

# Urinary Tract Infection



## Frequently asked questions

*For community healthcare providers*

### What is a urinary tract infection (UTI)?

A UTI is an infection in the urinary system (most often a bladder infection, also called **cystitis**)  
Women are at greater risk of developing a UTI than men, due to a shorter urethra.

Signs and symptoms of a UTI:

- In general, a UTI is likely in people *without a urinary catheter* if they have new onset of urinary symptoms
- For aged care residents, **acute dysuria** (stinging or burning sensation when they pass urine) is the most specific urinary symptom indicating a UTI
- For those without dysuria, general symptoms (fever, altered mental state) should be accompanied by at least one other urinary symptom (frequency, new onset incontinence) to make a confident diagnosis of a UTI

*Cloudy or malodorous urine is not a reliable sign of a UTI*

*Change in mental status alone is often used to incorrectly label a person as having a UTI*

### How is a UTI diagnosis confirmed?

A UTI diagnosis is confirmed if:

- New urinary signs and symptoms are present **and**
- The urine culture report is indicative of an infection

A midstream urine sample is sent to the laboratory for microscopy, culture and susceptibility testing. Laboratory confirmation usually requires elevated white cells in the urine and a high urinary bacterial colony count of a known bacterial pathogen:

- Pure growth of a single bacteria favours infection, most UTIs are due to *Escherichia coli*
- Mixed cultures of skin flora (e.g.; *Staphylococcus*) suggests contamination, not a UTI

*Dipstick urinalysis is **not recommended** as a routine screening tool in asymptomatic people*

*Urinary catheters are reliably associated with increased white cells and bacteria in urine samples and **do not** always signify a UTI*

### What is asymptomatic bacteriuria?

Asymptomatic bacteriuria is the presence of bacteria in the urine, with or without elevated white cells, in a person **without** signs or symptoms of a UTI.

*Asymptomatic bacteriuria is common in older people, antibiotic therapy is **not required***

### When might antibiotic therapy be prescribed?

Antibiotic therapy **may** be prescribed when a UTI has been **confirmed**:

- Always ensure that dehydration is **corrected** – this can help alleviate symptoms and may assist in prevention of recurrences

## What is a recurrent UTI?

Two or more **confirmed** UTIs within six months:

- Before labelling an infection as 'recurrent', therapy for the first UTI should be reviewed to ensure it was appropriate based on the results of culture and susceptibility testing
- Recurrent UTIs may be associated with incomplete bladder emptying and any voiding dysfunction should be investigated and managed
- **In women**, recurrent UTIs may be associated with frequent soiling of the perineum or atrophic vaginitis (thinning, drying, inflammation of the vaginal walls due to low estrogen levels) and management of these should be addressed
- **In men**, recurrent UTIs may be due to bacterial prostatitis and should be further investigated and treated

## When should prophylactic antibiotic therapy be considered to prevent recurrent UTIs?

The decision to start antibiotics as prophylaxis for UTI **should not** be taken lightly.

Prophylactic antibiotic therapy **might** be considered when:

- The resident has been diagnosed with **confirmed** recurrent UTIs
- Possible underlying risk factors for the recurrent UTIs have been managed
- Non-antibiotic strategies to prevent UTIs have been trialled
  - including correction of dehydration, improved perineal hygiene or intravaginal oestrogen for atrophic vaginitis
- Advanced care plans have been checked to ensure therapy is consistent with the expressed goals of the resident
- The benefit of the therapy **outweighs** any potential adverse effects or harm, which can significantly affect a resident's quality of life
  - long term antibiotics can cause nausea, diarrhoea, or candidiasis '**thrush**'
  - potential adverse effects include:
    - hypersensitivity, e.g.; rash
    - toxicity, e.g.; pulmonary fibrosis, hepatotoxicity
    - drug interactions
    - *Clostridioides difficile* infection
    - colonisation or infection with bacteria carrying antibiotic resistance

*Cranberry products **are not** recommended for the prevention of UTIs*

*The evidence for methenamine hippurate to prevent UTIs is **poor and inconsistent***

## When should prophylactic antibiotic therapy for UTIs be reassessed?

Long term prophylactic antibiotic therapy should be reassessed **every** 3-6 months:

- Factors that influenced the initial prescribing of therapy should be **reconsidered**
- For many residents in aged care, a trial **off prophylaxis** at this time is reasonable to determine whether it is still necessary
  - a trial off antibiotic prophylaxis **may not** be suitable for people with an anatomical predisposition or complex medical comorbidities

### References:

- Australian Medicines Handbook: Aged Care Companion. Australian Medicines Handbook Pty Ltd; Adelaide 2019.
- Antibiotic Expert Groups. Therapeutic Guidelines: Antibiotic, Version 16. Therapeutic Guidelines Limited; Melbourne 2019.

This Fact Sheet is intended as a guide only and does not equate to expert opinion. Our recommendations are based on review of the current literature and expert consensus. Interpretation of recommendations should always be taken in context with local variations, the person's current condition and formal clinical review.