

Your Monthly Update

Dear Colleague

Welcome to the January 2009 newsletter from Pure Bio Ltd.

Did you know:

CLA and Green Tea taken together can increase drainage of fat from the body's fat stores and prevent deposition of fat. CLA specifically blocks the uptake of fat in fat cells; whilst Green Tea increases fat metabolism and conversion from fat to energy.

The chosen topic for this month is:

UTI's (Urinary Tract Infections)

Protocol Summary

Ranking	Nutritional Supplements	Botanical Medicine
Secondary	Bromelain	Cranberry
Other	D-mannose Multivitamin-mineral Vitamin A Vitamin C	Asparagus Birch Blueberry Buchu Couch grass Goldenrod Goldenseal Horseradish Horsetail Java tea Juniper Lovage Nettle Oregon grape Parsley Sassafras Spiny restharrow Uva ursi
<p>Primary – Reliable and relatively consistent scientific data showing a substantial health benefit.</p> <p>Secondary – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.</p> <p>Other – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.</p>		

Symptoms

Typical symptoms of a urinary tract infection are frequent urges to urinate, accompanied by burning, stinging and / or pain during urination. Dribbling urination is common and emptying the bladder will not always relieve the urge. The urine is often milky and may be foul-smelling, due to the presence of pus and bacteria.

The onset of the infection can be slow or sudden, and cramping pains may develop. The infection can also be mild, with symptoms of bladder irritation but without any pain when urinating. Since kidney infections can result from untreated bladder infections, professional advice should be sought if the pain is severe or if the infection does not react to treatment. Other indications for more aggressive intervention are fever, lower-back pain or blood in the urine.

Recurring bladder inflammations without the presence of an infection are called interstitial inflammations because the pain and swelling occur between the tissues and not on the bladder walls, as most infections do. This type of inflammation is particularly frustrating to diagnose and treat since lab tests return negative results, as there are no bacteria present and antibiotics do not help. The symptoms of this type of inflammation are the same as for other bladder infections, but the process tends to be chronic and recurring.

Bladder Infection Causes

Bladder infections result from bacteria that cause an inflammation of the bladder's inner lining. In women, the urethra is short and close to the anus and vagina, so bacteria can enter the bladder easily. *E. coli*, which is beneficial to the normal gut flora but hazardous if it finds its way to the urinary organs, is the most common bacterial cause of bladder infection. Other sources are: *rickettsiae*, *amoebae*, *Chlamydia*, *Mycoplasma*, *Proteus*, *Staphylococcus*, *Neisseria gonorrhoeae* and *Gardnerella vaginalis*.

Interstitial cystitis is a chronic condition caused by inflammation of the space between the urinary bladder lining and the bladder muscle. The causes are varied, but bacteria are generally not found in the bladders of chronic cystitis sufferers and antibiotics are therefore ineffective. In contrast, the more common bladder infections are caused by bacteria originating in the large intestine. It is therefore important to get a urine culture done to determine if bacteria are present before starting antibiotic prescriptions. Bacteria may pre-sensitize the bladder so that various promoters (certain drugs, foods, hormones, viruses and even exposure to cold drafts and dampness) will start the chronic disease process.

Interstitial cystitis is a progressive disease which may range in severity from microscopic ulcers to a completely scarred bladder. Interstitial cystitis is an environmentally-induced illness which frequently responds to diet and lifestyle changes.

Dietary Modification

When healthy volunteers consumed a large amount (100 grams) of refined sugar, the ability of their white blood cells to destroy bacteria was impaired for at least five hours. Consumption of excessive amounts of alcohol has also been shown to suppress immune function. Reduced intake of dietary fat has been shown to stimulate immunity. For these reasons, many doctors recommend a reduced intake of sugar, alcohol, and fat during an acute infection and for prevention of recurrences.

People who have recurrent or chronic infections should discuss the possible role of allergies with a doctor, since chronic infections have been linked to allergies in many

reports. Identifying and eliminating foods that trigger problems may help reduce the number of infections.

Bladder Infection Nutrition

[Cranberry juice](#) is high in vitamin C and can be used to both treat and prevent UTIs. Take care in buying cranberry juice as the most popular brands have added sugar. Pure cranberry juice without added sweetener can be found in health food stores. Components in cranberry juice inhibit the ability of bacteria to adhere to the mucous membrane of the bladder.

Drink at least ten glasses of fluids:

- fresh spring water
- herbal teas
- juices – unsweetened

each day to keep the kidneys and bladder well flushed. Juices should be diluted. [Carrot juice](#) is good for flushing acid waste. Watermelon juice cleanses the kidneys. [Garlic](#) works well to fight bacteria and strengthen immunity.

During the acute stage of the infection, avoid salty, spicy foods as these irritate the bladder. Refined carbohydrates and simple sugars, acid- and sediment-forming foods, coffee, black tea, tomatoes, cooked spinach and yeast breads should also be avoided.

Patients with interstitial cystitis can usually control symptoms of urinary frequency, burning, painful intercourse and pelvic irritation by avoiding high acid-forming foods and those that contain high amounts of tyrosine, tyramine and aspartate. Eat more of the alkaline-forming foods. If symptoms improve, challenge the body occasionally with low acid-forming foods.

Nutritional Supplement Treatment Options

[Bromelain](#) - The proteolytic enzymes, bromelain (from pineapple) and trypsin may enhance the effectiveness of antibiotics in people with a UTI. In a double-blind trial, people with UTI's received antibiotics plus either bromelain/trypsin in combination (400 mg per day for two days) or a placebo. One hundred percent of those who received the enzymes had a resolution of their infection, compared with only 46% of those given the placebo.

[d-Mannose powder](#) - Some bacteria that typically cause urinary tract infections can attach themselves to the lining of the urinary tract by binding to molecules of mannose that naturally occur there. Theoretically, if enough D-mannose is present in the urine, it would bind to the bacteria and prevent them from attaching to the urinary tract lining. Preliminary studies have demonstrated this protective effect.

[Vitamin C](#), at dosages of up to 5000mg (or up to bowel tolerance) per day, have been used for an acute UTI, as well as long-term supplementation for people who are prone to recurrent UTI's. Vitamin C has been shown to inhibit the growth of E. coli, the most common bacterial cause of UTI's. In addition, supplementation with 4,000 mg or more of vitamin C per day, results in a slight increase in the acidity of the urine, creating an "unfriendly" environment for some infection-causing bacteria.

[Vitamin A and E](#) - Especially for recurring bladder infections, vitamins A and E are recommended. Vitamin E improves oxygen supply to the cells and prevents scarring that can sometimes become quite severe with the recurring irritation of interstitial bladder inflammation. Vitamin A and beta-carotene are essential for maintaining the

mucous membranes that line the bladder walls. They also support immune-system function. Zinc should be added for a stronger immune system.

[Garlic](#) capsules act as natural antibacterial agents. Acidophilus cultures help prevent bladder infections related to candida and should be added to the diet whenever antibiotics are being taken. If infections are chronic and recurring, Green-food supplements and drinks, especially chlorella, spirulina and blue-green algae, support cell renewal.

Since the immune system requires many nutrients in order to function properly, many people take a multivitamin-mineral supplement for “insurance.” In one double-blind trial, healthy elderly people who used such a supplement for one year showed improvements in immune function, as well as a significant reduction in the total number of infections (including non-urinary-tract infections).

Botanical Treatment Options

[Cranberry](#) - Modern research has suggested that cranberry may prevent urinary tract infections. In a double-blind trial, elderly women who drank 10 ounces (300 ml) of cranberry juice per day had a decrease at a dose of bacteria in their urine. In another study, elderly residents of a nursing home consumed either four ounces (120 ml) of cranberry juice or six capsules containing concentrated cranberry daily for 13 months. During that time, the number of UTIs decreased by 25%.

[Blueberry](#) contains similar constituents as cranberry, and might also prevent bacteria from attaching to the lining of the urinary bladder. However, there are currently no studies to determine if blueberry can help prevent bladder infections.

[Asparagus](#) (*Asparagus officinalis*), [birch](#) (*Betula* spp.), [couch grass](#) (*Agropyron repens*), [goldenrod](#) (*Solidago virgaurea*), [horsetail](#), [Java tea](#) (*Orthosiphon stamineus*), [lovage](#) (*Levisticum officinale*), [parsley](#) (*Petroselinum crispum*), [spiny restharrow](#) (*Ononis spinosa*), and [nettle](#) are approved in Germany as part of the therapy of people with UTIs. These herbs appear to work by increasing urinary volume and supposedly helping to flush bacteria out of the urinary tract. Juniper is used in a similar fashion by many doctors. Generally, these plants are taken as tea.

[Buchu leaf](#) preparations have a history of use in traditional herbal medicine as a urinary tract disinfectant and diuretic.

The volatile oil of [horseradish](#) has been shown to kill bacteria that can cause urinary tract infections.

[Goldenseal](#) is reputed to help treat many types of infections. It contains berberine, an alkaloid that may prevent UTIs by inhibiting bacteria from adhering to the wall of the urinary bladder. Goldenseal and other plants containing berberine (such as Oregon grape) may help in the treatment of UTIs.

[Uva ursi \(Bearberry\)](#) - An extract of uva ursi is used in Europe and in traditional herbal medicine in North America, as a treatment for UTI. This herb is approved in Germany for treatment of bladder infections. The active constituent in uva ursi is arbutin. In the alkaline environment of the urine, arbutin is converted into another chemical, called hydroquinone, which kills bacteria. A generally useful amount of uva ursi tincture is 3–5 ml TID.

Homeopathic Treatment Options

Choose one of the remedies below in the 6c strength, repeating hourly for three doses, then four times daily until symptoms disappear. Dissolve 2 tablets under the tongue. Seek professional advice if no improvement is noted.

Cantharis is the first remedy to consider for a bladder infection when, despite the sudden, strong urging, the urine dribbles, accompanied by burning pains, particularly at the end of urination.

Use Apis if the pains are stinging and sharp, worse from the least heat or touch. Cold often feels good.

Belladonna is indicated for a fierce infection that begins quickly, causing burning and urging even after passing urine. Typically, the bladder is extremely sensitive to any movement, even jarring, and a fever usually accompanies the infection.

Dulcamara helps if an infection begins after exposure to cold or after getting wet.

Use Pulsatilla if the pain is not very intense, yet the other typical bladder infection signs exist. Other indications for this remedy are little thirst, and a desire for open air and gentle motion.

Integrative Options

Acupuncture might be of some benefit for women with recurrent UTIs. A controlled study compared acupuncture to sham acupuncture or no treatment in a group of women with recurrent UTIs. After six months, the women receiving real acupuncture had half as many UTI episodes as the sham group and only one-third as many as the untreated group, a significant difference.

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