

## hl-Cran<sup>®</sup> - Supplement

### Urinary Tract Infection (UTI):

A UTI is a microbial infection that affects any part of the urinary tract. In the UK, it is estimated that one in three women will have a UTI by the time they are 24 years of age and half of all women will have at least one UTI during their lifetime <sup>(1)</sup> with many of these patients experiencing a re-occurrence. Although UTIs are less common in men it is still estimated that every year in the UK, in otherwise healthy men, only one in every 2,000 will develop a UTI<sup>(1)</sup>. Despite treatment with antibiotics recurrence is common causing frustration in the patient and the potential for developing antimicrobial resistance alongside potential side effects such as fungal super infections (thrush) and gastrointestinal infections. The symptoms have a major impact on patient quality of life.

A UTI is characterised by the sudden onset of frequent painful and urgent urination, haematuria or supra-pubic pain not associated with passing urine. The most common type of UTI is an infection of the lower urinary tract known as cystitis, which can have a severe impact on a patient's quality of life.

An infection occurs when microbes are present in urine and begin to colonise the urinary tract. The infection usually starts at the opening of the urethra where urine leaves the body and moves upward into the urinary tract. If the infectious agents reach the kidney they can cause a kidney infection, which in turn can become a serious condition if not treated promptly.

UTIs are common in people who:

- Suffer from conditions blocking the urinary tract (kidney stones)
- Are afflicted with medical conditions that cause incomplete bladder emptying (spinal chord injury and bladder decompression after menopause)
- Have suppressed immune systems (AIDs, diabetes or taking immunosuppressants)
- Are sexually active women or using a diaphragm for birth control
- Are pregnant
- Have an enlarged prostate (i.e prostatitis)
- Are using catheters

### hl-Cran<sup>®</sup>:

Is a new potent combination of nutrients and herbal extracts formulated by The Urology Company Ltd to improve to urinary tract health. Each of the following components was specifically selected for it's role in regulating urinary tract health:

**Cranberry Extract:** Cranberries are fruits containing antioxidants, fibre and vitamins. In particular berries of the *Vaccinium* species contain tannins called proanthocyanidins (PACs) which have antioxidant, anti-adhesion

UTIs are extremely prevalent in women with many patients suffering re-occurrences

If UTIs are left untreated they could lead to kidney infections

There are many populations which are at risk from UTIs

Cranberry extract can help prevent the growth of harmful microbes in the bladder

and other medicinal properties. These cranberry PACs metabolites bind to certain *E.coli*, a common cause of UTI's, in the urinary tract. This prevents the bacteria from adhering to the bladder wall (2) and then they are flushed out in the urine instead of causing an infection.

*Dietary consumption of cranberries has long been associated with the maintenance of urinary tract health. A number of clinical studies have demonstrated a positive link between cranberry consumption and prevention of urinary tract infections (3-6).*

**Hibiscus Extract:** *Hibiscus sabdariffa* is an edible plant and contains a wide range of constituents that are thought to prevent *E.Coli* from adhering to the urinary tract and bladder wall. Both the flower and the calyx of the plant contain an abundance of polyphenols which have known antioxidant properties. These chemical substances include flavanoids, sambubiosides and proanthocyanidins. One in particular, gossypetin, has been identified as a distinct and potent antimicrobial compound with powerful effects(7)

*A recent clinical study has reported that the use of Hibiscus sabdariffa extract has shown a beneficial effect in the reduction of UTIs in women (8)*



### Nutritional Information:

The combination of cranberry extract at this strength with hibiscus extract, if used regularly, should provide maximum benefit in reducing UTI's.

	Av. Per	%RDA
		capsule
Cranberry extract (50% PAC)	72mg <sup>ψ</sup>	-
Hibiscus extract	200mg	-

\*RDA – Recommended Daily Allowance

<sup>ψ</sup>:36 mg proanthocyanidins, equivalent to ~10g fresh Cranberries

mg – milligram

**Recommended dose:** 1 capsule per day

### References:

- 1 NHS Website: <http://www.nhs.uk/conditions/Urinary-tract-infection-adults/Pages/Introduction.aspx>
- 2 Howell B (2003). Cranberry Proanthocyanidins and the Maintenance of Urinary Tract Health. Clin Rev in Food Sci and Nutr, 42: 273-278
- 3 Bailey DT, Dalton C, Joseph Daugherty F, Tempesta MS (2007). Can a concentrated cranberry extract prevent recurrent urinary tract infections in women? A pilot study. Phytomedicine, 14: 237-241
- 4 McMurdo ME, Bissett LY, Price RJ, Phillips G, Crombie IK (2005). Does ingestion of cranberry juice reduce symptomatic urinary tract infections in older people in hospital? A double-blind, placebo-controlled trial. Age Ageing, 34: 256-261
- 5 Di Martino P, Agniel R, David K, Templer C, Gaillard JL, Denys P, Botto H (2006). Reduction of *Escherichia coli* adherence to uroepithelial bladder cells after consumption of cranberry juice: a double-blind randomised placebo-controlled cross-over trial. World. J. Urol, 24: 21-27
- 6 Valentova K, Stejskal D, Bednar P, Vostalova J, Cihalik C, Vecerova R, Koukalova D, Kolar M, Reichenbach R, Sknouril L, Ulrichova J, Simanek V (2007). Biosafety, antioxidant status, and metabolites in urine after consumption of dried cranberry juice in healthy women: a pilot double-blind placebo-controlled trial. J. Agric. Food Chem, 55: 3217-3224.
- 7 Mounnissamy VM, Kavimani S, Gunasegaran R (2002). Antibacterial activity of gossypetin isolated from *Hibiscus sabdariffa*. The Antiseptic, 92(3): 81-2

**Hibiscus has strong antimicrobial properties to help prevent the growth of harmful microbes in the bladder**

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