 specially selected microorganisms specifically chosen based on the scientific evidence outlining their many health benefits.

For the prebiotic element of the capsule, inulin from chicory is used based on its ability to stimulate growth and give a synergistic effect to the probiotics.

For the nutraceutical element of the capsule, dried cranberry extract is used for its well-documented benefits on the vaginal microflora.

### Probiotic

Each probiotic contained within the Bellavie WOMAN capsule is based on scientific research that demonstrates how each probiotic makes a positive impact on the vaginal microflora. The following facts about each probiotic has been backed up by extensive research and clinical trials.

- ***Bacillus Coagulans***
  - B. Coagulans* reduces several symptoms associated with vulvovaginitis (1).
  - Bacillus Coagulans* can provide benefits to women being treated with antibiotics to cure bacterial vaginosis (2).
  - Oral supplementation with *B. Coagulans* can be an effective approach for the treatment of recurrent bacterial vaginosis (3).
- ***Bifidobacteria producing H2O2***
  - Hydrogen peroxide represents a valid alternative to conventional treatments for recurrent bacterial vaginosis (4).
- ***Lactobacilli***
  - *Lactobacillus Acidophilus* is effective in the treatment of bacterial vaginosis (5).
  - Daily ingestion of 8 ounces of yogurt containing *Lactobacillus Acidophilus* decreases both candida colonization and infection (6).

- The combination of probiotics *L. Rhamnosus* and *L. Fermentum* is not only safe for daily use in healthy women, but it can reduce the colonization of the vagina by potential pathogenic bacteria and yeast (7).
- *L. Fermentum* is an efficient treatment for breast pain during lactation associated with a high level of *staphylococcus* in breast milk (8).
- *L. Crispatus* after treatment for cystitis is associated with a reduction in recurrent UTI (9).
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- In women with recurrent BV after antibiotics, treatment with *L. Crispatus* could significantly reduce the rate of recurrence and increase the time to recurrence (10).
- *L. Fermentum* and *L. Acidophilus* can not only solve candida infections in a very high percentage of women, but also exert a long-term physiological defense due to the colonization of vaginal microbiota and adhesion of the mucosa to the epithelial cells (11).
- Oral probiotics could be an alternative, side effect-free treatment for one of the most common indications in gynecology (12).

## Prebiotic

Prebiotics are needed to provide nutrients to create an optimal environment and support the growth of the probiotics. Inulin was chosen as the prebiotic for this capsule as inulin increases the number of good bacteria in the gut, particularly *bifidobacterial* and *lactobacilli*.

The fibre in inulin is soluble, which means it dissolves in water and in the stomach and forms a gelatinous substance.

Some of the functions of inulin include:

- Facilitates & slows digestion which enables the body to better absorb nutrients from the food.
- Helps modulate the immune system.
- Reduces cholesterol absorption as it passes through the digestive tract.
- Provides the body with nutrients and active elements.
- Facilitates the absorption of calcium and magnesium.
- Can be fermented into lactate and short chain fatty acids which impact the way energy is metabolised in the body and provides a protective effect against metabolic diseases and obesity.

## Nutraceutical

Nutraceuticals are natural health supplements recognized for their effects on targeted functions. The Bellavie WOMAN cap contains dried cranberry extract as it is known for the beneficial role that it plays on the vaginal microbiota.

- Cranberry has a protective effect against asymptomatic bacteriuria and symptomatic urinary tract infections in pregnancy (13).
- Cranberry may be effective in preventing UTI recurrence in healthy women (14).
- Cranberry reduces the number of clinical UTI episodes in women with a recent history of UTI episodes in women (15).
- Treatment based on probiotics and cranberry resulted in a safe and effective method for preventing recurrent UTI (16).

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