

# D-Mannose Power Complex

## URINARY TRACT SUPPORT

900MG PER SERVING



### High-strength D-mannose complex

D-Mannose Power Complex is a high-strength **D-mannose** supplement (**900mg\***), enriched with **cranberry (2160mg\*)**, **Lactobacillus acidophilus (2 billion CFU\*)**, **zinc**, **cinnamon**, **oregano** and **bamboo leaf (providing silica)** - all in one convenient and easy to take capsule.

\*Per serving.

It has been specially formulated to provide the optimal mix of D-mannose and cranberry extract to offer long-term support for **urinary tract health**.

We have also added **zinc** as it contributes to the normal function of the **immune system** and the protection of cells against **oxidative stress**, as well as tried and tested **botanicals** and **probiotics** that have long been used to support a **healthy gut** and urinary tract environment.

### BENEFICIAL FOR...

- Urinary tract health
- UTIs and rUTIs
- Cystitis
- Women
- Post-menopause
- Gut health / digestion
- The immune system
- Inflammation
- Antioxidant levels
- Skin
- Collagen production
- Mobility

# About the ingredients...

## D-Mannose and cranberry:

### What is D-mannose?

D-mannose is a simple sugar (a monosaccharide) naturally found in certain plants and found in many fruits (such as cranberries and pineapples). It is related to glucose. It also occurs naturally in some cells in the human body. Other names for D-mannose are: Carabinose, D-manosa, Mannose and Seminose.



### Urinary tract health

Urinary tract infections (**UTIs**) are one of the most prevalent bacterial diseases worldwide, especially in women (and even more so after the menopause). Although they can, of course, affect anyone.

Despite the efficacy of antibiotics targeted against UTIs, the recurrence rates remain significant and the development of antibiotic resistance (and other side-effects associated with regular antibiotic use) is a major concern and creates a demand for alternative treatment options.

Research suggests\* that supplemented D-mannose offers effective alternative / complementary support, especially for recurrent UTIs.

Although a natural sugar, D-mannose is not metabolised by humans and, on ingestion, passes immediately through to the kidneys and urine. It therefore does not interfere with blood sugar regulation, because it is non-glycaemic in humans.

Most urinary tract infections are caused by E. coli bacteria. This supplement contains D-mannose and cranberry extract, which research has demonstrated work well together to **prevent adhesion and replication of bacteria**.

D-mannose readily binds to pathogens to prevent adhesion and replication, and **aids removal via urine**.

Cranberry has a similar action to D-mannose because they contain A-type proanthocyanidins (**PACs**), which interfere with the bacteria's ability to adhere to the bladder wall, thereby reducing the likelihood of infection. Cranberry juice has a long history of use, however it is high in sugar and therefore often counter-productive. Use of the extract in supplement form avoids this issue.

\*<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7465228/>

\*<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9788503/>

**Bamboo leaf (providing silica):** Bamboo is packed with vitamins and essential minerals such as niacin, vitamin A, vitamin B6 and vitamin E.

It is known to naturally enhance **collagen** production, help to **detox** the body and boost natural **immunity**. It is also often used in a health context due to its **antioxidant** and **anti-inflammatory** actions.



\*Tundis, R. et al. (2023) "Anti-Inflammatory and Antioxidant Effects of Leaves and Sheath from Bamboo (*Phyllostachys edulis* J. Houz)", *Antioxidants*, 12(6), p. 1239. doi: 10.3390/antiox12061239. <https://www.mdpi.com/2076-3921/12/6/1239>

### Silica

Bamboo is also a natural source of silica. In fact, bamboo extract is the richest known source of natural silica, containing over 70%.

Silicon (Si) is the second most abundant element on earth after oxygen, and a sister element of carbon. Silicon's role as an essential nutrient was not established until 1972, but it is now known to play a part in the integrity of the skin, ligaments, tendons and bone. Silica is found in compounds called glycosaminoglycans - components of these structural tissues.

Given these properties, silica supplements have become popular for **healthy skin and mobility**. Although there's no NRV for silica, most nutritionists agree a daily intake is important. Our bamboo provides 15mg of silica per serving.

# About the ingredients...

## Lactobacillus acidophilus (2 billion CFU per serving):

Lactobacillus acidophilus is an important human intestinal **probiotic** - a type of "good" bacteria found in the gut, mouth and vagina, as well as in certain foods.



Probiotics like L. acidophilus can help **break down food**, **absorb nutrients** and **fight off harmful organisms** that can cause disease, by creating an inhospitable environment for them to survive, crowding them out / competing with them for space and food.

Its name gives an indication of what it produces - lactic acid. It does this by producing an enzyme called lactase. Lactase breaks down lactose (a sugar found in milk) into lactic acid, which in turn acts to prevent the growth of harmful bacteria.

[\\*https://pubmed.ncbi.nlm.nih.gov/20534435/](https://pubmed.ncbi.nlm.nih.gov/20534435/)

L. acidophilus has been found to play important roles in many aspects of human health. Due to its good resistance against acid and bile salts, it has broad application.

It is commonly used for **overgrowth of bacteria** in the vagina, diarrhoea from antibiotics, as well as irritable bowel syndrome (**IBS**) and an infection caused by the bacteria Helicobacter pylori (H. pylori).

It is also used for acne, hay fever, eczema and many other conditions.

[\\*https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9668099/#:~:text=of%20Lactobacillus%20acidophilus.-,L,immunity%2C%20and%20improve%20gastrointestinal%20diseases.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9668099/#:~:text=of%20Lactobacillus%20acidophilus.-,L,immunity%2C%20and%20improve%20gastrointestinal%20diseases.)

Urinary microbiota have a significant role to play in the prevalence and recurrence of **UTIs, especially in women**.

Overall, in contrast to the gut, urine contains very few microbes and is dominated by one or two species. Research suggests that the urinary microbiota is gender specific, likely due to anatomical and hormonal differences, with women being at greater risk for UTIs.

The most common bacteria in the urinary microbiota of healthy women are the same species of Lactobacillus that exists in the vagina. Other predominating species are from the genera Gardnerella, Streptococcus, Staphylococcus, Corynebacterium, and Escherichia.

Research suggests that urotype changes with age and for instance a Lactobacillus- or Gardnerella-dominated urotype is in some cases reported to be more common in **pre-menopausal women**, whereas the Escherichia-dominated urotype and more diverse microbiota seem to predominate in **postmenopausal women**.

Urinary microbiota is associated with recurrent UTIs. Changes resulting in the loss of the normally protective Lactobacillus species seem to especially increase the risk of UTIs.

The vaginal tract is suggested to play a role in UTI pathogenesis by serving as a potential reservoir for uropathogenic bacteria ascending from the gastrointestinal tract. Studies show that women with recurrent UTIs have lower levels of Lactobacilli and are more commonly colonised with vaginal E. coli. Indigenous vaginal lactobacilli produce H<sub>2</sub>O<sub>2</sub> and lactic acid, which contributes to lowering vaginal pH which in turn inhibits the growth of pathogenic bacteria, such as E. coli, and may ultimately reduce the risk of such organisms colonising the urinary tract.

We have used Lactobacillus acidophilus (2 billion CFU), a probiotic strain that therefore offers ideal support for microbiome flora and natural pH levels throughout the intimate area.

[\\*https://nutritionj.biomedcentral.com/articles/10.1186/s12937-022-00769-x](https://nutritionj.biomedcentral.com/articles/10.1186/s12937-022-00769-x)

**Ceylon cinnamon:** Ceylon cinnamon is a type of cinnamon that comes from the bark of an evergreen tree. Sri Lanka provides about 80% of the world's supply.

# About the ingredients...

Cinnamon has long been used for its **antibacterial** properties and is widely known to have **anti-microbial**, anti-spasmodic, carminative, anti-diarrhoea, anti-worm and antiseptic actions. It is rich in compounds that help to **reduce inflammation** and **hamper the growth of bacteria** and other pathogens (such as *Candida albicans*, *Escherichia coli* and *Staphylococcus aureus*).

\*[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9952462/#:~:text=Moreover%2C%20cinnamon%20bark%20oil%20\(C,O.1125%20to%201.8%25%2C%20respectively.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9952462/#:~:text=Moreover%2C%20cinnamon%20bark%20oil%20(C,O.1125%20to%201.8%25%2C%20respectively.)

Studies have shown that cinnamon's naturally potent antimicrobial actions can offer support against **UTIs**, by **preventing bacteria from coating the urinary tract**. As an anti-inflammatory agent, it can also help to ease some of the discomfort associated with UTIs.



Bacteria such as *Staphylococcus aureus*, *Enterococcus faecalis*, *Pseudomonas aeruginosa*, *Proteus mirabilis* and *Klebsiella pneumoniae* cause **UTIs**, and antibiotics are usually relied upon to treat them. However, UTI treatment can be complicated by antibiotic resistance and biofilm formation. Therefore, medicinal plants, such as cinnamon, can be a therapeutic alternative due to the variety of phytochemicals such as polyphenols, saponins, alkaloids, and terpenes present in their extracts that exert antimicrobial activity.

\*[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9952462/#:~:text=Moreover%2C%20cinnamon%20bark%20oil%20\(C,O.1125%20to%201.8%25%2C%20respectively.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9952462/#:~:text=Moreover%2C%20cinnamon%20bark%20oil%20(C,O.1125%20to%201.8%25%2C%20respectively.)  
[https://www.researchgate.net/publication/304488130\\_Cinnamon\\_Oil\\_as\\_A\\_Antimicrobial\\_Agent\\_To\\_Reduce\\_EColi\\_Contamination\\_In\\_Sprouts\\_and\\_Its\\_Effect\\_On\\_Quality\\_Parameters](https://www.researchgate.net/publication/304488130_Cinnamon_Oil_as_A_Antimicrobial_Agent_To_Reduce_EColi_Contamination_In_Sprouts_and_Its_Effect_On_Quality_Parameters)

The potent **antibacterial** activity of cinnamon is due to bioactive phytochemicals, such as **cinnamaldehyde (CAD)**, **cinnamic acid** and **eugenol**.

\*<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4586554/#:~:text=One%20of%20the%20most%20well,degradation%20of%20food%20or%20cosmetics.>

Cinnamon extracts, essential oils and their compounds have all been reported to inhibit bacteria by damaging cell membrane; altering the lipid profile; inhibiting ATPases, cell division, membrane porins, motility, and biofilm formation; and via anti-quorum sensing effects.

\*<https://pubmed.ncbi.nlm.nih.gov/29702210/#:~:text=Results%3A%20Cinnamon%20extracts%2C%20essential%20oils,via%20anti%20quorum%20sensing%20effects.>  
<https://www.medicalnewstoday.com/articles/322458#Breaking-up-biofilms>

**Oregano leaf:** This herb contains a number of active constituents (such as **carvacrol** and **thymol**), which are responsible for its **anti-microbial**, **antiparasitic** and **anti-fungal** actions (including inhibiting the growth of *Candida*).

\*<https://pubmed.ncbi.nlm.nih.gov/33915040/>

In particular in a **UTI context**, oregano oil has been shown to be effective against stationary *E.coli* bacteria in test tube research.



\*<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6152729/>

\*<https://pubmed.ncbi.nlm.nih.gov/23484421/#:~:text=Results%3A%20The%20results%20of%20experiments,oil%20from%20Origanum%20heracleoticum%20L.>

**Zinc glycinate:** Zinc is one of the most difficult minerals to obtain and absorb, yet it is essential for the function of hundreds of the body's enzymatic reactions - everything from DNA synthesis, cell signalling and division, growth and healing, to immune function, reproductive function, vision and more. Even the ability to taste and smell is dependant on adequate zinc levels.

You will find the highest amounts of zinc in foods like shellfish, wheat germ, seeds and tree nuts—but these are all among the most commonly allergenic foods. It is also one of the minerals that has become more challenging to obtain from food, because of intensive farming practices and soil mineral depletion.

The body can also experience increased demands during certain periods, such as during pregnancy, stress, infection, wound healing, and while taking oral contraceptive pills.

Here, supplementation is practically mandatory. But when taken in commonly available supplement forms such as zinc oxide and zinc sulfate, a lot of stomach acid is needed in order to kick-start the process of zinc absorption. Otherwise, nausea and gas can occur. Stress, over-eating and advancing age each negatively impact the body's absorption abilities.

## About the ingredients...

Zinc glycinate consists of zinc bound to 2 molecules of glycine - the smallest amino acid. Attaching these 2 nutrients together results in better absorption of zinc across the intestinal wall and into the bloodstream than any other zinc compound.

[\\*https://pubmed.ncbi.nlm.nih.gov/16684142/#:~:text=Metabolic%20utilization%20accounted%20for%2095,\(phytate\)%20in%20the%20diet](https://pubmed.ncbi.nlm.nih.gov/16684142/#:~:text=Metabolic%20utilization%20accounted%20for%2095,(phytate)%20in%20the%20diet).

Zinc contributes to normal DNA synthesis, normal acid-base metabolism, normal carbohydrate metabolism, normal cognitive function, normal fertility and reproduction, normal macronutrient metabolism, normal metabolism of fatty acids, normal metabolism of vitamin A, normal protein synthesis, the maintenance of normal bones, the maintenance of normal hair, nails and skin, the maintenance of normal testosterone levels in the blood, the maintenance of normal vision, the normal function of the **immune system**, the **protection of cells from oxidative stress** and it has a role in the process of cell division.



**D-Mannose Power Complex is available for re-sale under your own label (or our label) and can be dropshipped by us.**

*\*See our Trade Price List for trade prices, RRP's, discounts, dropshipping rates etc.*