Natural Care for Urinary Challenges

To Pee or Not to Pee

Judith Cobb, MH, CI, NCP, CCII
The Urinary System
The Urinary System

The urinary system is vitally important to the entire health of the body.

Canadian Women’s Olympic Hockey Team
2014 Gold Medalists
The urinary system consists of:

- two kidneys
- two ureters
- the bladder
- two urethral sphincter muscles
- the urethra

Quiz time!

- Which of the following is NOT a part of the urinary tract:
  a) urethra
  b) pharynx
  c) ureter
  d) bladder
Each Kidney:

- Is the shape of a kidney bean and about the size of a fist

Each Kidney:

- Has between 200,000
- and 2.5 million nephrons

The Kidneys Clean and Recycle:

• Water
• Salts
• Protein
• Glucose
• Minerals
• Other substances that are essential for cellular health

Quiz time!

Which part of the kidney is responsible for filtering metabolic debris out of the blood?

a) Glomerulus
b) Renal pelvis
c) Urethra
d) Ureter

Nature’s Institute

QUESTIONS

1- A B C D
2- A B C D
3- A B C D
4- A B C D
5- A B C D
6- A B C D
Indications of Kidney Disease:

- Swelling of ankles, hands, feet
- Shortness of breath
- High blood pressure
- Confusion or difficulty concentrating
- Poor appetite
- Nausea
- Vomiting
- Dry, itchy skin
- Fatigue


Dialysis statistics

- Currently, there are more than one million dialysis patients worldwide.
- The number of patients in the United States could double over the next 10 years.
- There are dialysis centers in about 159 countries.
- Dialysis is a multi-billion dollar industry
Common Kidney Issues:

- Chronic Kidney Disease
- Glomerulonephritis
- Infections
- Stones
- Urinary Tract Obstruction

Often Caused by:

- Benign prostatic hyperplasia
- Diabetes
- Hypertension

The Kidneys:

- Produce two important hormones and one enzyme:
  - Erythropoietin - stimulate bone marrow to make red blood cells
  - Calcitrol - converts cholecalciferol (vitamin D precursor made by the skin) into the active form of cholecalciferol which stimulates the absorption of calcium in the kidneys and intestines
  - Renin (enzyme) > converts to angiotensin I > converts to angiotensin II – contracts blood vessels to increase blood pressure

[Links to additional information provided]
Blood and the Kidneys:

• The average human being has 4.7 – 5.5 liters (1.0 to 1.5 gallons) of blood
• All of the blood in the body goes through the kidneys once every 45 minutes
• That means about 75 liters of blood are circulated through each kidney every day

https://www.niddk.nih.gov/health-information/kidney-disease/kidneys-how-they-work

Quiz Time!

The kidneys
a) Produce two important hormones
b) Get to take frequent rests
c) Are important in calcium uptake
d) a + c

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Water, anyone?

The kidneys can process and utilize up to 4 ounces of water at a time.

Coffee counts as fluid, right?
Acid or Alkaline?

The kidneys assist the lungs in keeping the pH of the blood where it belongs between 7.35 – 7.45

**Symptoms of Acidosis**
- Fatigue or drowsiness
- Becoming tired easily
- Confusion
- Shortness of breath, rapid or shallow breathing
- Sleepiness
- Headache
- Lack of appetite
- Jaundice
- Increased heart rate

[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3195546/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3195546/)

When your pH is slightly too acidic:

- The body will pull calcium out of the bones
- Some of that calcium will be used to neutralize acid in the blood
- Some of it may come out of solution and be deposited where we don’t want it
When your pH is slightly too acidic:

Quiz time!

Which of the following is NOT a symptom of acidosis?

a) Fatigue or drowsiness
b) Fever
c) Confusion
d) Shortness of breath, rapid or shallow breathing

QUESTIONS
1- A B C D
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The importance of electrolytes

The kidneys are the batteries of the body

When kidneys are not properly nourished and hydrated, energy levels can be low, leading to tiredness and fatigue

Where are the Ureters?

Fluid Movement

- The bladder is a muscular sac
- A healthy bladder easily holds up to 500 mL of urine for 2 to 5 hours
- Holding more than 600 mL of urine for extended lengths of time can stretch the bladder too far and do damage
- The average amount of urine that is excreted per day, per adult, is 1.5 liters


Can you ‘hold it’ ‘til you burst?

Bladder Infections

- Bladder infections/UTIs account for 25% of all infections in women.
- 50-60% of all women will have at least one urinary tract infection in their lifetime.
- Most UTIs are caused by E. coli.
- Men under 50 have almost zero risk for bladder infections.
- Men over 60 have the same incidence of bladder infections as women in the same age group.

Not just one sphincter, but two!

Two sphincters control the flow of urine out of the bladder.

Where is the Urethra?

The urethra is the tube that carries the urine to the point where it exits the body.

Quiz time!

There are several different types of tubes in the urinary tract. Which one of the following is a part of the urinary tract?

1. Eustachian tube
2. Urethra
3. Fallopian tube
4. Common bile duct

QUESTIONS

1- A B C D
2- A B C D
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5- A B C D
6- A B C D
Special risks for women?

- Being sexually intimate too frequently
- Using diaphragms
- Using spermicidal agents
- Inadequate personal hygiene
- Being post-menopausal
- Improper voiding habits
- Obesity
- Obstructions of the flow of urine, such as kidney stones, kinked ureters

1) http://www.mayoclinic.org/diseases-conditions/urinary-tract-infection/basics/risk-factors/con-20037892

Common Symptoms of UTI

- Painful or burning urination
- Urgency and increased urinary frequency
- Sensation of bladder fullness or lower abdominal discomfort
- Blood in the urine
- Backache just below the waist
- Fevers, chills, malaise
- Unusual urine odor, cloudy urine
- Incontinence

http://www.mayoclinic.org/diseases-conditions/kidney-infection/basics/complications/con-20032448
If you are prone to bladder infections:

- Drink water – 2-3 liters per day
- Void frequently
- Cleanse genital area before and after sex

Women:
- Don’t use bubble bath, feminine deodorant sprays
- Use unbleached, unscented toilet tissue
- Avoid using spermicidal contraceptives, diaphragms, vaginal douching
- Wipe from front to back after using the toilet

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3749018/

Proper hydration aids in washing bacteria out of the urinary tract

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1872071/
Quiz Time!

Which of the following are risk factors for developing a UTI? (check all that apply)

- a) Being female
- b) Incomplete voiding
- c) Poor toilet hygiene
- d) Use of certain contraceptives

Dietary factors that may protect women from UTI!

- fresh or frozen unsweetened juices, especially berry juice (especially cranberry or cranberry-lingonberry)
- fermented milk products containing probiotics (L. acidophilus or LGG) more than 3 times per week

* http://ajcn.nutrition.org/content/77/3/600.full
Support formula #1
UTI prevention

Cranberries
• Helps to prevent UTI, especially when caused by E. coli
• Prevents bacteria from attaching to walls of urinary tract
• Reduces the amount of bacteria in the bladder as compared to a placebo
• Also reduces risk of stomach ulcers by preventing H. pylori from attaching to stomach wall
• GRAS
• Use caution with:
  • Warfarin
  • Proton pump inhibitors
  http://www.umm.edu/health/medical/altmed/herb/cranberry

Buchu
• Demulcent
• Soothes inflamed tissues

Support formula #1
Cranberries – for men with lower urinary tract symptoms

• Study of 42 older men who were at risk for prostate disease
• 6 months – 21 rec’d 1500 ml dried cranberry powder daily, 21 rec’d no supplement

• In contrast to the control group, patients in the cranberry group had statistically significant improvement in International Prostate Symptom Score, QoL, urination parameters including voiding parameters (rate of urine flow, average flow, total volume and post-void residual urine volume), and lower total PSA level on day 180 of the study. There was no influence on blood testosterone or serum CRP levels. There was no statistically significant improvement in the control group.

Support formula #2

- dong quai
- juniper berries
- parsley
- uva ursi
- ginger rhizome
- marshmallow root
- golden seal root extract

Support formula #2

- dong quai - antibacterial against gram negative bacteria including E.coli
- For post-menopausal women – studies show slight estrogenic-like benefits

2) http://journals.lww.com/menopausejournal/Abstract/2005/12060/Use_of_dong_quai___An
gelica_sinensis__to_treat.15.aspx
Support formula #2

Uva Ursi
• Bearberry, kinnikinnik
• Mild diuretic, disinfectant
• Contains arbutin that gets converted to hydroquinone in the urinary tract
• Hydroquinone kills E. coli
• Hydroquinone from uva ursi is more powerful when urine in alkaline


• Astringent with an affinity for the kidneys


• Used for kidney and bladder infections
• Not recommended in pregnancy or when person is dehydrated
Support formula #2

Golden Seal

- Soothes mucus membranes\textsubscript{2}
- Berberine – antibiotic, effective against E. coli and Chlamydia sp\textsubscript{2}
- University of Singapore, Feb 2008, berberine interrupts E. coli cell division\textsubscript{1}
- Effective against E.coli\textsubscript{3}

- Golden seal is not recommended for use in pregnancy

1) http://pubs.acs.org/doi/abs/10.1021/bi7018546

Special concerns for seniors

- May be prone to fluid retention or electrolyte imbalance because:
  - Physically unable to get to water
  - Medications
  - Impaired thirst sensation
  - Excess loss of fluid through skin (thin skin, diminished subcutaneous fat), respiration, and gastrointestinal imbalances
  - Unable to toilet themselves
  - Incontinence issues

- May be prone to dehydration or electrolyte imbalance because:
  - Medications
  - Ageing kidneys don’t work as well
  - Eating high sodium/packaged food diet
  - Early stages of kidney failure
  - Heart failure
Support #3 KISS (keep it simple for seniors)

For fluid retention:
• Increase their protein slightly
• Support protein digestion with a digestive aid

• Kelp
• Alfalfa
• Dulse
• Horseradish
• White cabbage
• Horsetail

Horseradish
• Stimulates digestion of protein
• “The sympathetic response of mucous membranes throughout the body makes it useful ... as a diuretic”
• Immune stimulate, increases number of circulating white blood cells
• Very high in potassium, magnesium

3 https://www.hindawi.com/journals/ecam/2014/760683/
Support #3 KISS (keep it simple for seniors)

Horsetail

- Urinary tract astringent, diuretic
- 2014 of 36 healthy males
- “The diuretic effect of [horsetail] was assessed by monitoring the volunteers’ water balance over a 24 h period. The [horsetail] extract produced a diuretic effect that was stronger than that of the negative control and was equivalent to that of hydrochlorothiazide without causing significant changes in the elimination of electrolytes. There was no significant increase in the urinary elimination of catabolites.”

Support #4 KISS (keep it simple for seniors)

- To correct dehydration:
  - 90 mg Sodium
  - 30 mg Potassium
  - 15 mg Calcium
  - 12 mg Magnesium
  - Vitamins
  - Sweetened with stevia

- Mix this formula in 16 oz water
- Tastes great, and it’s an extra way to get water into a client
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