



An Herbalist's View of the Kidneys and Urinary System

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Anatomy and Physiology

Kidney

- Arteriole; afferent and efferent
- Hilus
- Renal capsule
- Renal artery
- Renal vein

Nephron

- Ascending tubule
- Bowman's capsule
- Collecting duct
- Distal convoluted tubule
- Glomerulus
- Juxtaglomerular apparatus
- Juxtaglomerular cells
- Loop of Henle
- Peritubular capillary
- Proximal convoluted tubule
- Renal corpuscle
- Renal cortex

- Renal medulla
- Renal tubule

Ureter

Urethra

Urinary bladder

- Detrusor muscle
- Stretch receptors
- Trigone

Other terms

- Urine/Micturition
- Glomerular filtration rate (GFR)
- Filtration/Filtrate
- Urine/Micturition
- Glomerular filtration rate (GFR)
- Filtration/Filtrate
- Reabsorption
- Secretion
- Excretion
- Filtration

Functions of the Kidney:

- 1) Maintenance of water, electrolyte and acid-base balance
- 2) Excretion of water, nitrogenous waste products, some bacterial toxins, H⁺ (Hydrogen ions), electrolytes, fixed acids and metabolites, heat, carbon dioxide, drugs and various toxins
- 3) Regulation of blood pressure by secreting renin
- 4) Metabolic functions a) gluconeogenesis b) erythropoietin secretion c) synthesis of the active form of Vitamin D

Hormones, Secretions and Excretions:

Aldosterone
Anti-diuretic hormone (ADH)
Blood plasma
Chloride (Cl⁻)

Creatinine
Erythropoietin
Hydrogen (H⁺)
Potassium (P⁺)
Renin

Sodium (Na⁺)
Urea
Urine
Vitamin D
Water (H₂O)

Disharmonies

- Chronic renal failure (CRF)**- a reduction of nephrons (and GFR) leading to serious illness. It has many causes especially diabetes and glomerulonephritis. Diet, Tonics
- Cystitis**- inflammation of the bladder usually due to bacterial infection. Analgesics, Anodynes, Antimicrobials, Diet (drink water), Diuretics, Hypnotics,
- Diabetes**- a complex disease resulting from insulin irregularities and the metabolism of carbohydrates, fats and proteins. Diet, Oplopanax, Panax, Tonics, Trigonella, Vaccinium,
- Dysuria**- painful urination. Anodyne, Antimicrobials, Antiinflammatories, Demulcents, Diuretics, Sitz bath
- Eczema**- A confusing term referring to a number of skin disorders usually red, itchy and scaly. Anodyne, Compress, Diet, Nervines, Tonics
- Edema**- swelling due to excess fluid in the tissue. Cardio-tonics, Diuretics, Tonics
- End-stage renal failure**- A complete or near complete failure of the kidneys. It generally follows chronic renal failure. Dialysis, Transplantation
- Enuresis**- involuntary discharge of urine at night. Also called bed-wetting. Astringent, Diet, Diuretic, Tonic, Verbascum root
- Glomerulonephritis**- An inflammation of the glomeruli. Can be acute or progressive. May be immune mediated. Alteratives, Anodyne, Antimicrobials, Diet, Immunomodulators, Sedatives, Tonics
- Glycosuria**- an abnormal quantity of sugar in the urine, most often due to diabetes. Diet, Tonics
- Gout**- a condition in which uric acid is deposited in joints in the form of urate crystals causing intense pain. Anodyne, Antiinflammatories, Diet, Diuretics, Sedatives, Tonic
- Hematuria**- abnormal presence of blood in the urine. Astringents, Tonics, Diet
- Incontinence**- inability to control urination. Tonics, Astringents,
- Polycystic kidney disease**- a genetic disorder multiple cysts grow and spread on the kidneys. Over time they cause end-stage renal failure.
- Polyuria**- excretion of abnormally large amounts of urine. Diet
- Prostatitis**- Inflammation of the prostate usually due to infection. Anodyne, Antiinflammatories, Antimicrobials, Demulcents, Diet, Diuretic, Immunostimulant, Sitz bath, Tonic
- Pyelitis**- inflammation of the pelvis of the kidney- Anodyne, Antiinflammatory, Antimicrobial, Demulcents, Diet, Immunostimulant, Sedatives, Tonic
- Pyelonephritis**- Pyelonephritis is an infection of the kidney and the ducts. Anodyne, Antiinflammatory, Antimicrobial, Demulcents, Diet, Immunostimulant, Sedatives, Tonic
- Renal calculi/stones**- When urine becomes too concentrated and substances in the urine crystalize to form stones. Stones cause intense pain as they move down the ureters. Anodyne, Antilithic, Antispasmodic, Bath, Compress, Demulcent, Diet, Diuretic, Sedative, Tonic
- Retention**- Inability to urinate, may be caused by many factors. Diet, Diuretic, Tonic
- Stricture**- A narrowing of the lumen. May be caused by inflammation, pressure or scarring.
- Urethritis**- Inflammation of the urethra, often caused by infection. Dysuria is a common symptom. Anodyne, Antiinflammatory, Antimicrobial, Demulcent, Diet, Diuretic, Immunostimulant, Tonic

- ☞ **Urinary tract infection (UTI)**- Infection of any of the structures of the urinary tract. Anodyne, Antiinflammatory, Antimicrobial, Demulcent, Diet, Diuretic, Immunostimulant, Sedative, Sitz bath, Tonic

Herbs

Agrimony – *Agrimonia* spp.
 Aspen – *Populus* spp.
 Astragalus/Huang chi – *Astragalus membranaceus*
 Black haw – *Viburnum prunifolium*
 Buchu – *Barosma* spp.
 Bugleweed – *Lycopus* spp.
 Burdock – *Arctium* spp.
 Bush clover – *Lespedeza capitata*
 California poppy – *Eschscholtzia* spp.
 Canadian fleabane – *Erigeron canadensis*
 Cattail – *Typha* spp.
 Cedar – *Thuja* spp.
 Celery seed – *Apium graveolens*
 Chickweed – *Stellaria media*
 Cleavers/Bedstraw – *Galium aparine*/G. spp.
 Corn silk – *Zea mays*
 Crampbark – *Viburnum opulus*/V. *trilobum*
 Cranberry – *Vaccinium* spp.
 Cubeb berry – *Piper cubeba*
 Dandelion – *Taraxacum officinale*
 Dooryard knotweed – *Polygonum aviculare*
 Echinacea – *Echinacea* spp.
 Goldenrod – *Solidago* spp.
 Golden seal – *Hydrastis canadensis*
 Gravelroot – *Eupatorium maculatum*
 Horsetail – *Equisetum* spp.
 Irish moss – *Chondrus crispus*
 Juniper – *Juniperus* spp.
 Kava kava – *Piper methysticum*
 Liatris – *Liatris* spp.
 Licorice – *Glycyrrhiza uralensis*/G. *glabra*
 Mallow – *Malva* spp.
 Marshmallow – *Althaea officinalis*
 Mullein root – *Verbascum thapsus*
 Nettles – *Urtica* spp.
 Oatstraw – *Avena sativa*/A. *fatua*
 Parsley – *Petroselinum* spp.
 Plantain – *Plantago* spp.
 Poke – *Phytolacca* spp.
 Prickly ash – *Zanthoxylum* spp.
 Quack grass – *Agropyron repens*
 Rattlesnake master – *Eryngium* spp.
 Rhatany – *Krameria* spp.
 St. Johnswort – *Hypericum perforatum*
 Saw palmetto – *Serenoa repens*
 Shepherd's purse – *Capsella bursa-pastoris*
 Silk tassel – *Garrya* spp.
 Skullcap – *Scutellaria* spp.
 Stoneroot – *Collinsonia canadensis*
 Sweet sumac – *Rhus aromatica*
 Uva-ursi – *Arctostaphylos uva-ursi*
 Valerian – *Valeriana officinalis*/V. spp.
 Wild hydrangea – *Hydrangea arborescens*
 Wild yam – *Dioscorea villosa*/D. *quadranata*
 Yarrow – *Achillea millefolium*
 Yellow jasmine – *Gelsemium sempervirens*
 Yellow pond lily – *Nuphar polysepala*
 Yerba santa – *Eriodictyon* spp.

Categories of Therapeutics

Anodyne- reduce pain

Antibacterial- kill or inhibit bacteria

Antiinflammatories-reduce inflammation

Antilithic- reduce or suppress urinary calculi (stones) and act to dissolve those already present.

Antimicrobial- kill or suppress a variety of microbes

Antispasmodics-reduce smooth muscle cramps

Astringent- tighten tissue

Compress- a cloth immersed in a medicinal tea and applied on the body

Demulcents- mucilaginous substance used internally or externally to soothe mucous membranes

Diet- the intake of food and drink

Diuretic-increases urinary output

Immunostimulant- increase immunity

Nervines- tonify nerves

Sedatives- calm and allay excitement

Sitz bath- a bath of medicinal tea in which one sits in

Tonic- a simple or remedy taken over time for general or a specific health issue