



Urinary alkalinisers

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Introduction

A urinary tract infection (UTI) may occur at different points in the urinary tract, including the bladder, kidneys, ureters and urethra.¹⁻³ UTIs are common, particularly in women and older people. Around one in two women and one in 20 men will get a UTI in their lifetime.²

Causes

UTIs are usually caused by bacteria.² Bacteria do not normally live in the urinary tract, but they do live close to the urethra in women, and men who are not circumcised. Urinary tract infections may occur when these bacteria get into the urethra and travel up into the urinary tract.³

Some people are at greater risk than others of developing UTIs.²

Factors that increase the risk of developing a UTI include:³

- Having sex frequently or having a new sex partner
- People with diabetes—especially in the case of uncontrolled diabetes as the urine may contain more sugar which feeds the bacteria and encourages them to grow
- Having a urinary catheter – this can introduce bacteria directly into the bladder
- Menopause
- Having a condition that prevents the bladder from emptying such as bladder or kidney stones, an enlarged prostate or pregnancy
- Having a bladder or kidney infection in the past 12 months
- A genetic predisposition
- Surgery or other procedures involving the urinary tract

- Using irritants such as certain soaps – the chemical may irritate the urethra and/or bladder

Symptoms

The symptoms of a UTI may be mild to severe.⁴

Table 1. Common signs and symptoms of a UTI

The typical signs and symptoms of a bladder infection may include^{3,6}:

- A stinging or burning sensation when passing urine
- The need to pass urine more often, even if very little or no urine is passed
- Pain or tenderness in the lower back or lower abdomen
- Cloudy or dark-coloured urine
- Blood in the urine
- Strong-smelling urine
- Fever
- Feeling generally unwell

Urinary alkalinisation

Over-the-counter (OTC) products are available for the treatment of mild symptoms of UTIs or for use until patients can consult their doctor.⁵

The acidic urine produced as a result of the UTI is thought to be responsible for pain during urination, or difficulty urinating. Alkalinisation of the urine may therefore provide symptomatic relief.⁵ The pH of the urine may be increased by administration of alkalinising salts such as bicarbonate and citrate salts. These agents may be helpful to relieve painful urination (dysuria).⁷

While easing discomfort, alkalinising the urine will not produce an antibacterial effect, and it is important to tell patients that if symptoms have not improved within one to two days, to see their doctor.⁵

Special precautions

Urinary alkalinisers should be used with caution in patients with high blood pressure (hypertension) or heart failure, as some of these agents have a high sodium (salt) content.⁷

Sodium citrate should not be recommended for hypertensive patients, anyone with heart disease or for pregnant women.⁵

Caution is also advised in patients with kidney problems. Patients with kidney disease should speak to the doctor before using these preparations.⁷

Alkalinisation is also not suitable when certain urinary antiseptics and antimicrobials are used. For example, the activity of the fluoroquinolone class of antimicrobials as well as nitrofurantoin (a urinary antiseptic) is enhanced in acidic urine (pH 5.5 or below).⁷

Conclusion

Urinary alkalinisers are commonly purchased OTC and widely used for the symptomatic treatment of uncomplicated UTIs. The pharmacist's assistant should be aware of the signs and symptoms of urinary tract infections and refer patients appropriately.

References

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