



# RESTORING BALANCE

*UTI Relief and Prevention for  
Midlife Women*



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# CHAPTER 1

## UNDERSTANDING UTIS IN THE MENOPAUSE JOURNEY

### You're Not Alone

If urinary tract infections seem to appear more often now than they used to, you're far from alone.

More than **half of all women** will experience at least one UTI in their lifetime, and the risk increases sharply during perimenopause and menopause.<sup>1</sup>

Hormonal shifts, thinning tissues, and changes in the body's natural bacteria all play a role.

Many women still feel embarrassed discussing UTIs, assuming they're linked to hygiene or sexual behavior.

**In reality, UTIs are not a sign of being unclean, they're a biological response to normal hormonal and tissue changes.**

Breaking that misconception is the first step toward prevention and comfort.



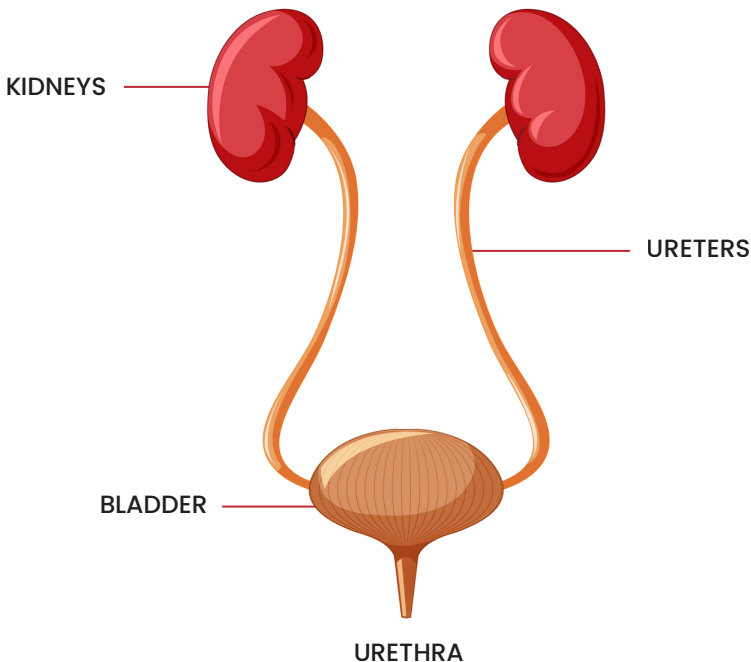


## What Exactly Is a UTI?

A **urinary tract infection (UTI)** occurs when bacteria enter and multiply within the urinary system—the kidneys, ureters, bladder, and urethra.

Under healthy conditions, urine flows through this system sterile and bacteria-free. When microorganisms, most often *Escherichia coli* (*E. coli*) from the intestinal tract, reach the bladder, they can attach to the bladder's lining and cause inflammation.

## THE FEMALE URINARY TRACT



## Why UTIs Become More Common in Midlife

During the reproductive years, estrogen helps keep vaginal and urinary tissues thick, elastic, and well supplied with blood.

As estrogen levels decline, several protective mechanisms weaken:

- **Thinning tissues:** The urethra and bladder lining become more fragile, making it easier for bacteria to attach.
- **Changes in pH:** The vaginal environment becomes less acidic, reducing natural defense against harmful microbes.
- **Loss of “good” bacteria:** Helpful *Lactobacillus* species decrease, allowing *E. coli* to grow more easily.
- **Reduced bladder emptying:** Pelvic floor changes can leave small amounts of urine behind, giving bacteria time to multiply.

These changes explain why UTIs become more frequent during and after menopause—not because of hygiene, but because of biology.

### Let’s Talk About It.

#### UTIs Aren’t “Dirty”

Bacteria live naturally in and around every human body. When hormonal or anatomical factors allow them to reach the bladder, infection can occur even with excellent hygiene.

#### MYTH



UTIs happen when someone isn’t clean enough.

#### FACT



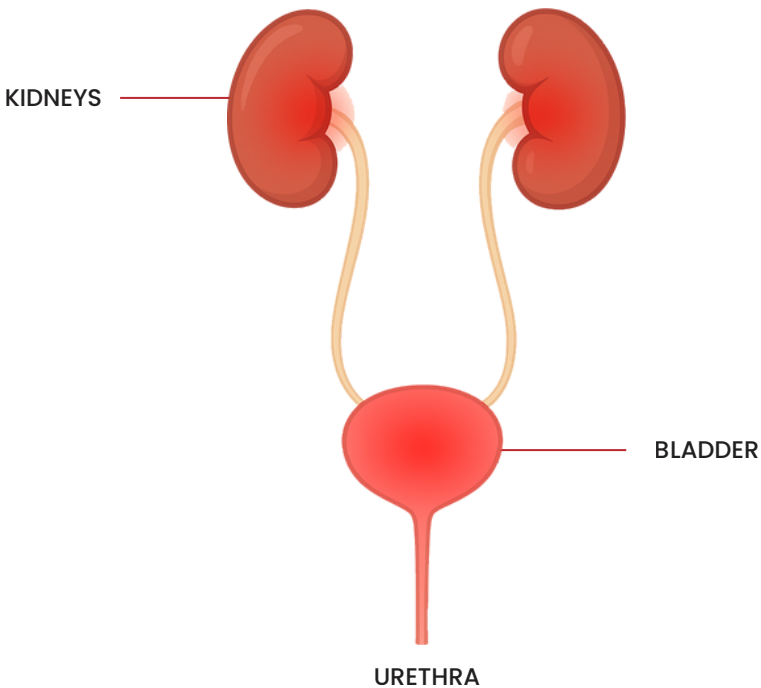
UTIs are common, medical, and biological.

Talking about UTIs openly removes shame and encourages earlier care, preventing more serious infection.

## Common Symptoms to Watch For

- Burning or stinging when urinating
- Frequent urge to urinate (with little output)
- Cloudy or strong-smelling urine
- Pelvic or lower-abdominal pressure
- Feeling tired or mildly feverish
- (If infection reaches the kidneys) back pain, chills, or nausea

## WHERE IT HURTS DURING A UTI



## When to Seek Medical Care

Even a mild UTI deserves attention. If symptoms last more than 48 hours, if fever develops, or if infections keep returning, see a healthcare provider.

Recurrent UTIs—defined as **two or more in six months or three or more in a year**—should be evaluated for hormonal, structural, or microbiome factors. <sup>2</sup>

### Key Takeaways

- UTIs are **very common**. Over 50 % of women experience at least one. <sup>1</sup>
- They are **not caused by poor hygiene** but by normal biological and hormonal changes.
- Declining estrogen affects tissue health and microbial balance, raising risk.
- Early recognition and open conversation prevent complications and stigma.

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### Reference Notes

**1. Foxman B. Epidemiology of Urinary Tract Infections:** *Incidence, Morbidity, and Economic Costs. Am J Med. 2002;113(1A):5S–13S.*

**2. Hooton TM. Clinical Practice:** *Uncomplicated Urinary Tract Infection. N Engl J Med. 2012;366(11):1028–1037.*



## CHAPTER 2

### HORMONES, THE VAGINAL MICROBIOME, AND UTI RISK

#### A Hidden Connection

You've probably heard about hormones and hot flashes. But what most women aren't told is that **those same hormonal changes also affect the urinary tract.**

Estrogen isn't only about reproduction, it helps protect your bladder, urethra, and the delicate balance of bacteria that keep infections away.

As estrogen levels fall in perimenopause and menopause, the tissues of the vagina and urethra begin to change.

They become thinner, less elastic, and less able to maintain the natural acidic environment that defends against bacteria.

These small shifts can make a big difference in how often infections occur.

## The Role of Estrogen in Urinary Health

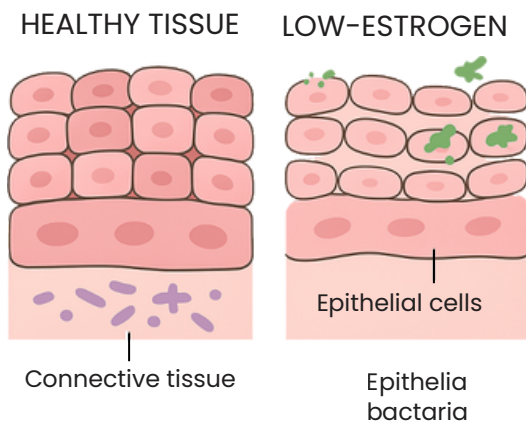
Estrogen is a quiet protector. It supports multiple parts of the urinary system that work together to prevent infection:

- **Thicker, healthier tissue:** Estrogen keeps the lining of the vagina and urethra strong and well-lubricated, creating a physical barrier that's harder for bacteria to cross.
- **Increased blood flow:** Good circulation nourishes the tissues, supporting repair and immune defense.
- **More "good" bacteria:** Estrogen encourages the growth of Lactobacillus — friendly bacteria that keep the vaginal pH slightly acidic, discouraging E. coli and other pathogens.
- **Reduced inflammation:** Balanced estrogen levels help calm irritation and maintain tissue comfort.

When estrogen levels drop, each of these defenses weakens. The result?

Bacteria can reach the bladder more easily and multiply faster once they arrive.

### HOW ESTROGEN PROTECTS THE URINARY TRACT



*Healthy vs. low-estrogen tissue*

## The Vaginal Microbiome: Your Natural Shield

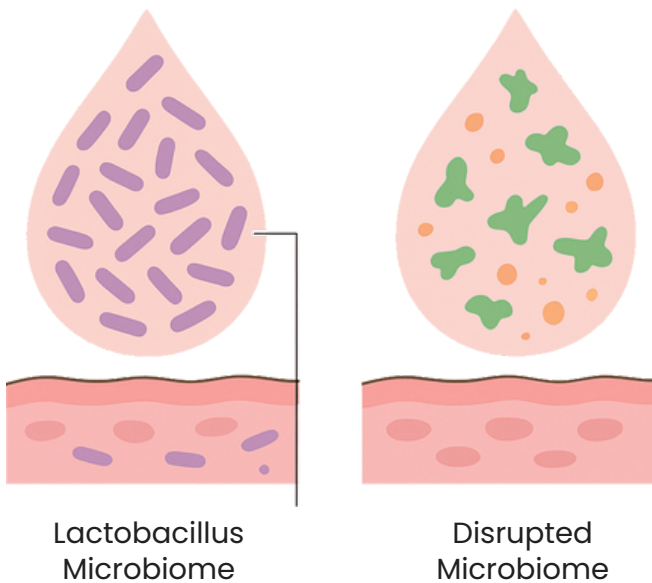
The **vaginal microbiome** is the community of bacteria that live naturally inside the vagina.

In healthy balance, this microbiome is dominated by *Lactobacillus* species — beneficial bacteria that:

- Produce lactic acid to keep the vagina acidic (pH around 3.8–4.5)
- Create hydrogen peroxide that kills harmful microbes
- Form a protective layer on the vaginal walls to block invaders

As estrogen declines, *Lactobacillus* numbers drop and pH rises. This allows *E. coli* and other unwanted bacteria to survive longer and travel upward toward the urethra and bladder.

### HEALTHY vs. DISRUPTED VAGINAL MICROBIOME



*Healthy vs. Disrupted Vaginal Microbiome  
(Lactobacillus dominance vs. imbalance)*

## Vaginal Dryness and Irritation

Many women notice **vaginal dryness, itching, or burning** during menopause, symptoms of a condition known as genitourinary syndrome of menopause (GSM). This isn't only about comfort; it's about protection. When tissues become dry and fragile, tiny tears can occur, providing openings for bacteria to enter.

Topical treatments like **low-dose vaginal estrogen** or **moisturizing gels** can restore comfort and rebuild tissue strength, reducing both dryness and infection risk.

## Other Hormonal and Lifestyle Influences

Beyond estrogen, other changes can subtly affect urinary health during midlife:

- **Progesterone fluctuations** may impact bladder muscle tone and urinary urgency.
- **Stress hormones** (cortisol) can weaken immune function, making it harder for the body to fight bacteria.
- **Reduced hydration.** Many women drink less to avoid frequent urination, actually increases infection risk by concentrating bacteria in the bladder.
- **Sexual activity** can introduce bacteria to the urethra, but this is natural and preventable with good post-intercourse hygiene and hydration.





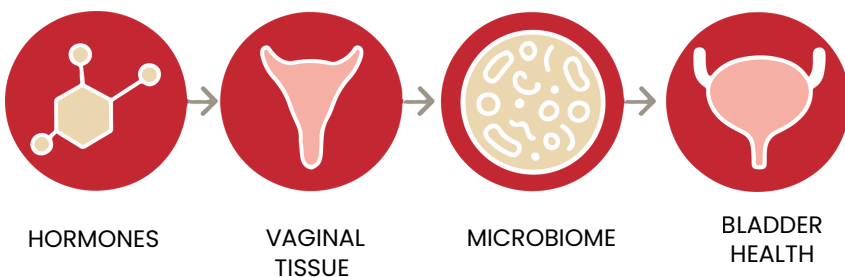
## Can Restoring Balance Help?

Yes, and the science is encouraging.

Several studies have shown that **rebalancing the vaginal microbiome** can significantly reduce recurrent UTIs. Restoring *Lactobacillus* dominance, either through probiotics or gentle vaginal estrogen therapy, helps re-establish the acidic barrier that naturally discourages infection.

A healthy microbiome isn't just about the vagina, it protects the entire urinary system.

## THE CHAIN OF PROTECTION



## The Emotional Side: It's Not “All in Your Head”

Hormonal changes can influence both physical and emotional health.

For some women, recurrent UTIs lead to anxiety about intimacy, fear of discomfort, or frustration with ongoing antibiotics. It's important to remember that **this is not a personal failure or a hygiene problem, it's a physiological process.**

Understanding the hormonal link helps you take back control with compassion and confidence.

### Key Takeaways

- Estrogen supports tissue strength, circulation, and healthy bacteria that protect the bladder.
- During menopause, lower estrogen weakens these defenses, raising the risk of infection.
- A balanced vaginal microbiome, rich in *Lactobacillus* is essential for urinary health.
- Managing dryness, restoring hormones when appropriate, and supporting good bacteria all reduce recurrence.
- Knowledge replaces shame: UTIs are biological, not behavioral.

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### Reference Notes

1. Brubaker L, Wolfe AJ. *The Female Urinary Microbiota, Urinary Health and Common Urinary Disorders.* *Ann Transl Med.* 2017;5(2):34.
2. Stapleton AE. *The Vaginal Microbiota and Urinary Tract Infection.* *Microbiol Spectr.* 2016;4(6).
3. Perrotta C, Aznar M, Mejia R, Albert X, Ng CW. *Oestrogens for Preventing Recurrent Urinary Tract Infection in Postmenopausal Women.* *Cochrane Database Syst Rev.* 2008;CD005131.

# CHAPTER 3

## RECURRENT UTIS: BREAKING THE CYCLE

### When It Feels Like Déjà Vu

You finish your antibiotics, feel better for a week or two... and then it starts again. The same burning, the same urgency, the same frustration.

If this sounds familiar, you're not alone. About **one in four women** who experience a UTI will have another within six months, and nearly half will have at least one recurrence in their lifetime. <sup>1</sup>

It's not your fault, and it's not "just bad luck."

Recurrent UTIs are the result of **bacterial persistence, microbiome imbalance, and tissue vulnerability**, all of which become more common during perimenopause and menopause.

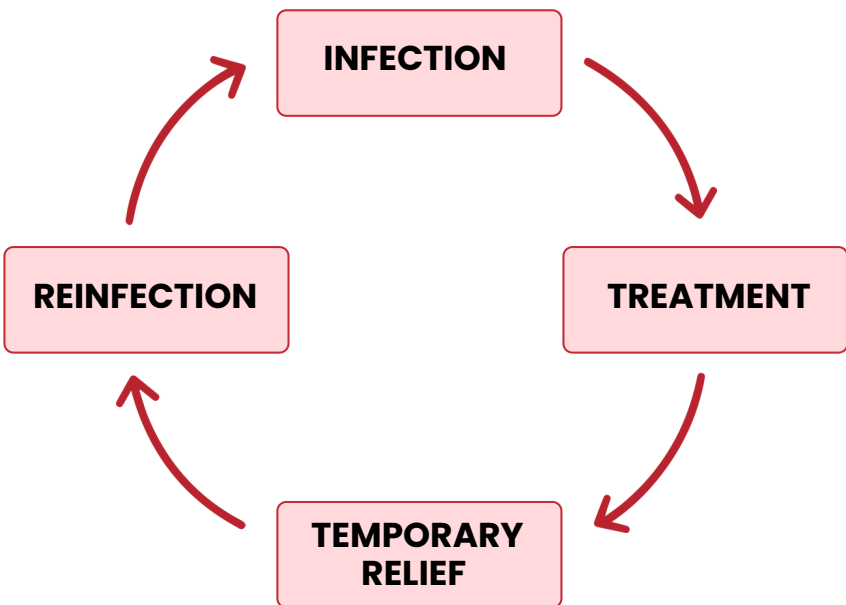


A recurrent urinary tract infection (rUTI) is defined as:

- Two or more infections within six months, or
- Three or more infections within one year. <sup>2</sup>

For many women, these aren't new infections at all, they're flare-ups caused by bacteria that were never fully cleared. In other cases, new bacteria take advantage of an already irritated urinary tract.

## THE CYCLE OF RECURRENCE



## Why Do UTIs Keep Coming Back?

### 1. Bacteria That Hide

Some strains of *E. coli* are experts at survival. They can attach to the bladder wall, slip inside bladder cells, and form protective layers called **biofilms**.

Within these biofilms, bacteria can stay dormant for weeks or months untouched by antibiotics or immune cells, only to reemerge later.

### 2. Weakened Tissue Defenses

Low estrogen levels thin the lining of the bladder and urethra, making it easier for bacteria to attach and harder for the body to flush them out. Even mild inflammation can make these tissues more “sticky,” allowing bacteria to cling.

### 3. Disrupted Microbiome

Antibiotics, while sometimes necessary, can also wipe out protective *Lactobacillus* species in the vagina and bladder. Without these friendly bacteria, *E. coli* and others can recolonize quickly.

### 4. Incomplete Bladder Emptying

Small amounts of leftover urine after voiding can provide a warm, nutrient-rich space for bacteria to multiply. This is more common in postmenopausal women due to subtle pelvic floor or bladder changes.

### 5. Lifestyle and Habits

- **Low hydration** means concentrated urine and fewer opportunities to flush bacteria.
- **Holding urine too long** gives bacteria time to grow.
- **Sexual activity** can push bacteria closer to the urethra, especially when tissues are dry or irritated.

## The Antibiotic Trap

For decades, the standard approach to recurrent UTIs was repeated rounds of antibiotics.

While this often provides temporary relief, over time it can:

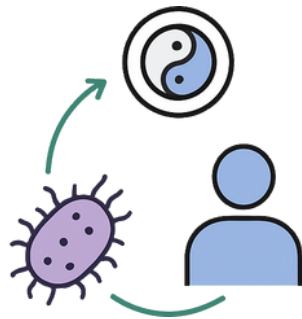
- Disrupt healthy bacteria and worsen microbiome imbalance
- Increase antibiotic resistance
- Lead to side effects like yeast infections or gastrointestinal upset

More physicians are now recognizing that **prevention, not repetition, is the key**. That means addressing the underlying biological factors — not just the bacteria.

## ANTIBIOTIC CYCLE VS. BIOLOGICAL PREVENTION



Short-Term  
Relief



Long-Term  
Relief

## Breaking the Cycle: Restoring Balance

### 1. Support Tissue Health

Topical vaginal estrogen (when medically appropriate) can rebuild thickness, moisture, and resilience in the vaginal and urethral lining, restoring the body's natural barrier.

### 2. Rebuild the Microbiome

Certain strains of *Lactobacillus* bacteria have been shown to support vaginal and urinary health by restoring natural balance.

### 3. Hydrate and Flush Regularly

Drinking enough water (about 1.5–2 liters daily) helps dilute urine and flush bacteria from the bladder. Urinate when you feel the urge, don't "hold it."

### 4. Consider Non-Antibiotic Preventive Options

Certain natural compounds, such as **D-mannose**, **cranberry proanthocyanidins (PACs)**, and **plant-based anti-adhesion agents**, can prevent *E. coli* from clinging to bladder walls.

### 5. Address Triggers Holistically

Stress, poor sleep, and chronic inflammation all weaken immune defense. Gentle exercise, hydration, balanced nutrition, and pelvic health awareness can make a significant difference.



## The Emotional Toll, and Why You're Not to Blame

Women often describe recurrent UTIs as “maddening” or “lonely.” The cycle of discomfort, antibiotics, and worry can lead to anxiety and avoidance of intimacy. **But this is not your fault.**

Understanding what's happening and that it's common, can replace frustration with empowerment. You are not “prone to infections” because you're unclean or unlucky. You're simply experiencing the body's natural response to change, and there are proven ways to manage it.

### Key Takeaways

- Recurrent UTIs are common and treatable, especially during perimenopause and menopause.
- Bacteria can “hide” in bladder cells or biofilms, leading to repeat infections.
- Low estrogen, microbiome imbalance, and incomplete bladder emptying all increase risk.
- Prevention focuses on restoring balance, not just taking antibiotics.
- You're not alone. Knowledge and gentle prevention can truly break the cycle.

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### Reference Notes

**1.Foxman B. Epidemiology of Urinary Tract Infections:** *Incidence, Morbidity, and Economic Costs.* *Am J Med.* 2002;113(1A):5S–13S.

**2.Hooton TM. Clinical Practice:** *Uncomplicated Urinary Tract Infection.* *N Engl J Med.* 2012;366(11):1028–1037.

**3.Beerepoot MAJ, ter Riet G, Nys S, van der Walten B, de Borgie CAJM, de Reijke TM, et al. Cranberries vs Antibiotics to Prevent Urinary Tract Infections:** *A Randomized Double-Blind Noninferiority Trial in Premenopausal Women.* *Arch Intern Med.* 2011;171(14):1270–1278.

**4.Falagas ME, Betsi GI, Tokas T, Athanasiou S. Probiotics for Prevention of Recurrent Urinary Tract Infections in Women:** *A Review of the Evidence from Microbiological and Clinical Studies.* *Drugs.* 2006;66(9):1253–1261.



# CHAPTER 4

## LIFESTYLE AND SELF-CARE FOR URINARY HEALTH

### Small Habits, Big Impact

You can't control your hormones, but you can support your body through small, consistent habits that make a real difference. UTI prevention isn't just about avoiding infection, it's about creating the right environment for balance, comfort, and confidence.

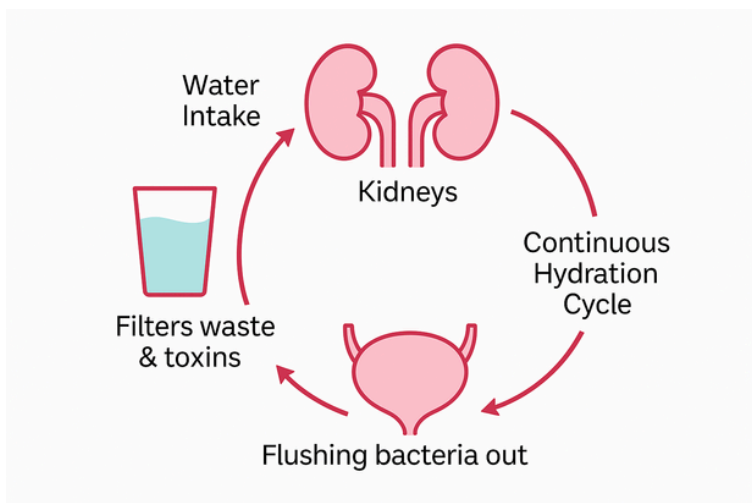
Many women find that once they understand how everyday choices affect bladder and vaginal health, they can finally stop feeling anxious and start feeling empowered.

### Hydration: The Simplest Protection

Your bladder is like a self-cleaning system, it flushes bacteria each time you urinate. But that only works when there's enough water flowing through it.

- Aim for about **1.5 to 2 liters (6–8 cups)** of water per day, or more in hot weather or if you're active.
- Spread your intake throughout the day rather than drinking large amounts at once.
- Herbal teas or diluted fruit-infused water count too.
- If you often avoid drinking to reduce trips to the bathroom, remember: concentrated urine can actually irritate your bladder and increase UTI risk.

## HYDRATION AND BLADDER FLUSH CYCLE



### Bathroom Habits That Support Health

- **Don't hold your urine.** Urinating when you feel the urge prevents bacteria from multiplying in stagnant urine.
- **Empty your bladder completely.** Take a moment after you finish, gentle relaxation or leaning forward slightly can help.
- **Wipe front to back.** This simple habit minimizes the chance of transferring bacteria from the rectal area to the urethra.
- **Urinate after sex.** This helps flush out any bacteria that may have entered the urethra during intercourse.
- **Avoid perfumed wipes or harsh soaps.** The vaginal area cleans itself naturally; fragranced products can disrupt healthy bacteria.

## Clothing and Comfort

What you wear can influence your comfort and moisture balance:

- Choose **breathable cotton underwear** or moisture-wicking fabrics.
- Avoid tight jeans or synthetic leggings for long periods.
- Change out of wet swimsuits or workout clothes promptly.

A dry, breathable environment discourages bacterial growth and helps maintain the body's natural pH balance.

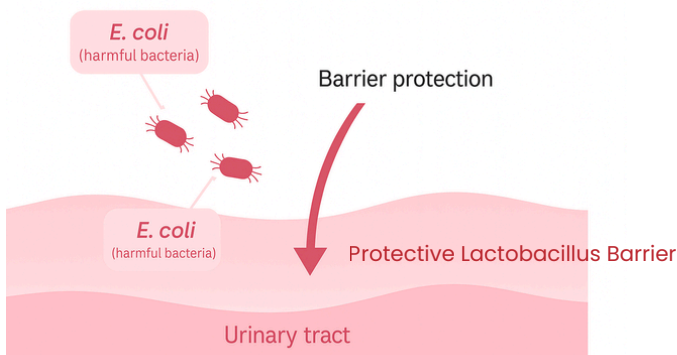
## Nourishing Your Microbiome

Your microbiome, the community of bacteria that live in your gut, vagina, and urinary tract, is central to your defenses.

You can support it naturally by:

- Eating a balanced diet rich in plant fibers (fruits, vegetables, whole grains).
- Including fermented foods such as yogurt, kefir, or sauerkraut, which provide beneficial bacteria.
- Considering a probiotic supplement formulated for women's health, after discussing it with your healthcare provider.

Probiotics help repopulate the body with friendly bacteria that create a protective acidic barrier, an especially important defense during menopause.



## Managing Vaginal Dryness and Irritation

Dryness is one of the most common and least discussed effects of menopause.

It's not just uncomfortable; it can also make tissues more vulnerable to infection.

- 🚫 **Use vaginal moisturizers or lubricants** regularly, not just during intimacy.
- 🚫 **Avoid douches or antiseptic washes**, which strip natural moisture and healthy bacteria.
- 🚫 **Ask your healthcare provider** whether a low-dose vaginal estrogen cream or tablet might help restore tissue health and reduce UTI risk.

Restoring hydration to these tissues isn't cosmetic — it's protective.

## Sexual Health and Communication

Sexual intimacy shouldn't be a source of worry.

If UTIs seem to appear after intercourse:

- 🚫 **Stay hydrated** before and after.
- 🚫 **Empty your bladder** soon afterward.
- 🚫 **Use gentle, water-based lubricants** to minimize friction and tissue irritation.
- 🚫 **Avoid spermicides** if you're prone to infections, they can disrupt vaginal bacteria.

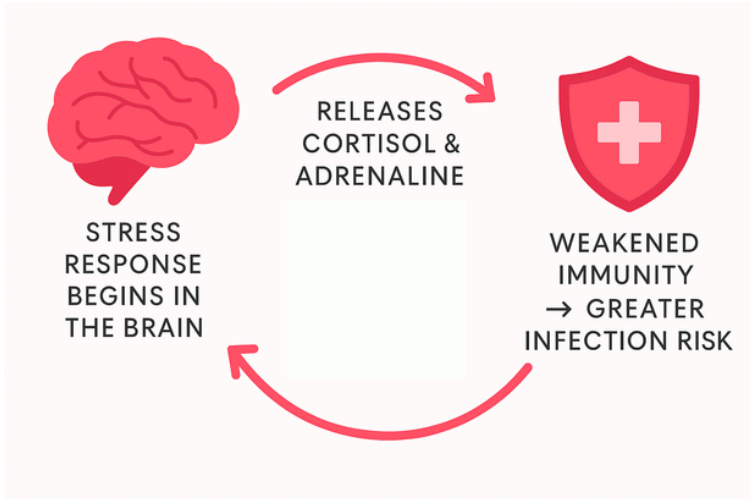
Most importantly, talk openly with your partner and healthcare provider. UTIs are **not a sign of poor hygiene or "too much activity"**, they're simply a response to biological change.

## Stress, Sleep, and Immunity

Your immune system plays a direct role in keeping the urinary tract balanced.

Chronic stress, lack of sleep, and fatigue can all weaken immune defenses, making it harder for your body to fight off bacteria.

- Prioritize sleep — aim for 7–8 hours per night.
- Try stress-reduction techniques like deep breathing, walking, yoga, or journaling.
- Gentle daily movement helps improve circulation and hormonal balance.



## Creating a Daily Routine for Urinary Wellness

Here's how small, consistent actions can add up:

### ☉ Morning:

- Start your day with a full glass of water.
- Empty your bladder before leaving home.

### ☉ Midday:

- Drink steadily through the day; don't wait until you're thirsty.
- Choose balanced meals with fiber and vegetables.

### ☉ Evening:

- Stay hydrated but reduce fluids an hour before bed if nighttime trips are bothersome.
- Use a vaginal moisturizer or gentle cleanser if part of your routine.
- Before sleep, take a few deep breaths — relaxation helps your bladder and immune system function better.

## Key Takeaways

- ☉ Everyday habits can dramatically reduce the risk of UTIs.
- ☉ Hydration, hygiene, and microbiome balance work together to protect your bladder.
- ☉ Vaginal dryness is normal — and treatable.
- ☉ Open conversations about intimacy and discomfort reduce stigma and improve outcomes.
- ☉ Caring for your urinary health is part of caring for your overall well-being.

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## Reference Notes

1. Hooton TM. **Clinical Practice:** *Uncomplicated Urinary Tract Infection*. *N Engl J Med*. 2012;366(11):1028–1037.

2. Perrotta C, et al. *Oestrogens for Preventing Recurrent Urinary Tract Infection in Postmenopausal Women*. *Cochrane Database Syst Rev*. 2008;CD005131.

3. Anger J, Lee U, Ackerman AL, et al. *Recurrent Uncomplicated Urinary Tract Infections in Women: AUA/CUA/SUFU Guideline*. *J Urol*. 2019;202(2):282–289.

# CHAPTER 5

## TARGETED PREVENTION: FEMISTINA PLUS

### Rethinking Prevention

Recurrent UTIs often happen not because of poor hygiene or “bad luck,” but because the body’s natural protective systems have changed especially during and after menopause.

As estrogen levels fall, the tissues of the vagina and urinary tract become thinner, less acidic, and more vulnerable to bacterial adhesion. While antibiotics can relieve symptoms by clearing active bacteria, they often miss those that hide inside bladder tissue or biofilms. These “hidden” bacteria can trigger new infections later, especially when the microbiome has been weakened by repeated antibiotic use.

That’s why many healthcare professionals now emphasize **non-antibiotic prevention**.

Femistina Plus was designed with this modern understanding in mind: to support the urinary system’s natural rhythm and resilience, using clinically informed plant-based and biological ingredients.

### The Femistina Plus Approach

The urinary tract functions differently by day and night.

- Daytime: frequent urination and hydration provide natural flushing opportunities.
- Nighttime: slower urine flow and longer retention increase the chance for bacterial adhesion and inflammation.

Femistina Plus aligns with these cycles to help prevent recurrence and maintain comfort naturally.



## Daytime Capsule:

### Blocking Bacterial Adhesion

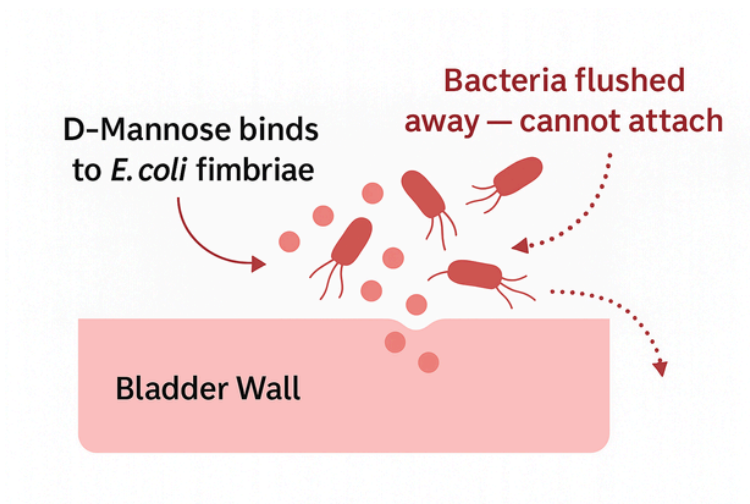
The **daytime capsule** contains **D-Mannose**, a simple natural sugar molecule that helps prevent bacteria, especially *E. coli*, from sticking to the bladder lining.

Instead of killing bacteria (like antibiotics do), D-Mannose works mechanically, binding to *E. coli*'s tiny "hooks" (fimbriae) so that the bacteria are not able to attached itself to the bladder and are carried out naturally the next time you urinate.

This gentle, non-antibiotic mechanism makes it suitable for daily preventive use and compatible with hydration habits during the day.

INGREDIENT	PRIMARY ACTION	MECHANISM OF BENEFIT
D-Mannose	Anti-adhesion agent	D-Mannose binds to the <b>FimH</b> adhesins on <i>E. coli</i> fimbriae, the structures bacteria use to attach to bladder cells. Once bound, the bacteria are flushed out with urine instead of sticking to the bladder lining.

## HOW D-MANNOSE WORKS AGAINST BACTERIAL ADHESION



## Nighttime Capsule:

### Cleansing and Restoring Balance

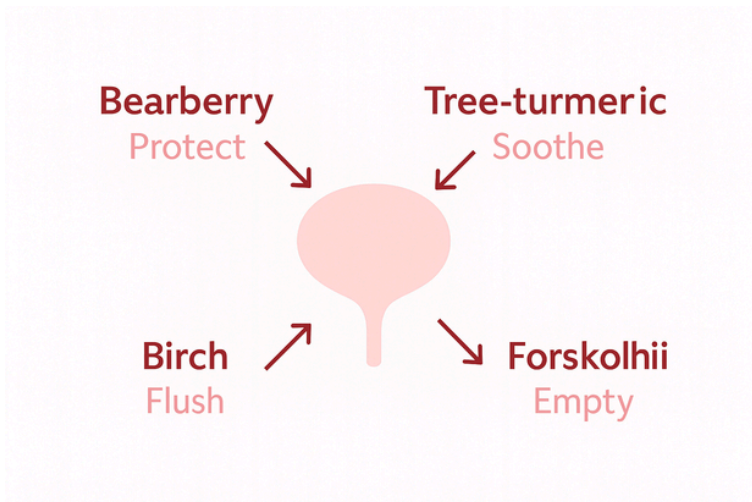
The **nighttime capsule** provides a botanical complex designed to protect and soothe the urinary tract while you rest.

Because urine output is slower at night, this combination helps maintain a balanced environment and supports complete bladder emptying.

INGREDIENT	PRIMARY ACTION	MECHANISM OF BENEFIT
<b>Bearberry</b> ( <i>Arctostaphylos uva-ursi</i> )	Natural antimicrobial	Contains <b>arbutin</b> , a compound converted into <b>hydroquinone</b> in the urinary tract, which exerts direct antibacterial effects particularly against <i>E. coli</i> and <i>Proteus</i> species. It helps sanitize the bladder and prevent bacterial overgrowth.
<b>Tree-turmeric</b> ( <i>Berberis aristata</i> )	Antimicrobial and anti-inflammatory	Rich in <b>berberine</b> , a natural alkaloid shown to inhibit bacterial replication and biofilm formation. Berberine also reduces bladder wall inflammation by modulating inflammatory cytokines.
<b>Birch</b> ( <i>Betula pendula</i> )	Diuretic and detoxifying	Promotes urine production and helps “flush” bacteria and inflammatory byproducts from the bladder and urethra. Its flavonoids and saponins support kidney filtration and urinary clearance.
<b>Forskohlii</b> ( <i>Plectranthus barbatus</i> )	Urinary tract and smooth muscle support	Activates <b>adenylate cyclase</b> , increasing cyclic AMP (cAMP), which enhances smooth muscle relaxation and improves urinary flow. This helps ensure complete bladder emptying, reducing residual urine where bacteria can multiply.

## MECHANISMS OF NIGHTTIME CAPSULE

CLEARING AND PROTECTING THE URINARY TRACT



### Why the 24-Hour Cycle Matters

- **Daytime:** D-Mannose acts as the first line of defense, preventing bacteria from sticking while the urinary system is active.
- **Nighttime:** The botanical extracts calm, cleanse, and support tissue comfort while urine flow is slower.

Morning urination effectively clears detached bacteria

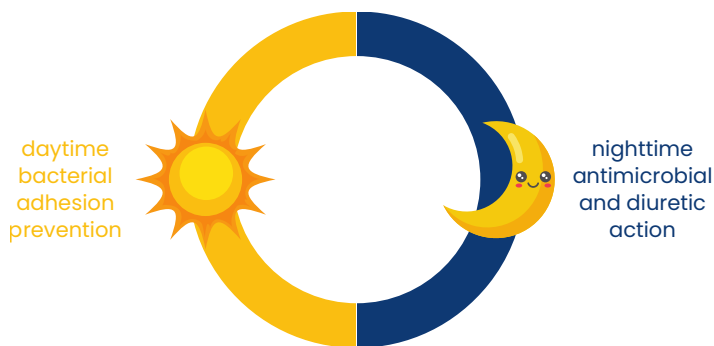
Together, they form a **continuous, synergistic cycle**:

- Daytime prevention through D-Mannose anti-adhesion
- Nighttime protection through antimicrobial and anti-inflammatory balance

## Day–Night Synergy: A 24-Hour Defense Strategy

TIME	BODY'S NATURAL ACTIVITY	FEMISTINA PLUS FUNCTION
Daytime	Higher hydration and urine flow	Reduces inflammation, increases urination, promotes bladder clearance, and delivers plant-based antimicrobial activity.
Nighttime	Lower urine output, bacterial adhesion risk increases	Maintains anti-adhesion protection with D-Mannose to prevent bacterial binding and colonization overnight.

## 24-HOUR PROTECTION CYCLE OF FEMISTINA PLUS



## How Femistina Plus Supports Women in Midlife

During menopause, thinning tissues, altered pH, and reduced *Lactobacillus* levels make infections more likely.

Femistina Plus provides a balanced, non-antibiotic approach that:

- Protects bladder cells from bacterial adhesion
- Promotes natural cleansing and comfort overnight
- Supports tissue balance and reduces irritation
- Complements lifestyle, hydration, and probiotic care

This gentle yet comprehensive approach helps women maintain comfort and confidence without antibiotic dependency.

## Scientific Evidence Supporting Key Components

### ● **Bearberry:**

Demonstrated antibacterial effects against *E. coli*, *Proteus*, and *Staphylococcus* species in multiple studies; useful in mild recurrent cystitis (Blumenthal M, *Herbal Medicine: Expanded Commission E Monographs*, 2000).

### ● **Tree-tumeric:**

Inhibits bacterial adhesion and disrupts biofilms while reducing pro-inflammatory cytokines (Kuo et al., *Phytomedicine*, 2016).

### ● **Birch:**

Known for its mild diuretic and anti-inflammatory activity, helping reduce urinary stasis and irritation (European Medicines Agency, *Community Herbal Monograph on *Betula pendula**, 2012).

### ● **Forskohlii:**

Improves smooth muscle tone in the bladder and ureters via cAMP signaling, potentially aiding urinary clearance (Seamon KB et al., *J Cyclic Nucleotide Res.*, 1981).

### ● **D-Mannose:**

Proven to reduce recurrence rates comparable to antibiotic prophylaxis without side effects (Kranjčec et al., *World J Urol.*, 2014).

## Summary: Why Femistina Plus Is Different

CHALLENGE IN RECURRENT UTI	FEMISTINA PLUS SOLUTION
Bacterial persistence and biofilm formation	Daytime antimicrobial action from uva-ursi and berberine
Inflammation and bladder irritation	Anti-inflammatory and soothing effects of plant compounds
Incomplete bladder emptying	Forskolin supports full urinary evacuation
Bacterial adhesion overnight	D-Mannose blocks binding during low-flow nighttime hours
Continuous 24-hour risk cycle	Dual-phase dosing maintains around-the-clock protection

## Safe, Gentle, and Evidence-Based

Femistina Plus works by **supporting your body's natural urinary defenses**, not by eliminating bacteria through antibiotics.

It helps create an environment that is less welcoming to infection — restoring comfort and confidence safely over time.

This approach is particularly **suited for women in perimenopause and menopause**, when tissue support and microbial balance are key.

## References

- **Blumenthal M. Herbal Medicine:** *Expanded Commission E Monographs. Integrative Medicine Communications;* 2000.
- **Kuo CL et al.** Berberine Enhances the Activity of Antibiotics Against Uropathogenic *Escherichia coli*. *Phytomedicine.* 2016;23(5):578–584.
- **European Medicines Agency (EMA).** *Community Herbal Monograph on Betula pendula Roth, Folium.* 2012.
- **Seamon KB, Daly JW, Metzger H. Forskolin:** *Unique Diterpene Activator of Adenylate Cyclase in Membranes and Intact Cells.* *J Cyclic Nucleotide Res.* 1981;7(4):201–224.
- **Kranjčec B, Papeš D, Altarac S.** *D-Mannose Powder for Prophylaxis of Recurrent Urinary Tract Infections in Women.* *World J Urol.* 2014;32(1):79–84.

# BREAK THE CYCLE. FIND RELIEF.



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