

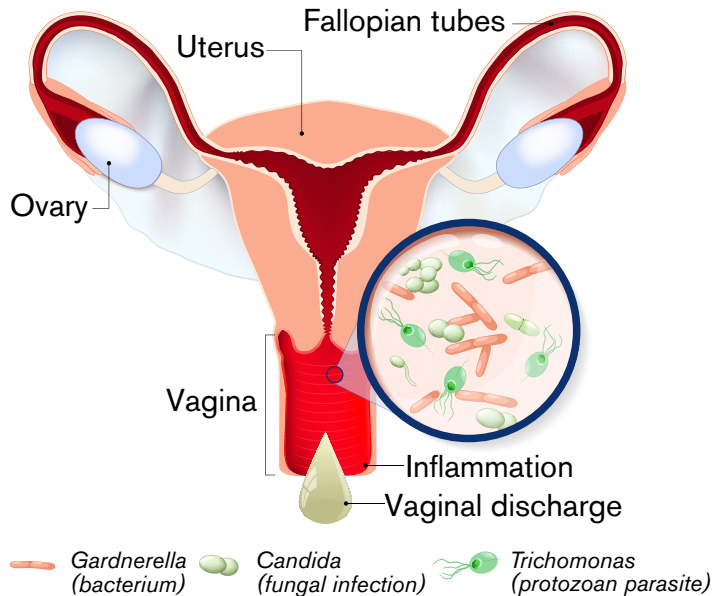
DR.VEGAN[®]

Vaginal health

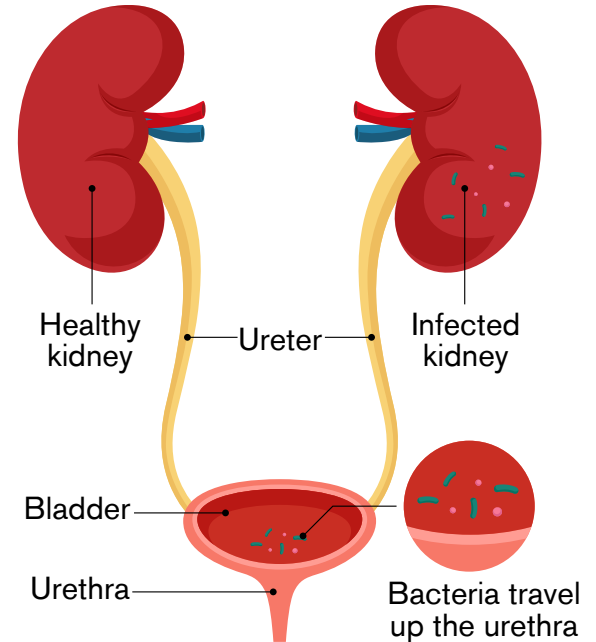
*A comprehensive guide to
vaginal health support*

Practitioner Paper • For practitioner use only

VAGINAL INFECTION



URINARY TRACT INFECTION



Up to 75% of women

will experience at least one vaginal infection in their lifetime, including bacterial vaginosis and thrush.¹ This can lead to discomfort, odour, and an imbalance in vaginal flora.

Over 50% of women

report experiencing recurring UTIs, leading to frequent discomfort, antibiotic use, and disruption in daily life.²

Probiotics

like *Lactobacillus crispatus* and *Lactobacillus reuteri* are essential for maintaining healthy vaginal flora, reducing the risk of infections by promoting an acidic pH and producing antimicrobial substances.³

Up to 47% of sexually active women

experience vaginal dryness or irritation at some point, often due to hormonal imbalances, which can affect their quality of life.⁴

LIFE STAGES AND CHANGING NEEDS

	Younger Women	Middle Age Women	Postmenopause
Vaginal Flora Support	Probiotics help maintain balanced vaginal flora, protecting against infections like thrush and bacterial vaginosis, especially during menstruation and periods of stress.	Maintaining healthy vaginal pH and flora is essential during hormonal shifts related to perimenopause; Lactobacillus strains provide support to prevent infections.	Vaginal flora balance may be disrupted by declining oestrogen, increasing the risk of dryness and discomfort; probiotics help maintain healthy vaginal tissues.
Urinary Health	Occasional support is needed, particularly during times of stress or sexual activity when UTIs may be more frequent; Cranberry helps prevent bacterial adhesion.	Increased risk of urinary issues (e.g. UTIs) due to hormonal fluctuations and changes in vaginal pH; cranberry provides ongoing UTI prevention and supports urinary tract health.	Continued focus on preventing UTIs as the risk remains higher postmenopause due to vaginal atrophy; Cranberry support remains beneficial for urinary health.
Gut Health	Probiotics support gut flora balance, helping to maintain healthy digestion and immune function during busy, active years; Lactobacillus strains are needed for gut health.	Gut microbiome may fluctuate due to hormonal changes in perimenopause, requiring probiotic support to maintain digestive balance; probiotics aid in nutrient absorption.	Probiotic support is crucial to sustaining gut health and immune function as digestive efficiency declines with age; it is beneficial for reducing constipation and promoting regularity.
Hydration and Mucosal Health	Sea Buckthorn supports the hydration of vaginal and mucosal tissues, protecting against dryness, especially in those with physically demanding lifestyles.	Hydration becomes more critical as vaginal and urinary tissues become drier due to hormonal decline; Sea Buckthorn helps maintain moisture levels.	Hydration becomes more critical as vaginal and urinary tissues become drier due to hormonal decline; Sea Buckthorn helps maintain moisture levels.
Stress and Immunity	Probiotics and botanicals like Parsley help boost immunity and manage stress in high-pressure environments, supporting mental clarity and immune health.	Stress management becomes essential, and probiotics combined with botanicals help support immune and stress resilience during hormonal transitions; Parsley may aid in mood stabilisation.	Continued probiotic and botanical support promotes stress resilience and protects against immune decline as the body ages and helps combat fatigue and mood fluctuations.

DIETARY AND LIFESTYLE ADVICE

Hydration

Staying well-hydrated is crucial for flushing out toxins and bacteria from the urinary tract, reducing the risk of infections.

Incorporate probiotic foods

Probiotics help maintain a healthy balance of bacteria in the gut and vaginal flora, which is vital for urogenital health.

Consume a high-fibre diet

A fibre-rich diet supports the gut and urogenital microbiome.

Limit sugar intake

High sugar intake can promote the growth of harmful bacteria and yeast, increasing the risk of infections.

Consume healthy fats

Healthy fats are essential for hormone balance and overall health.

Maintain a healthy weight

Being overweight can increase the risk of urinary incontinence and other urogenital issues.





Urinate before and after sex

This helps to clean out the urethra and reduce the risk of UTIs.

Limit alcohol and caffeine

Both substances can irritate the bladder and exacerbate urinary symptoms.

Practice good hygiene

Proper hygiene can prevent infections and promote urogenital health. Educate clients on the importance of wiping front to back after using the bathroom and avoiding douching, which can disrupt the natural balance of bacteria.

Use pH-balanced intimate health products

pH-balanced intimate health products, such as lubricants and washes, are essential to maintain the normal pH of the vagina. Choose products that are made from natural sources.

Manage stress levels

Stress can impact hormonal balance and overall health, including urogenital health.

pH Hero®

pH Hero® is an acclaimed, advanced formula of scientifically studied live, friendly bacteria and botanicals for vaginal flora, helping protect against harmful bacteria, thrush, UTIs and dryness. Including 5 probiotic strains providing 20bn CFU, prebiotics, Cranberry and Sea Buckthorn, pH Hero® supports vaginal and gastrointestinal health.



* NRV= Nutrient Reference Value

** No NRV Established

PER 1 CAPSULE

Parsley	1000mg**
Cranberry	4000mg**
Inulin	100mg**
<i>Lactobacillus Acidophilus</i>	6.9 billion CFU***
<i>Lactobacillus Crispatus</i>	2.3 billion CFU***
<i>Lactobacillus Rhamnosus</i>	4.6 billion CFU***
<i>Lactobacillus Reuteri</i>	4.6 billion CFU***
<i>Lactobacillus Plantarum</i>	4.6 billion CFU***
Stinging Nettle	275mg**
Sea Buckthorn	500mg**

Ingredients

Parsley Extract (*Petroselinum crispum*), Cranberry Extract (*Vaccinium macrocarpon*), Inulin Powder, *Lactobacillus Acidophilus*, *Lactobacillus Crispatus*, *Lactobacillus Rhamnosus*, *Lactobacillus Reuteri*, *Lactobacillus Plantarum*, Stinging Nettle Extract (*Urtica dioica*), Sea Buckthorn Extract (*Hippophae rhamnoides*), Vitamin B6 (Pyridoxal 5'-phosphate), Capsule Shell (Hydroxypropyl Methylcellulose).

Free from

Added Sugar, Starch, Sweeteners, Gluten, Wheat, Soya, Lactose, Dairy, Artificial Flavours, Colours and Preservatives.

Directions

- Take one capsule each day on an empty stomach and at least 20 minutes before or after a hot drink or food.
- pH Hero® contains probiotics which are sensitive to heat, warm air and moisture, so also ensure to store the pouch or pill tin away from heat, direct sunlight and steam in a kitchen or bathroom.
- Can be taken on an ongoing basis or for protection and support.

Pairs well with



MenoFriend®



PeriMenoFriend®



Women's ProMulti



PMS Hero®

What customers can look forward to

2 weeks

Improvement in feelings of discomfort (such as vaginal itchiness, discomfort upon urinating, urgency and frequency) as the urinary tract and vaginal pH balance reset.

3 weeks

Support for vaginal dryness. Better overall digestion.

4 weeks

Improvement in signs of bacterial vaginosis and a healthy vaginal flora. Customers may notice decreased signs of vaginal candidiasis with significantly less vaginal discharge.

6-8 weeks

Might experience lower antibiotic resistance in UTI treatment.

12 weeks

Improvement in vaginal pH and overall vaginal health. Support for signs of vaginal atrophy. Begin to enjoy fewer feelings of burning, itching and overall vaginal discomfort.

6-12 months

The recurrence of UTIs may be less.

KEY INGREDIENTS IN PH HERO®



Parsley

Parsley is used to support urinary and vaginal health. Its mechanisms of action include:

Increased urine production: Parsley acts as a natural diuretic due to its compounds apiole and myristicin. These compounds promote renal blood flow, causing increased glomerular filtration rate (GFR) and urine output.⁵

Flushing out pathogens: Increased urine volume helps to flush out bacteria and toxins from the urinary system, reducing the likelihood of urinary tract infections (UTIs). Regular consumption of parsley may help maintain urinary health by reducing the risk of UTIs, especially in individuals prone to recurrent infections.

Antimicrobial properties: Parsley contains essential oils like eugenol, myristicin, and apiole, which possess significant antimicrobial activity. These compounds have been shown to inhibit the growth of various pathogens, including *Escherichia coli* (*E. coli*) and *Staphylococcus aureus*.⁶ The antimicrobial properties can be attributed to the disruption of bacterial cell membranes, inhibiting the synthesis of nucleic acids and proteins, and interfering with metabolic pathways in bacterial cells. For example, eugenol disrupts the integrity of the bacterial cell wall, leading to lysis and death of the bacteria. Parsley may also prevent biofilm formation, a protective layer that bacteria form to evade the immune system and resist antibiotic treatment.

Anti-inflammatory effects: Parsley is rich in flavonoids (e.g. luteolin, apigenin) and polyphenols that possess potent anti-inflammatory properties. These compounds exert their effects by inhibiting the activity of pro-inflammatory enzymes and mediators. Flavonoids inhibit cyclooxygenase (COX) and lipoxygenase (LOX) enzymes, which play key roles in the production of inflammatory mediators such as prostaglandins and leukotrienes, which helps to reduce inflammation in the urinary and vaginal tracts. Parsley also suppresses the production of pro-inflammatory cytokines (e.g. IL-1 β , IL-6, TNF- α) by modulating immune cell activity. This immunomodulatory effect contributes to the maintenance of tissue health and the reduction of inflammation-related discomfort. By reducing inflammation, parsley can alleviate symptoms associated with conditions like cystitis and vaginitis, promoting overall urinary and vaginal health.⁷



Cranberry

Cranberry is well known for its role in urinary tract health and works in several ways.

Inhibition of pathogen adhesion: Cranberries are particularly rich in proanthocyanidins, a type of polyphenolic compound. PACs play a critical role in urinary tract health by preventing the adhesion of bacteria, particularly *Escherichia coli* (*E. coli*), to the uroepithelial cells lining the urinary tract. The anti-adhesion mechanism involves the binding of PACs to the fimbriae (hair-like structures) on the surface of *E. coli*.⁸ This binding inhibits the bacteria's ability to attach to the urinary tract walls, effectively reducing the risk of infection. The PACs act by blocking the lectin receptors on the bacterial surface, preventing them from binding to host cells. By inhibiting bacterial adherence, Cranberry consumption can significantly lower the incidence of urinary tract infections (UTIs), especially in individuals prone to recurrent infections.

Antioxidant properties: Cranberries are high in antioxidants, including Vitamin C, flavonoids, and other polyphenols. These antioxidants help neutralise free radicals, thereby reducing oxidative stress in the body. Antioxidants scavenge reactive oxygen species (ROS) and prevent cellular damage by protecting the integrity of cellular membranes and DNA. The high concentration of Vitamin C enhances the immune system's function by supporting the proliferation and activity of immune cells, such as lymphocytes and phagocytes. The phytochemicals in Cranberries may enhance immune function by promoting the activity of immune cells, improving the body's ability to fend off infections. A robust immune response is essential for preventing infections, including UTIs and vaginal infections. By reducing oxidative stress and supporting immune function, Cranberries contribute to overall health.

Anti-inflammatory effects: Cranberries have been shown to exert anti-inflammatory effects by downregulating the production of pro-inflammatory cytokines (e.g. $\text{TNF-}\alpha$, $\text{IL-1}\beta$) and enzymes (e.g. COX-2) involved in inflammation. The polyphenolic compounds in cranberries inhibit the activation of nuclear factor kappa B ($\text{NF-}\kappa\text{B}$), a transcription factor that regulates the expression of genes involved in inflammation.⁹ By inhibiting $\text{NF-}\kappa\text{B}$ activation, Cranberry Extracts reduce the production of inflammatory mediators, thus alleviating inflammation in the urinary and vaginal tracts. The anti-inflammatory properties of cranberries can help protect the urothelial cells from inflammatory damage, contributing to a healthier urinary tract. Reducing inflammation in the urinary tract can alleviate symptoms associated with infections and support overall urinary health.

Support for gut microbiome: Cranberries may act as a prebiotic, promoting the growth of beneficial gut bacteria. The dietary fibres and polyphenols in cranberries can enhance the growth of beneficial bacteria such as *Lactobacillus* and *Bifidobacterium*. By providing a substrate for beneficial bacteria, Cranberries help maintain a balanced gut microbiome, which is crucial for overall health and immunity. A healthy gut microbiome can influence urinary tract health by preventing the overgrowth of pathogenic bacteria and supporting the immune response.



Inulin

Inulin is a prebiotic that supports the growth of beneficial bacteria. Its mechanisms of action include:

Selective fermentation: The fermentation of inulin by gut bacteria leads to the production of SCFAs, which have anti-inflammatory properties. SCFAs can inhibit the activation of nuclear factor kappa B (NF- κ B) and other inflammatory pathways, reducing the expression of inflammatory mediators.

Inulin serves as a food source for beneficial bacteria, particularly Bifidobacteria and Lactobacilli, promoting their growth and activity. This selective feeding supports microbial diversity and helps suppress the growth of potentially harmful bacteria.

Probiotics

Probiotics are beneficial microorganisms that play a crucial role in maintaining health through various mechanisms. One of their main functions is the modulation of the gut microbiota, helping to establish a balanced microbial community. By competing with pathogenic bacteria for adhesion sites and nutrients, probiotics can inhibit the growth of harmful microorganisms, thereby reducing the risk of infections and promoting overall gut health. Probiotics produce short-chain fatty acids (SCFAs) through the fermentation of dietary fibres. These SCFAs, such as butyrate, serve as an energy source for colonocytes (the cells lining the colon) and contribute to maintaining intestinal barrier integrity. A strong intestinal barrier is essential for preventing the translocation of harmful substances into the bloodstream, thus supporting systemic health and reducing inflammation.

Probiotics also play a significant role in enhancing immune function. They can stimulate the activity of immune cells, such as macrophages and lymphocytes, promoting a balanced immune response. This immune modulation helps improve the body's ability to fight off infections. Probiotics produce antimicrobial compounds, including bacteriocins and hydrogen peroxide, which further inhibit the growth of pathogenic bacteria. They also help maintain a low pH environment in the gut, which is unfavourable for many pathogens while promoting the survival of beneficial bacteria. Probiotics have been shown to influence urogenital health by helping to maintain a balanced vaginal microbiome. By promoting lactic acid production and maintaining an acidic environment, they can inhibit the growth of harmful pathogens in the urinary and vaginal tracts.



Lactobacillus rhamnosus

Lactobacillus rhamnosus is another vital strain for both vaginal and gastrointestinal health. This probiotic has strong adhesive properties, allowing it to colonise the epithelial lining of the vagina and gut effectively. In the vagina, it helps balance the microbial population by producing lactic acid, maintaining an acidic pH that discourages the growth of pathogens such as *Gardnerella* and *Candida* species. A clinical trial found that *Lactobacillus rhamnosus* allows stabilisation of the vaginal ecosystem and reduces the recurrence of BV.¹⁴

L. rhamnosus also exhibits immunomodulatory effects, promoting a balanced immune response that enhances resistance to infections. In the gastrointestinal tract, it supports mucosal integrity and reduces inflammation, contributing to overall health and reducing systemic effects that could impact vaginal health.



Lactobacillus reuteri

Lactobacillus reuteri is known for its ability to produce reuterin, an antimicrobial compound that can inhibit the growth of a broad spectrum of harmful microorganisms, including Gram-positive and Gram-negative bacteria, fungi and protozoa.¹⁵ In the vaginal microbiome, this helps in preventing infections like bacterial vaginosis and candidiasis. *L. reuteri* also plays a role in maintaining a healthy immune system by influencing the production of anti-inflammatory cytokines, which can help reduce vaginal and urinary tract inflammation. This strain is also linked to strengthening the epithelial barrier, reducing the likelihood of infections by harmful bacteria.¹⁶ By promoting the secretion of anti-inflammatory cytokines (e.g. IL-10) and inhibiting pro-inflammatory cytokines (e.g. TNF- α), *L. reuteri* helps maintain a balanced immune response. This modulation is critical in preventing chronic inflammation, which can lead to various urogenital and gastrointestinal issues. *L. reuteri* can form biofilms on epithelial surfaces, providing a protective barrier against pathogen adherence and promoting the stability of beneficial bacterial communities.¹⁷



Lactobacillus plantarum

Lactobacillus plantarum produces lactic acid and bacteriocins, which inhibit the growth of harmful bacteria such as *Staphylococcus aureus* and *E. coli*.^{18, 19} *L. plantarum* strengthens the mucosal barrier, preventing the entry of pathogens and maintaining the integrity of the vaginal and gastrointestinal linings. This strain has surface adhesins, such as proteins and polysaccharides, to bind to the intestinal mucosa, preventing the attachment of harmful bacteria like *Clostridium difficile* and *Escherichia coli*. This strain promotes the production of immunoglobulin A (IgA) and cytokines, such as IL-10, which help regulate immune responses and reduce inflammation.²⁰



Lactobacillus acidophilus

L. acidophilus produces lactic acid, which lowers vaginal pH, creating an inhospitable environment for pathogens like *Candida* (thrush) and *Gardnerella* (bacterial vaginosis).¹⁰ It secretes bacteriocins, which are antimicrobial peptides that inhibit harmful bacteria and help maintain the balance of the vaginal flora. *L. acidophilus* supports mucosal integrity, reducing the risk of infections and enhancing the barrier function of the vaginal lining. *Lactobacillus acidophilus* is a prominent strain in both vaginal and gastrointestinal microbiomes, crucial for maintaining acidic pH levels, particularly through the production of lactic acid. This strain is also involved in the production of bacteriocins, antimicrobial peptides that further protect the vaginal environment by inhibiting the growth of harmful bacteria. *Lactobacillus acidophilus* contributes to the epithelial barrier function, enhancing mucosal integrity and protecting against infections.



Lactobacillus crispatus

Lactobacillus crispatus is a dominant strain in healthy vaginal flora.¹¹ By producing lactic acid, *L. crispatus* helps maintain a low vaginal pH, which is essential for preventing overgrowth of pathogens like *Candida* and *E. coli*. This strain forms a biofilm that acts as a physical barrier against pathogens, enhancing the mucosal defence system.¹² *L. crispatus* can modulate local immune responses, reducing inflammation and promoting a healthy balance of vaginal microorganisms. *Lactobacillus crispatus* is particularly effective in outcompeting harmful pathogens and maintaining an acidic vaginal pH through lactic acid production. This strain is frequently found in healthy vaginal microbiomes and has been associated with a lower incidence of bacterial vaginosis (BV). Its ability to form a biofilm helps to reinforce the vaginal mucosal barrier, providing a physical and biological defence against infections. In clinical studies, *L. crispatus* has demonstrated the ability to restore vaginal flora, reduce recurrence rates of BV, and enhance immune responses by modulating inflammatory cytokines.¹³



Nettle

Nettle is a herbal remedy with anti-inflammatory and anti-microbial properties.

Diuretic: Nettle acts as a natural diuretic, promoting increased urine production through several biochemical mechanisms.²¹ This flushing effect helps remove harmful bacteria from the urinary tract, thereby reducing the risk of urinary tract infections (UTIs). Additionally, the diuretic action may help alleviate symptoms of fluid retention and promote overall urinary tract health.

Anti-microbial: Nettle exhibits significant anti-microbial properties, attributed to its rich content of phenolic compounds, flavonoids, and other phytochemicals. These compounds exert a direct inhibitory effect on the growth of various pathogens, including bacteria and fungi.²² For instance, the phenolic compounds can disrupt the cell membrane integrity of bacteria, leading to cell lysis and death. Nettle's anti-microbial properties may be enhanced by its ability to modulate the immune response, promoting the activity of immune cells that target pathogens.²³ This double action—direct anti-microbial activity combined with immune modulation—helps control the growth of harmful microorganisms in the urogenital tract.



Sea Buckthorn

Nutrient-rich composition: Sea Buckthorn is exceptionally rich in vitamins, particularly Vitamin C, E, and several B vitamins. Vitamin C acts as a powerful antioxidant, scavenging free radicals that can cause oxidative stress and damage to cellular structures. It also plays a crucial role in collagen synthesis, promoting skin elasticity and overall tissue health. Vitamin E further supports skin health through its antioxidant properties, enhancing cell membrane integrity and protecting against lipid peroxidation.

Anti-inflammatory effects: Sea Buckthorn contains various bioactive compounds, including flavonoids and carotenoids, that exhibit significant anti-inflammatory properties.²⁴ These compounds inhibit the production of pro-inflammatory cytokines and enzymes, such as cyclooxygenase-2 (COX-2), thereby reducing inflammation in tissues. The anti-inflammatory action is particularly beneficial for individuals experiencing inflammatory conditions in the urogenital tract, contributing to overall comfort and wellbeing.

Mucosal health support: The oil extracted from Sea Buckthorn berries is rich in Omega 7 fatty acids (palmitoleic acid), which are known to support mucosal health. Omega 7 fatty acids help maintain the integrity of mucosal membranes, including those in the vaginal and urinary tracts. This property is essential for maintaining moisture and preventing dryness, which can lead to discomfort and increase susceptibility to infections. The presence of these fatty acids also aids in promoting tissue regeneration and repair.



Vitamin B6

Vitamin B6 plays several roles in supporting vaginal health through its impact on hormonal balance, immune support and anti-inflammatory action.

Metabolism of hormones: One of the main mechanisms of action for Vitamin B6 is its role as a coenzyme in the metabolism of hormones, particularly oestrogen and progesterone. By helping to regulate hormonal fluctuations, Vitamin B6 can reduce premenstrual symptoms like vaginal dryness or discomfort, which are often related to hormonal shifts.²⁵

Immune support: Vitamin B6 supports immune function, which is essential for maintaining a healthy vaginal microbiome and protecting against infections. It contributes to the production of antibodies and immune cells, enhancing the body’s natural defences against pathogens. In inflammatory conditions, such as bacterial vaginosis, Vitamin B6 may have beneficial effects by modulating inflammatory pathways, as it’s involved in the synthesis of cytokines and other anti-inflammatory mediators.

DRUG INTERACTIONS

Interaction Severity

Moderate

Anticoagulant / Antiplatelet Drugs.	Parsley and Sea Buckthorn may increase the risk of bleeding when taken with these drugs. Nettle may decrease the effects of these drugs.
Antidiabetes Drugs	Parsley and Nettle may increase the risk of hypoglycaemia when taken with these drugs.
CYP1A2 Substrates.	Parsley may increase the levels of these drugs.
Antibiotic Drugs	Lactobacillus probiotics should be taken at least 2 hours away from antibiotic drugs to improve the effectiveness of lactobacillus probiotics.
Diuretic Drugs	Nettle may increase the effects of this drug.
Lithium	Nettle may increase the effects of this drug.
Warfarin	Nettle may decrease the effects of this drug.
Antihypertensive Drugs	Sea Buckthorn and Vitamin B6 may increase the risk of hypotension when taken with this drug.
Amiodarone	Vitamin B6 may worsen the photosensitivity side effects of this drug.

Drug-nutrient interactions have been taken from the Natural Medicines Database, October 2024. Please do your own due diligence before recommending this product to individuals taking medicines.

DR.VEGAN® PRACTITIONER SCHEME

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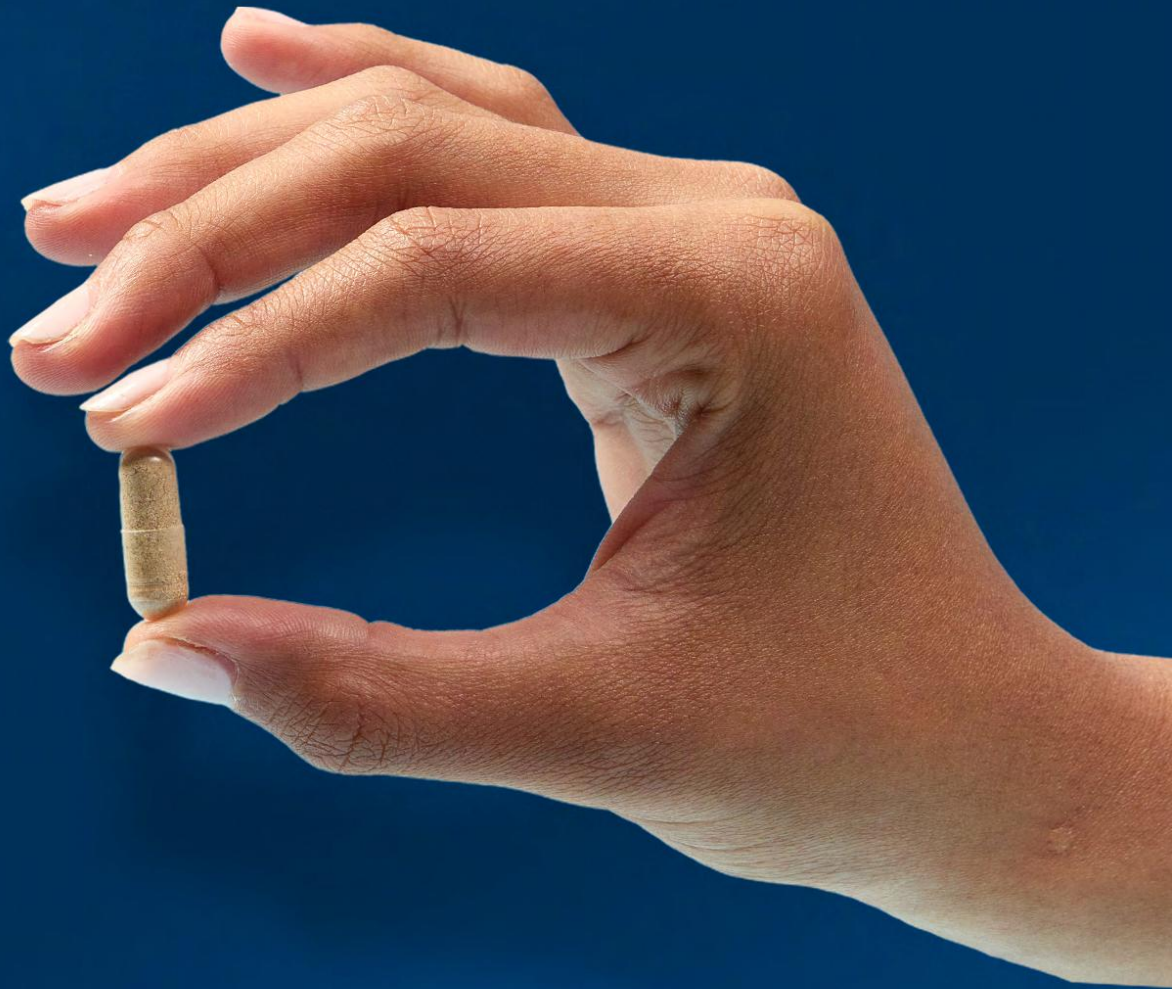


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