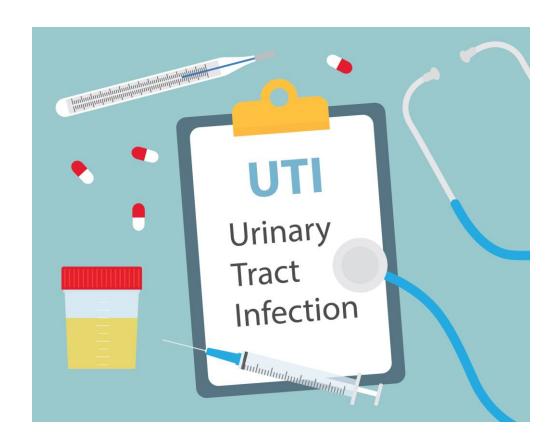


### What we'll cover today...

- What is a urinary tract infection (UTI)?
- Why do they occur?
- How are they typically treated?
- Can they be prevented?
- What are some natural tools we can use to prevent before they happen or treat once they do?



Urinary tract infections (UTIs) are among the most common bacterial infections, affecting millions of people each year—especially women. A UTI can occur anywhere along the urinary tract, but it most commonly affects the bladder (a condition known as **cystitis**). The usual culprit is *Escherichia coli* (*E. coli*), a type of bacteria that normally resides in the intestines but can easily migrate into the urethra and bladder where it doesn't belong.

# 



### Typical Symptoms of UTI

#### **Lorem** ipsum

a. Ut enim ad minim v

Typical symptoms include urinary urgency, burning or discomfort during urination, frequent urination in small amounts, and pelvic discomfort. If not addressed promptly, an infection can ascend to the kidneys and cause more serious illness. While antibiotics are often prescribed, many people seek natural approaches to support **urinary tract health**, whether for prevention, recovery, or ongoing resilience—especially in the face of antibiotic resistance and recurrent



infections.

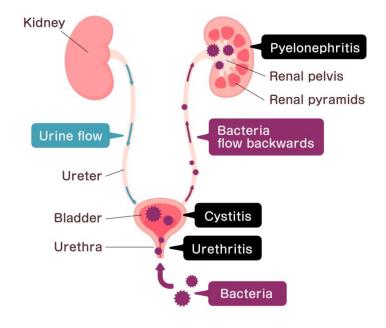




### Why Do UTIs Keep Coming Back?

- Adhesion of bacteria to bladder wall
- Disruption of mucosal immunity (postmenopause, antibiotics, etc.)
- Gut-vagina-bladder microbial connection
- Incomplete eradication or biofilm protection

#### Urinary tract infections



### Bacterial Adhesion: How Infections Take Hold

- Most UTIs begin when bacteria (usually E. coli) cling to the bladder wall
- They use tiny "sticky fingers" called fimbriae or pili to latch onto the urinary lining
- Once attached, they resist being flushed out by urine
- This gives them time to multiply, cause inflammation, and potentially form biofilms
- Adhesion is the first step—block it, and you can often prevent infection entirely





## Disruption of Mucosal Immunity: When Defenses Break Down

- The **urinary tract lining (urothelium)** is protected by a thin, mucosal immune barrier
- It contains antibodies, beneficial flora, antimicrobial peptides, and immune cells
- Factors like antibiotics, hormone decline (e.g., menopause), stress, or chronic inflammation can weaken this defense
- Once the mucosa is compromised, bacteria can adhere more easily, invade tissue, and trigger inflammation
- Rebuilding mucosal immunity is key to preventing recurrence and chronic irritation

#### Natural ways to restore mucosal defense:

- **Probiotics** especially *L. rhamnosus*, *L. reuteri*, *L. gasseri*
- **DHEA vaginal suppositories** support tissue integrity postmenopause
- Slippery elm, marshmallow, cornsilk soothe and nourish mucosal lining
- Glutamine supports epithelial healing (optional addition)

Language Think of mucosal immunity as your bladder's natural armor—when it's intact, invaders can't get in.



### The Gut-Vagina-Bladder Microbial Connection

- The gut, vaginal canal, and bladder are closely linked through microbial ecosystems
- Disruption in one area—often from antibiotics, poor diet, or stress—can affect the others
- Gut dysbiosis can lead to loss of protective Lactobacillus species in the vagina
- This makes it easier for uropathogens (like E. coli) to migrate and cause infection
- Restoring microbial balance in the gut and vagina helps protect the bladder long-term



### **Supportive strategies:**

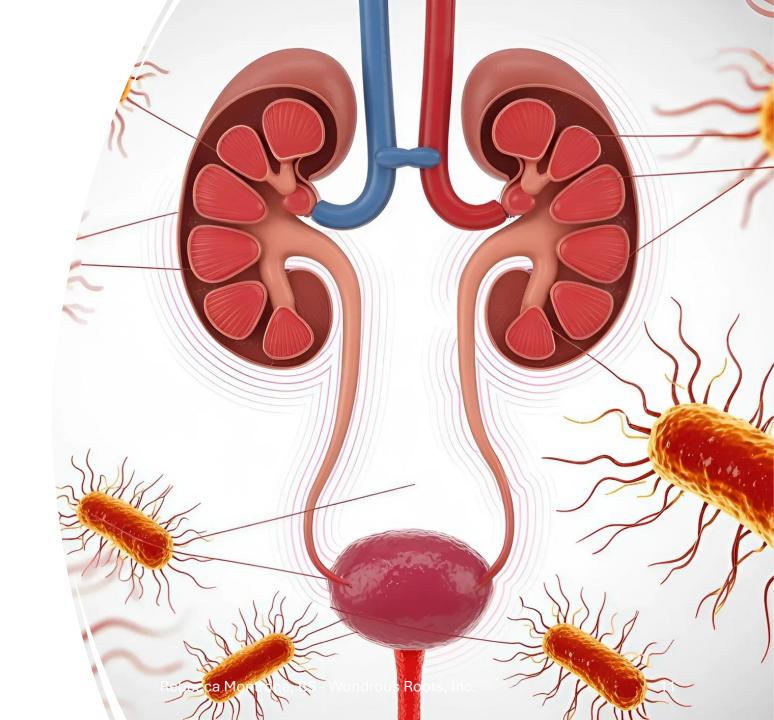
- **Probiotics** L. rhamnosus, L. reuteri, L. gasseri, B. longum
- Saccharomyces boulardii yeast probiotic especially post-antibiotics
- Avoid overuse of antibiotics when possible
- **DHEA + estrogen (local)** support vaginal flora postmenopause

It's all connected—healing the gut helps restore vaginal flora, which protects the bladder.



## Biofilm Protection: Why Some Infections Keep Coming Back

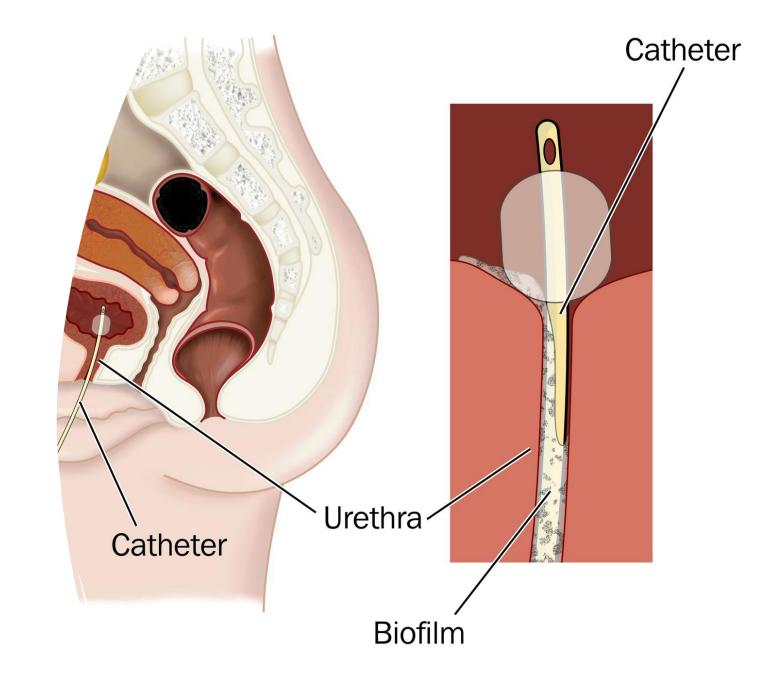
- Biofilms are sticky layers bacteria build to shield themselves from antibiotics, herbs, and immune defenses
- Found in chronic UTIs, catheterassociated infections, and more
- Microbes inside biofilms can be up to 1,000x more resistant to treatment
- Even if symptoms improve, bacteria hiding in biofilms can re-emerge later
- Breaking the biofilm barrier is key to lasting results



### \* Natural biofilm busters include:

- NAC (N-acetylcysteine)
- Ellagic acid
- Berberine
- Cranberry PACs
- Lactoferrin & enzymes

Think of it as breaking down the bacteria's protective hideout so your treatment can actually reach them.





- Standard antibiotic protocols
- Downsides: resistance, recurrence, gut disruption
- Importance of seeking medical care if signs point to something more serious





## D-Mannose: Blocking Bacteria Before They Stick

- D-Mannose: Blocking Bacteria Before They Stick
- D-mannose is a naturally occurring sugar that binds to E. coli fimbriae (the "sticky fingers" they use to attach to the bladder wall)
- Once bound, the bacteria are flushed out in the urine before they can stick and multiply
- It doesn't kill bacteria—it just prevents adhesion, making it a gentle but powerful prevention tool
- Especially effective for UTIs caused by E. coli (the most common cause by far)
- ✓ Well-tolerated, safe for long-term use✓ Won't disrupt gut or vaginal flora like antibiotics can

Think of D-mannose as coating the bladder with a nonstick surface for bacteria.



A simple sugar supplement for

Bladder Cleansing & Healt Urinary Tract Support

### 🥦 Monarda fistulosa (Bee Balm): Subtle but Powerful UTI Support

- Traditionally used as a **urinary tract tonic and energetic protector**, especially in low-dose applications
- **Matthew Wood**, in *The Book of Herbal Wisdom*, documents strong anecdotal success with 3 drops, 3x daily as a preventive for UTIs
- Appears to help **modulate urinary terrain**—even when bacteria aren't present
- Particularly helpful in **sensitive or recurrent cases** where infection patterns persist despite treatment

Works well in **drop-dose form**, suggesting it may act on tissue intelligence or mucosal signaling rather than direct antimicrobial action.

Gentle, subtle, and mysteriously effective—especially for those prone to repeat infections.



## Herbal Blend – Wondrous Roots Urinary Tract Health

- Agrimony herb (Agrimonia eupatoria) Astringent and toning to the mucous membranes; helps tighten and protect irritated bladder tissue.
- Buchu leaf (Agathosma betulina) A traditional urinary antiseptic with a bright, aromatic profile; supports healthy bladder and kidney function.
- Pipsissewa herb (Chimaphila umbellata) Lymphatic stimulant and urinary antiseptic; useful in sluggish or congested urinary conditions.
- **Dandelion leaf (***Taraxacum officinale***)** A mineral-rich diuretic that gently increases urinary flow and supports kidney function.
- **Uva Ursi (***Arctostaphylos uva-ursi***)** Antibacterial and astringent; contains arbutin, which converts to hydroquinone in the urine to combat pathogens.
- Red Clover leaf & blossoms (Trifolium pratense) Lymph-cleansing and mildly estrogenic; supports tissue repair and gentle detoxification.
- Cleavers herb (Galium aparine) Soothing diuretic and lymphatic herb; promotes healthy urinary flow and glandular drainage.
- Juniper berry (Juniperus communis) Antimicrobial and diuretic; supports the clearance of urinary tract
  irritante
- Parsley leaf (Petroselinum crispum) A gentle diuretic rich in chlorophyll and potassium; supports urinary flow and freshens the system.
- Slippery Elm bark (Ulmus rubra) Mucilaginous and soothing; coats inflamed tissues to ease discomfort and promote healing.

10/4/2025



## Wondrous Roots Water Works Tea

- Juniper berry (Juniperus communis) Aromatic urinary antiseptic and diuretic that helps flush irritants from the urinary tract.
- Nettle leaf (*Urtica dioica*) Nutritive and mildly diuretic; supports kidney function and balances inflammation.
- Horsetail (Equisetum arvense) Rich in silica; tones bladder tissue and strengthens connective tissue in the urinary tract.
- Cornsilk (Zea mays) Soothing to inflamed or irritated urinary tissue; classic herbal support for bladder comfort.
- Honeybush (*Cyclopia maculata*) Mildly sweet and antioxidant-rich; adds a pleasant flavor while supporting overall well-being.
- Dandelion leaf (*Taraxacum officinale*) Mineral-rich and diuretic; supports elimination and fluid balance.
- **Pipsissewa (***Chimaphila umbellata***)** Astringent and lymphatic; supports stagnant or sluggish urinary conditions.
- **Uva Ursi (***Arctostaphylos uva-ursi***)** Traditionally used to combat infection and soothe irritated urinary tissues.



#### Topical Hypochlorous Acid Spray: A Simple Barrier Against UTI-Causing Bacteria

- Hypochlorous acid (HOCl) is a naturally occurring compound produced by your immune system
- When used as a gentle topical spray, it helps neutralize microbes like E. coli on the skin without disrupting healthy tissue
- Especially helpful for external use on the genital area—after toileting, sexual activity, or travel
- Shown in research to reduce the risk of bacterial migration into the urethra
- Safe, non-toxic, and well-tolerated
- 🔽 No fragrance, preservatives, or sting
- Great for **daily prevention** in those prone to recurrent UTIs

Think of it as a natural "clean shield" that reduces unwanted bacterial hitchhikers.





#### Wondrous Healthy Skin Spray

ACNE - ECZEMA - ROSACEA
PSORIASIS - EYELID CARE - FOLLICULITIS
CANDIDA RASH - SMOOTHES SKIN
WOUND HEALING- HAND SANITIZER

hypochlorous acid is a weak acid with potent antimicrobial properties, created naturally in our body to combat infections, bacteria, and irritants, Contains 4 fluid ounces.

> Wondrous Roots® www.wondrousroots.org 603-439-2603 103 Roxbury Street STE 300 Keene, NH 03431

## DHEA Vaginal Suppositories: Rebuilding the First Line of Defense

- DHEA Vaginal Suppositories: Rebuilding the First Line of Defense
- After menopause (or even during perimenopause), declining estrogen and DHEA levels can lead to thinning of the vaginal and urethral mucosa
- This makes the tissue more fragile, less acidic, and more susceptible to infections and microtrauma
- Topical DHEA (as a vaginal suppository) helps rebuild healthy, resilient mucosa and supports the return of protective Lactobacillus flora
- Helps prevent recurrent UTIs, especially in postmenopausal women
- ✓ Supports tissue integrity, lubrication, and microbial balance
   ✓ Often more effective (and better tolerated) than topical estrogen

• Restores the natural environment so bacteria can't take hold—and the tissue can defend itself again.





### Microbiome Balance: Protecting the Urinary Tract from the Inside Out

- A healthy balance of **beneficial bacteria** in the gut, vagina, and bladder is essential for preventing infections
- Lactobacillus species help maintain an acidic environment, compete with pathogens, and block bacterial adhesion
- Antibiotics, stress, aging, and poor diet can disrupt this balance, allowing opportunistic microbes (like *E. coli*) to thrive
- **Probiotic supplementation** helps restore key species—especially after antibiotics or in recurrent UTI patterns
- 🔽 Look for strains like L. rhamnosus, L. reuteri, L. gasseri, and B. longum
- Pair with prebiotics (e.g., inulin, FOS) for better colonization
- Safe for daily use, especially during times of increased susceptibility
- When the microbial balance is right, the bladder stays quiet.





#### When and How to Use:

- During antibiotics: Take at least 2 hours apart from antibiotic dose
- After antibiotics: Continue daily for 2–4 weeks
- For prevention: 1 capsule daily with food
- **For recurrent UTIs**: Consider rotating with strains like *L. reuteri* or adding targeted vaginal probiotics (if needed)

### If a UTI is Brewing...

Ramping things up...



### Grapefruit Seed Extract – natural antibiotic

- **D-Mannose** increase frequency
- Grapefruit Seed Extract antimicrobial support
- Urinary Tract Health Formula increased frequency
- Water Works Tea increased intake
- Add-ons (optional): NAC, ellagic acid, berberine if appropriate



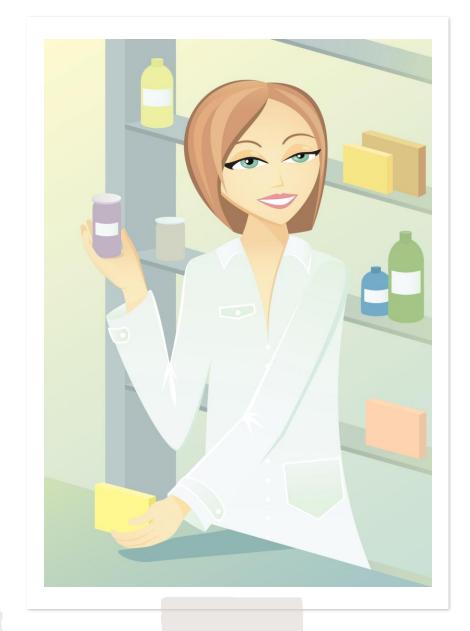
### Grapefruit **Seed Extract: A Natural Antimicrobial** with Potent **UTI Activity**

- GSE has been shown in studies to possess broad-spectrum antimicrobial activity, including against antibiotic-resistant bacteria
- Effective against **Gram-negative organisms** like *E. coli*, *Klebsiella*, and *Proteus*—common culprits in recurrent and resistant UTIs
- Laboratory research has demonstrated GSE's ability to disrupt bacterial membranes and inhibit growth even when standard antibiotics fail
- Also exhibits **antifungal and antiviral** properties—useful when infections are complex or involve mixed organisms
- ▼ Typically used short-term (up to 2 weeks) during active infection
- Works well alongside other natural agents like D-mannose and herbs
- A powerful ally when resistance is a concern
- Think of GSE as nature's backup plan when antibiotics fall short.

### My most typical recommendations?

When someone walks into my shop saying, "I feel like I might be getting a UTI," this is what I will most often recommend:

- D-Mannose (or purchase in powder form)
- Grapefruit Seed Extract
- Urinary Tract Health Formula
- To get at the root of recurrent problems, refer to the other ideas above!



#### In Summary

Urinary tract infections may be common—but they're not inevitable, and they certainly don't have to run the show. With the right combination of smart daily habits and timetested natural UTI support allies, you can reclaim the upper hand and stop playing defense against every twinge, urge, or "oops, not again."

Whether you're preventing your first UTI or finally putting an end to the revolving door of recurrences, remember: your bladder doesn't have to be a victim of bad luck. As I always say, "You have so much more power than you know!"





## For This Info as Blog Post...

Go here! Natural UTI Support: Prevention & Relief

Thanks for joining me! I hope you find this information helpful. Be sure to share if you know someone suffering from the troubling issue of recurrent UTI.

"Go to health!"

Rebecca Roentsch Montrone, BS

Wondrous Roots, Inc.