



Medical Terminology

Lecture 3

First stage

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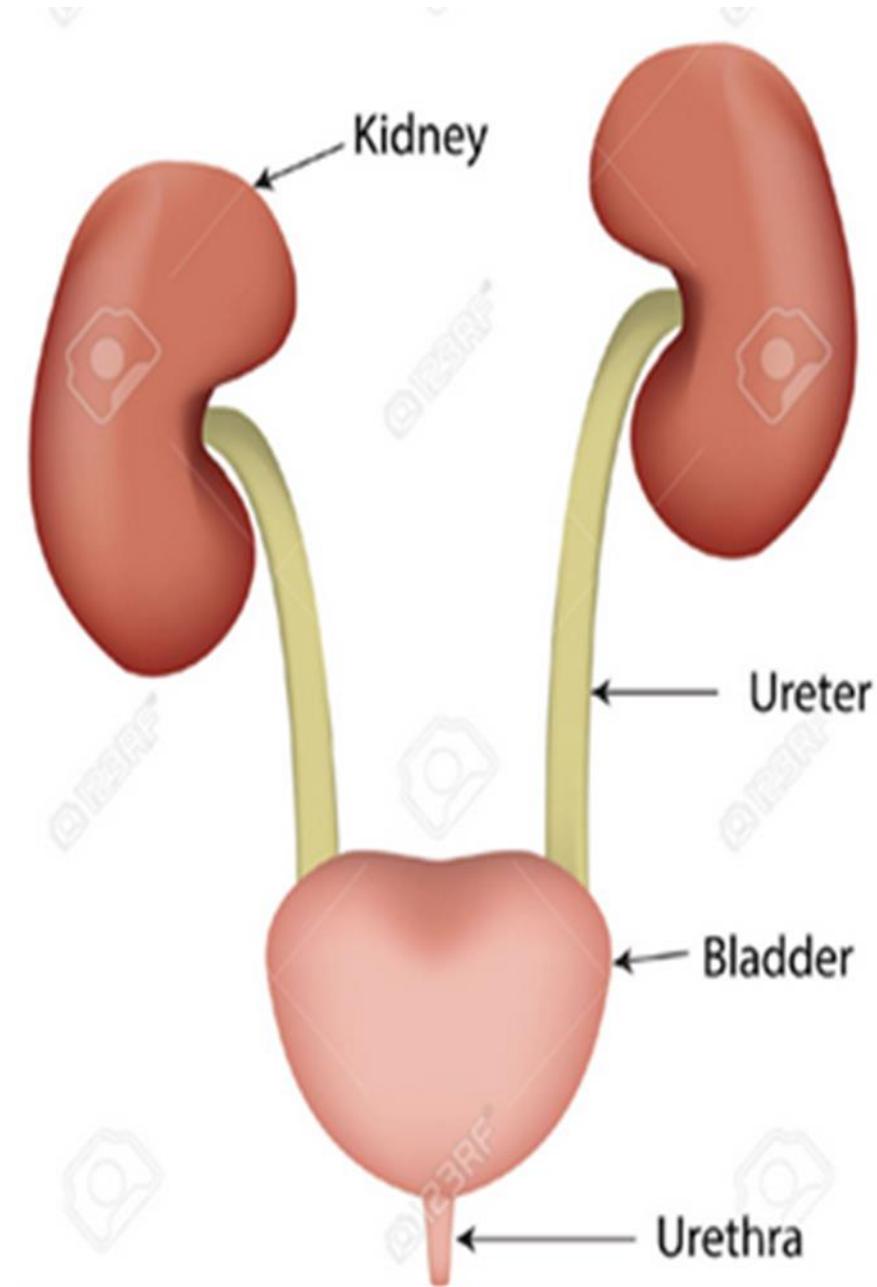
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The urinary system

Introduction:

The **urinary system** is composed of the **kidneys**, **ureters**, **urinary bladder**, and **urethra**.

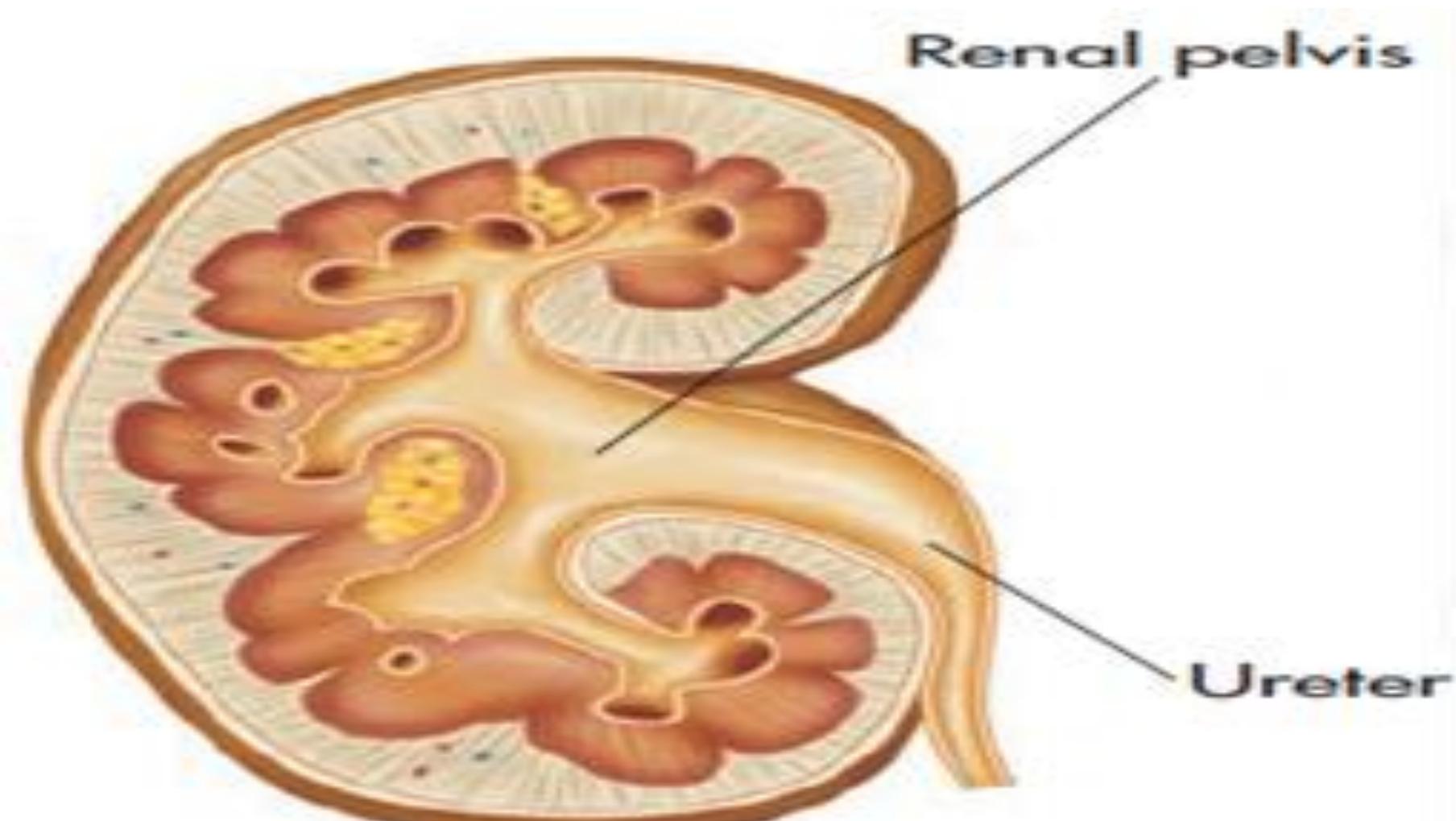
These organs are responsible for the **formation**, **storage**, and **removal** of urine.



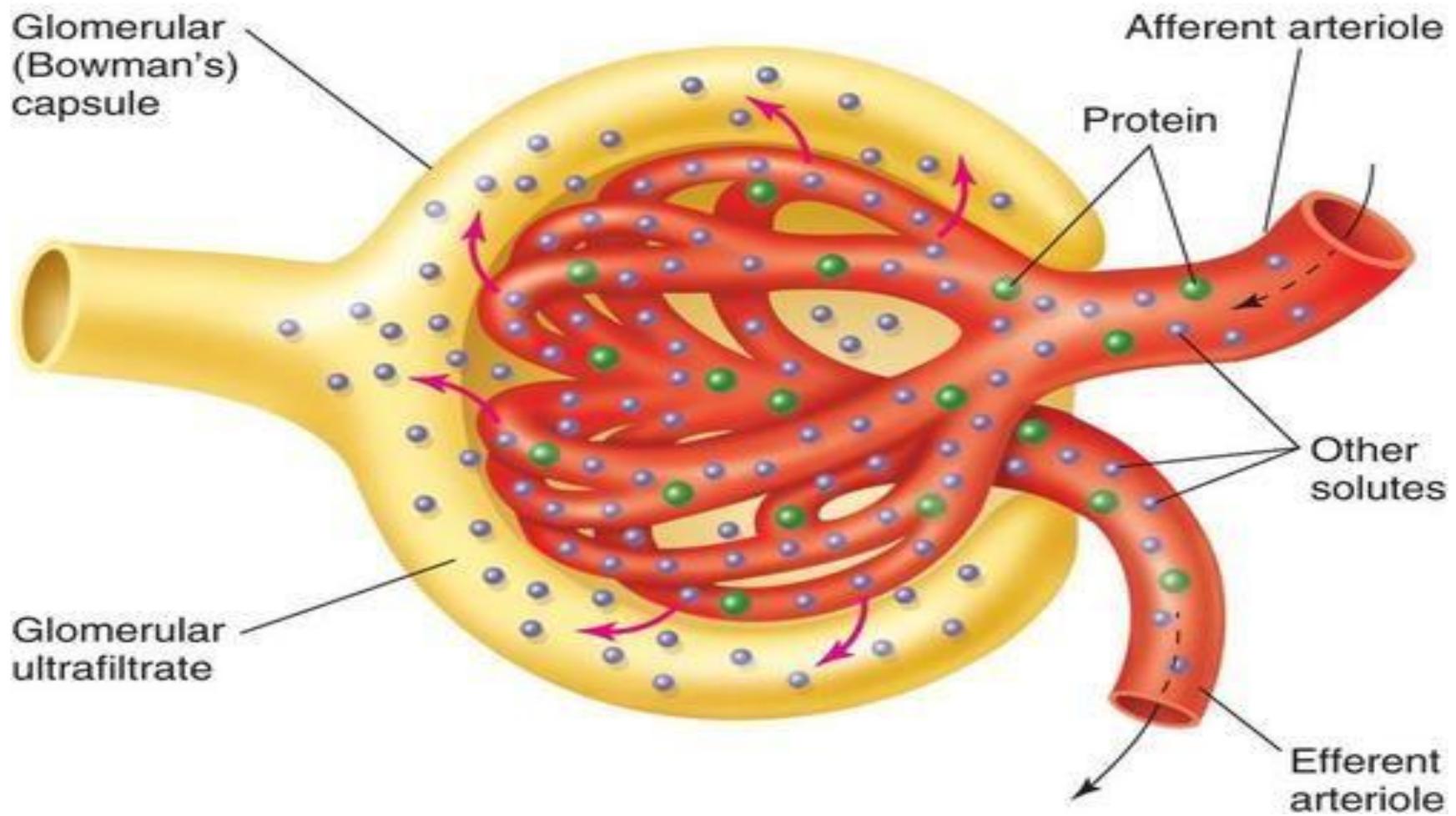
Word parts related to the urinary system

Word	Part Meaning	Word	Part Meaning
cyst/o	bladder	poly-	much, many
glomerul/o	glomerulus	py/o	pus
-iasis	condition, state	pyel/o	pelvis
lith/o	stone	ur/o, urin/o	urine
nephr/o, ren/o	kidney	ureter/o	ureter
noct/o	night	urethr/o	urethra
olig/o	few, little	vesic/o	urinary bladder

Pyel/o : pelvis



Glomerulus

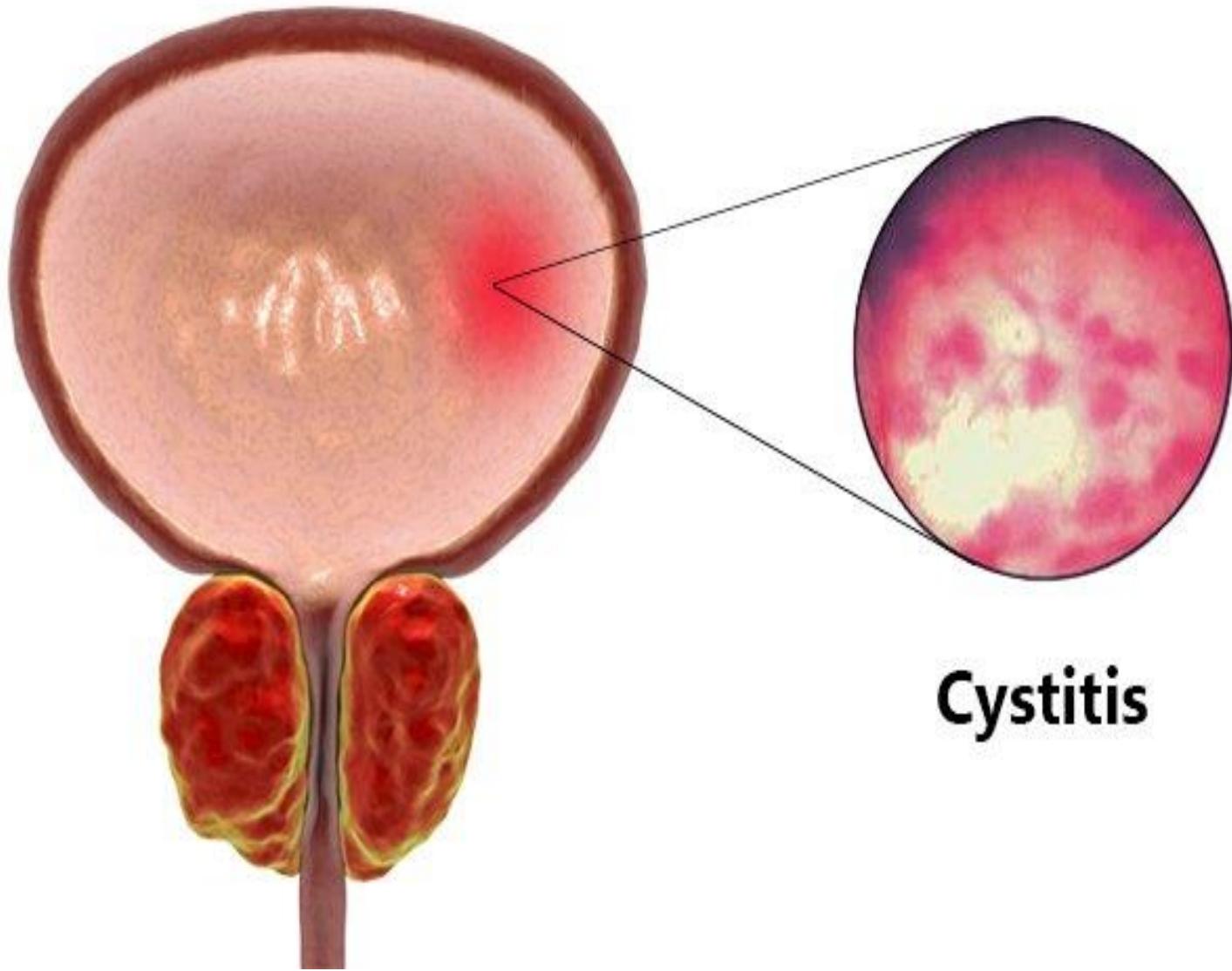


Nephrology: is medical specialty **dealing with the kidneys** while **nephrologist** is a medical specialist who **diagnoses** and **treats disorders of the kidney** .

Urology: is the medical specialty dealing with the **urinary system** while **urologist** is a medical specialist who **diagnoses** and **treats disorders of the urinary system**.

Disorders related to the urinary system

Term	Meaning
Anuria	No urine produced.
Bacteriuria	Presence of bacteria in the urine .
Cystitis	Inflammation of the urinary bladder .
Dehydration	Excessive loss of body fluids .
Diabetes insipidus	A condition caused by inadequate production of antidiuretic hormone resulting in excessive excretion of dilute urine and extreme thirst.

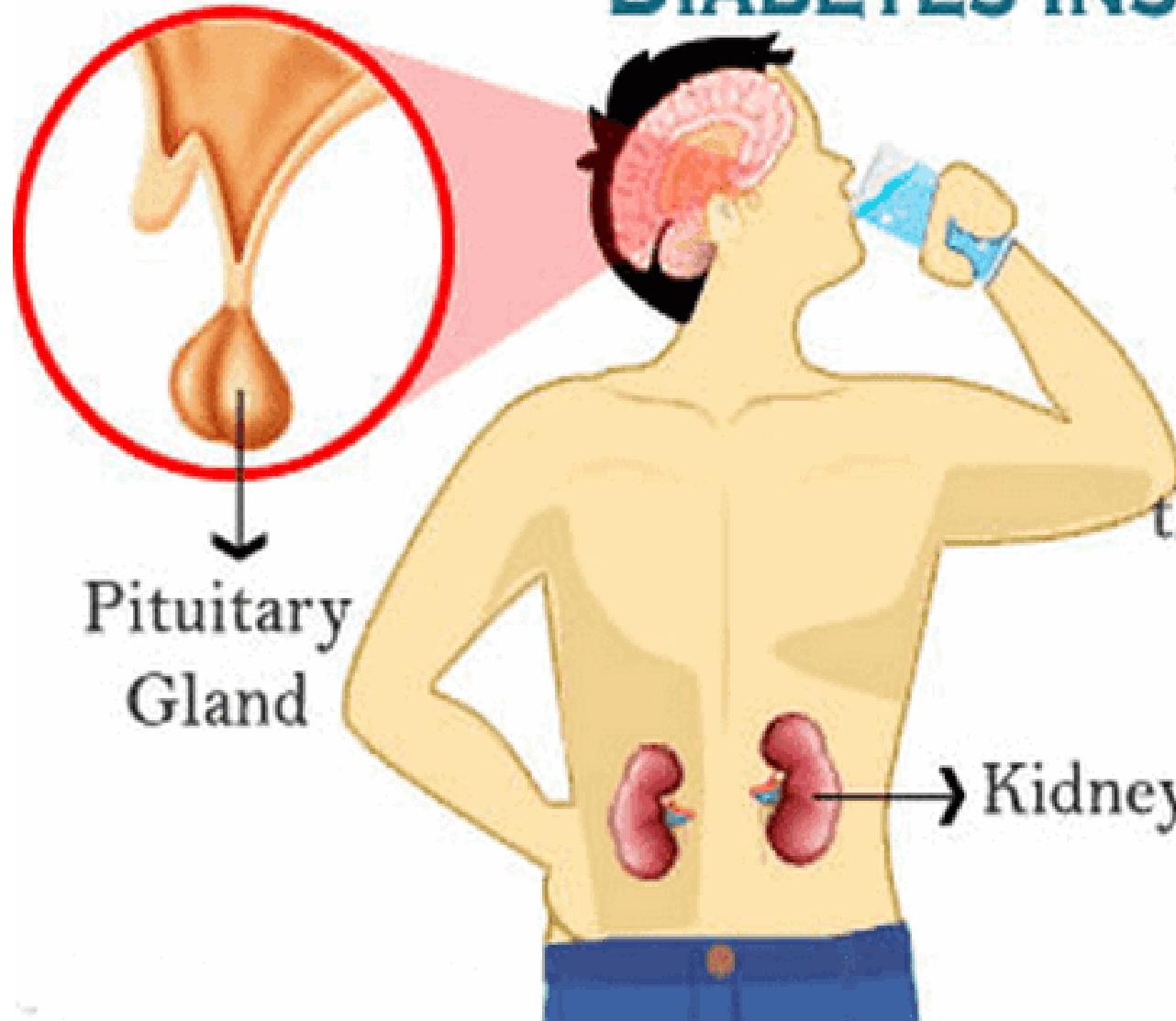


Cystitis

Dehydration



DIABETES INSIPIDUS



Pituitary gland produces insufficient ADH, hence the kidneys make a lot of urine.



Urine

Dysuria	Painful or difficult urination .
Enuresis	Involuntary urination , usually at night ; bed-wetting.
Glomerulo nephritis	Inflammation of the kidney primarily involving the glomeruli.
Glycosuria	Presence of glucose in the urine , as in cases of diabetes mellitus.
Hematuria	Presence of blood in the urine .

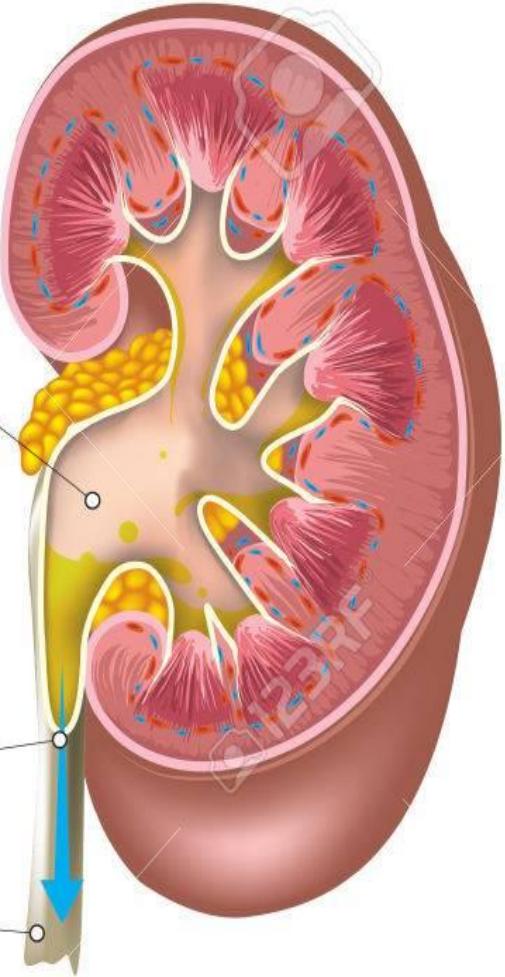
Hematuria



Enuresis



Hypovolemia.	A decrease in blood volume.
Hydronephrosis	Collection of urine in the renal pelvis caused by obstruction.
Nephrolithiasis	The presence of renal calculi.
Nephropathy	Any disease of the kidney.

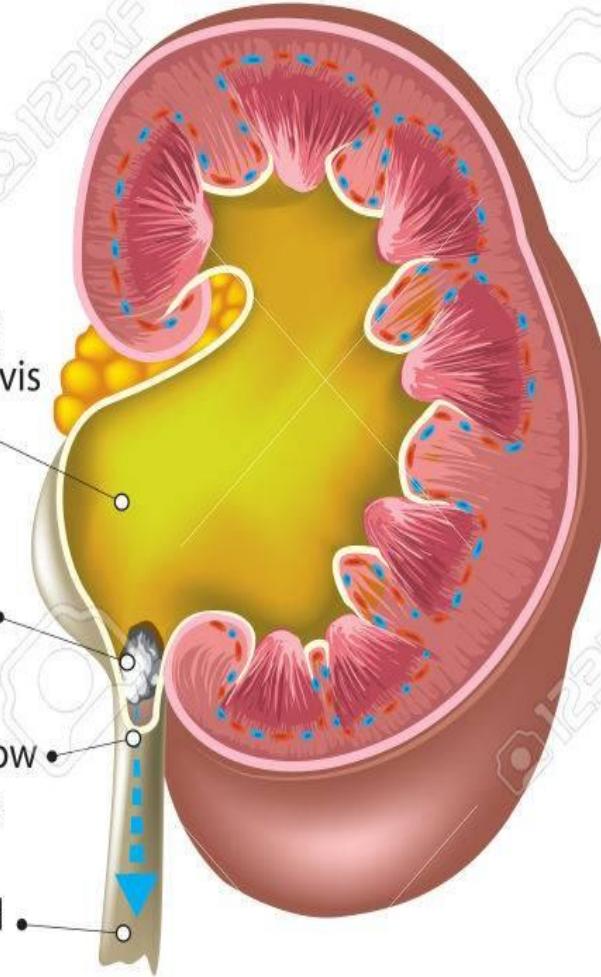


renal pelvis

normal flow
of urine

ureter

NORMAL KIDNEY



distende
renal pelvis

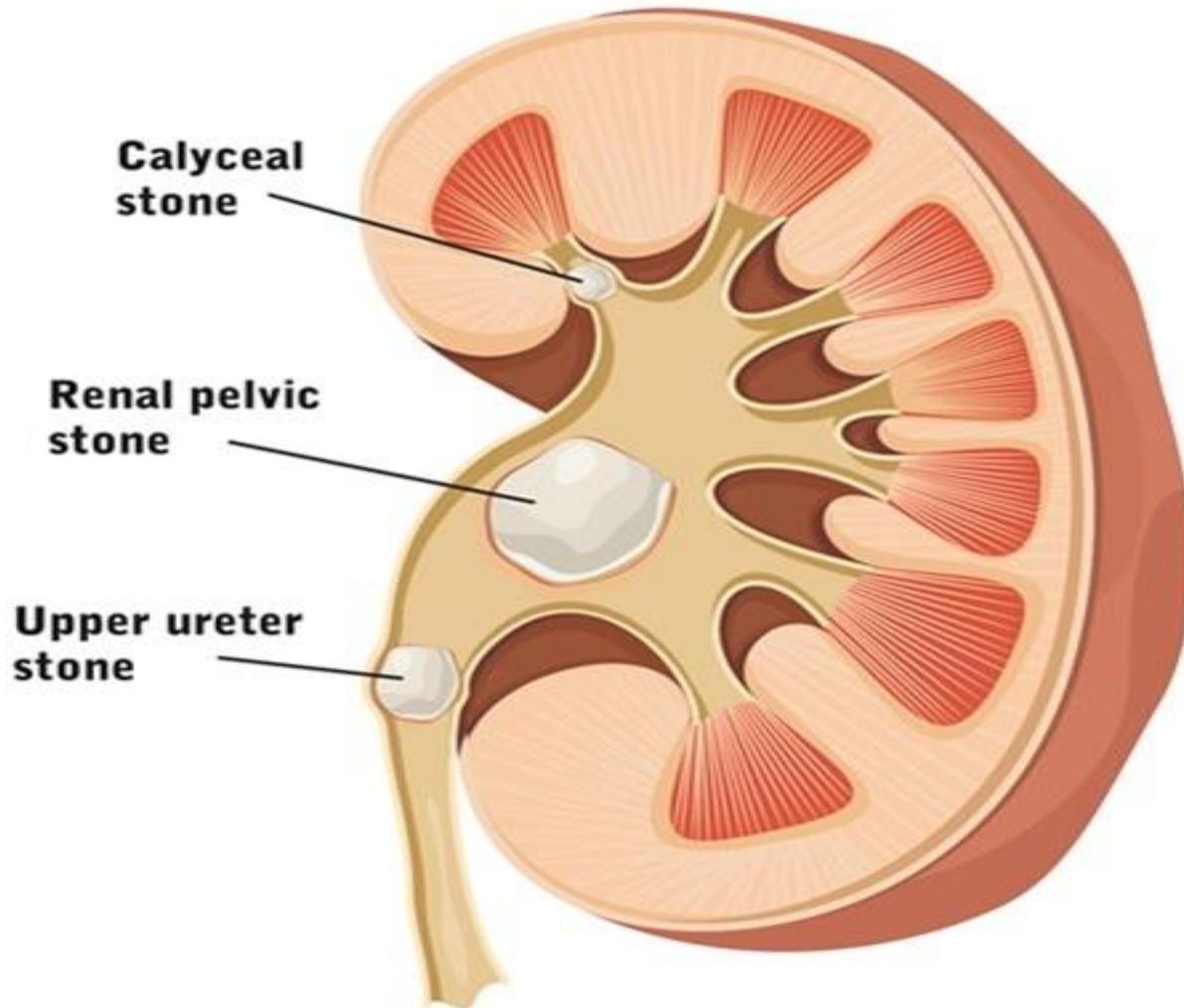
kidney
stone

weak flow
of urine

blocked
ureter

HYDRONEPHROSIS

KIDNEY STONES



Nocturia	Excessive urination at night.
Oliguria	Elimination of small amounts of urine.
Polydipsia	Excessive thirst.
Polyuria	Elimination of large amounts of urine , as in diabetes mellitus.
Proteinuria	Presence of protein, mainly albumin , in the urine.

Polydipsia

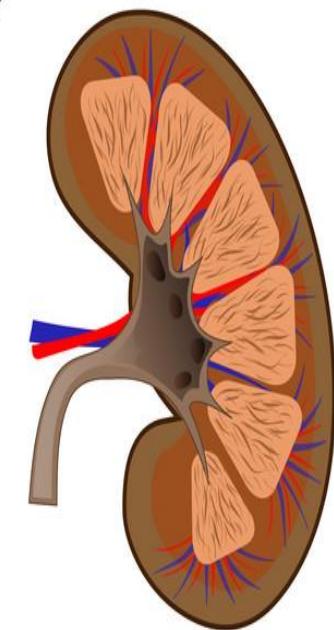
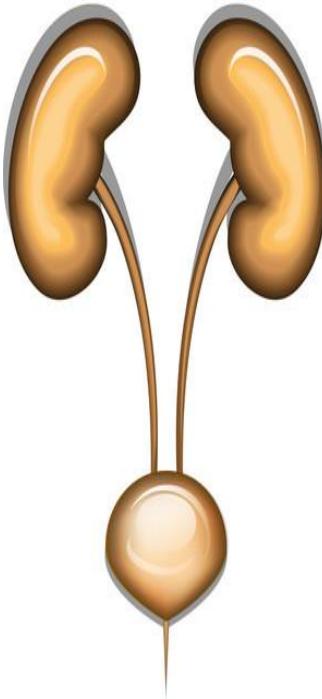


Proteinuria

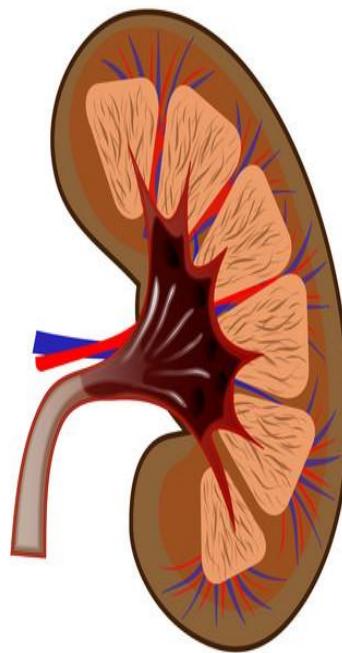
Pyelonephritis	Inflammation of the renal pelvis and kidney.
Pyuria	Presence of pus in the urine.
Renal colic	Pain in the region of the kidney
Renal failure	Impairment of renal function.
Urine Retention	The inability to empty the bladder.

UROLOGY

PYELONEPHRITIS



healthy kidney



pyelonephritis

Pyuria



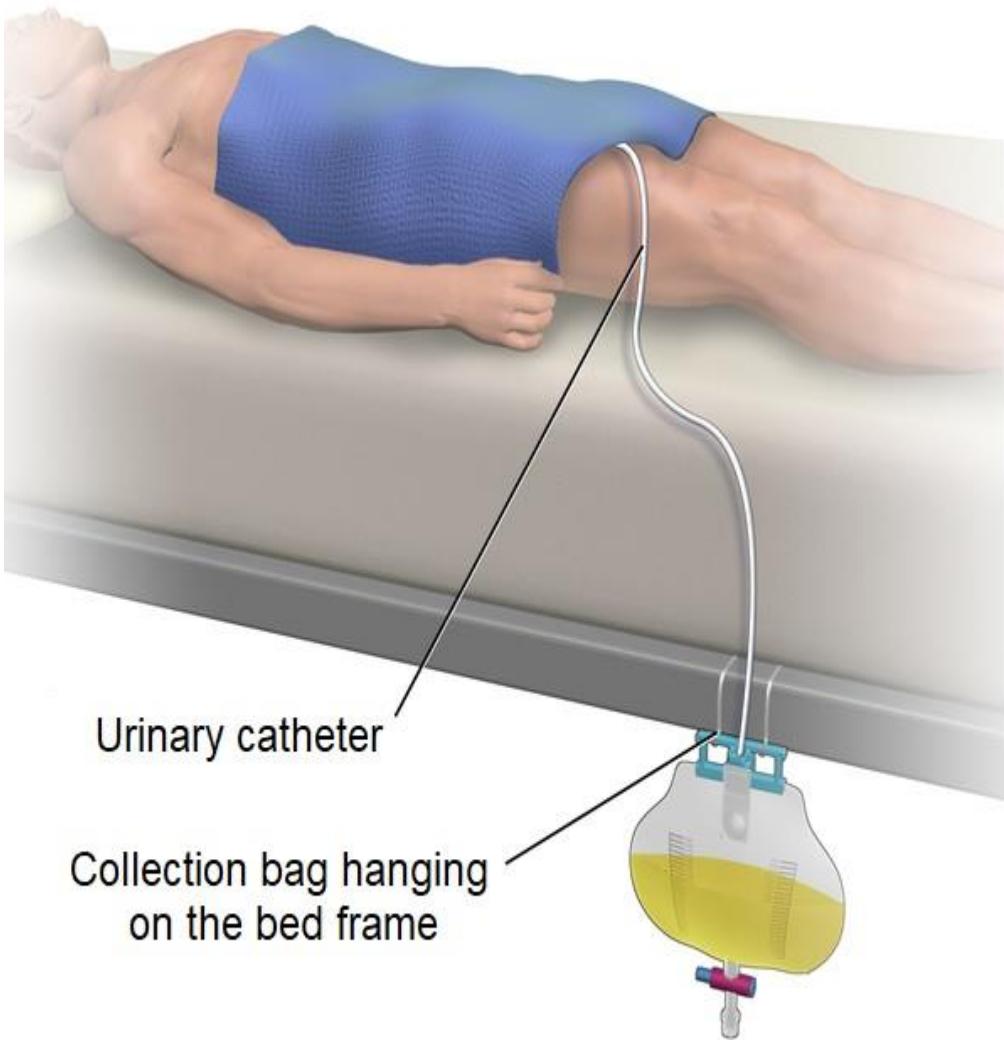
Uremia	An excess of urea in the blood as a result of renal insufficiency.
Urethritis	Inflammation of the urethra.
Urinary urgency	Sudden need to urinate.
Urinary tract infection (UTI)	Microbial infection of any part of the urinary tract.

Urinary urgency



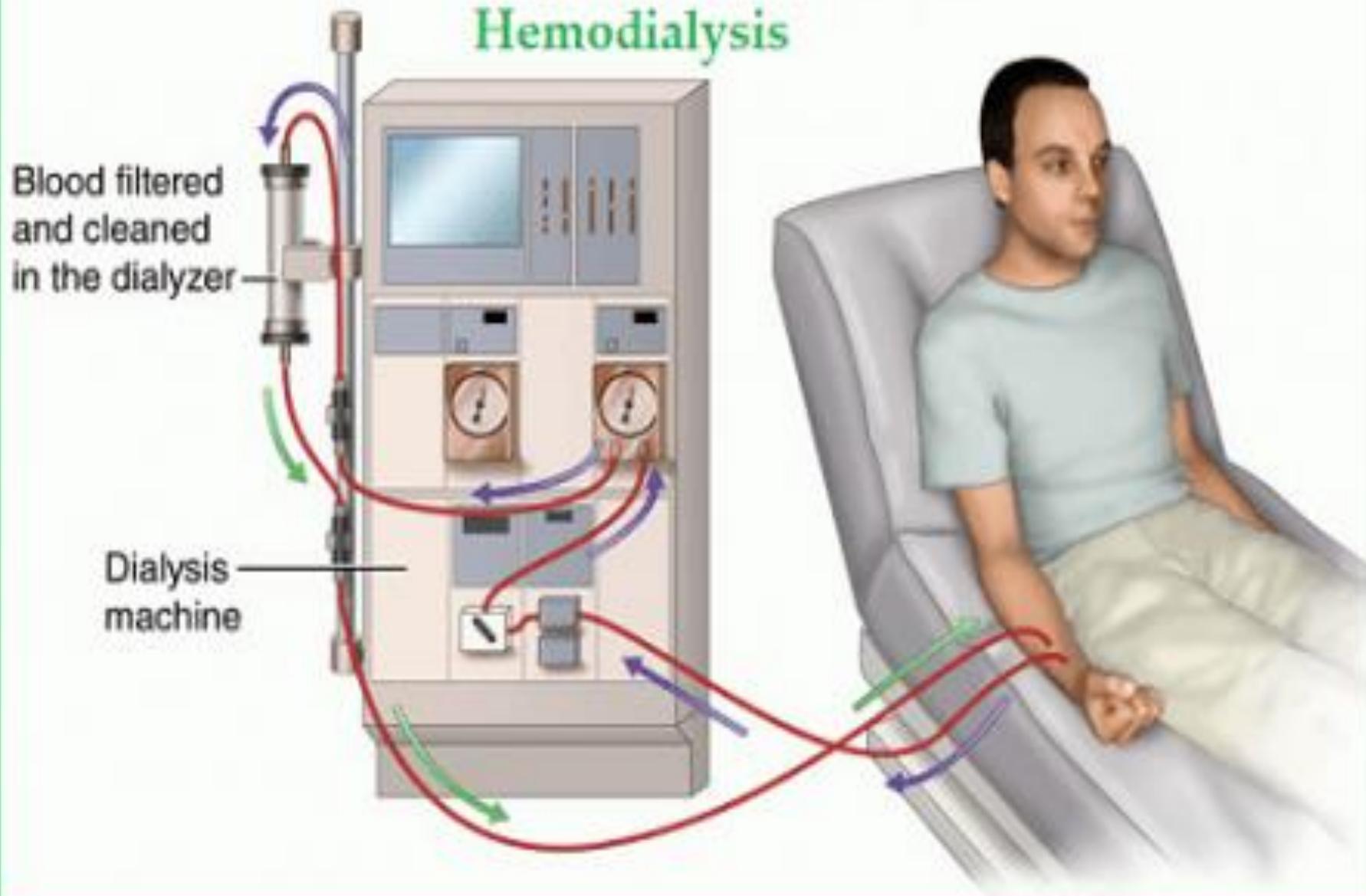
Diagnostic Tests, Treatments, and Surgical Procedures

Term	Meaning
Catheterization	Introduction of a tube into a passage , such as through the urethra into the bladder for withdrawal of urine.
Dialysis	Separation of substances by passage through a semipermeable membrane. Dialysis is used to rid the body of unwanted substances when the kidneys are impaired.
Hemodialysis	Removal of unwanted substances from the blood .
Peritoneal dialysis	Removal of unwanted substances from the body by introduction of a dialyzing fluid (a solution of water and electrolytes) into the peritoneal cavity followed by removal of the fluid.

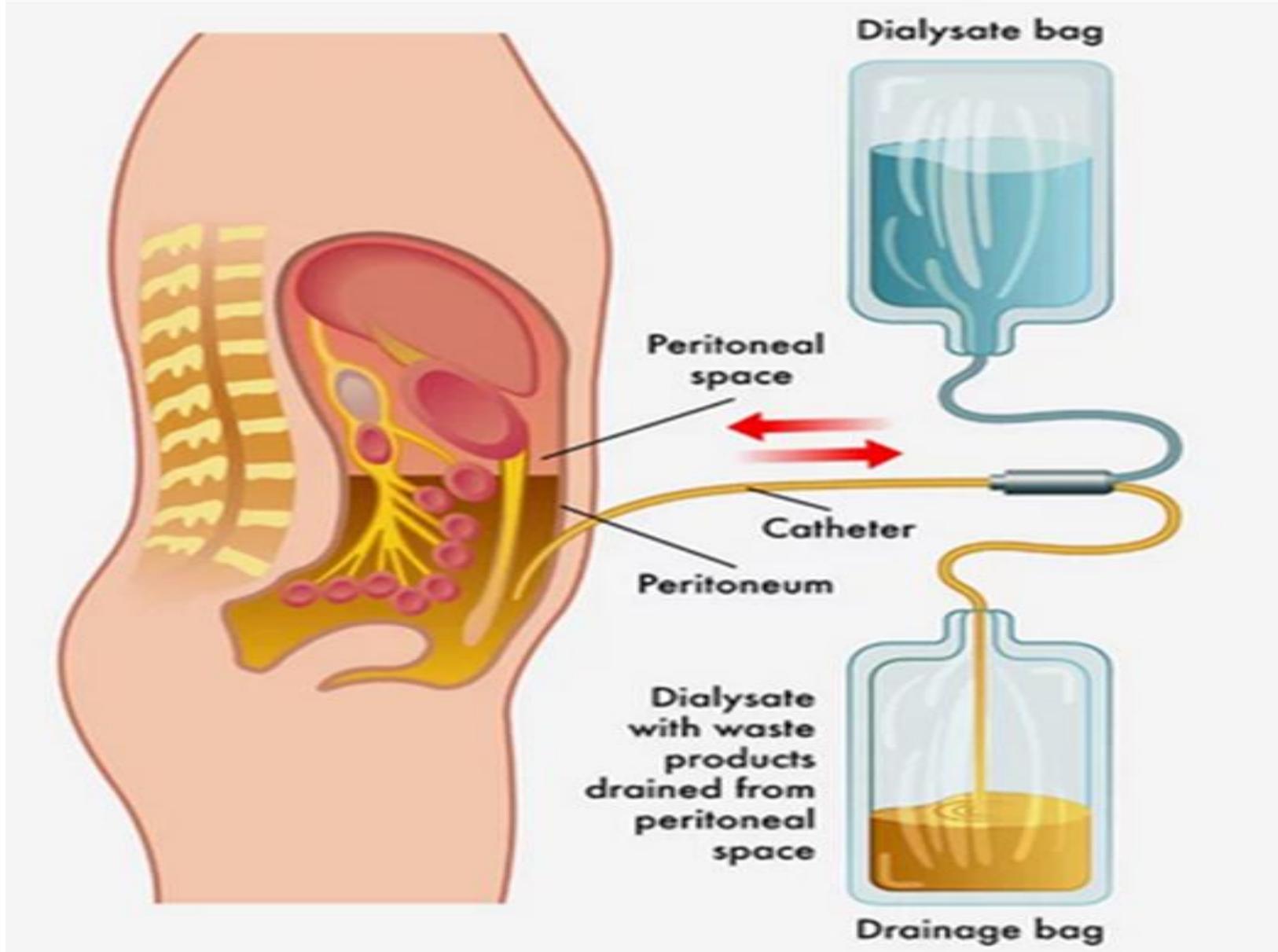


Emptying the collection bag

Hemodialysis



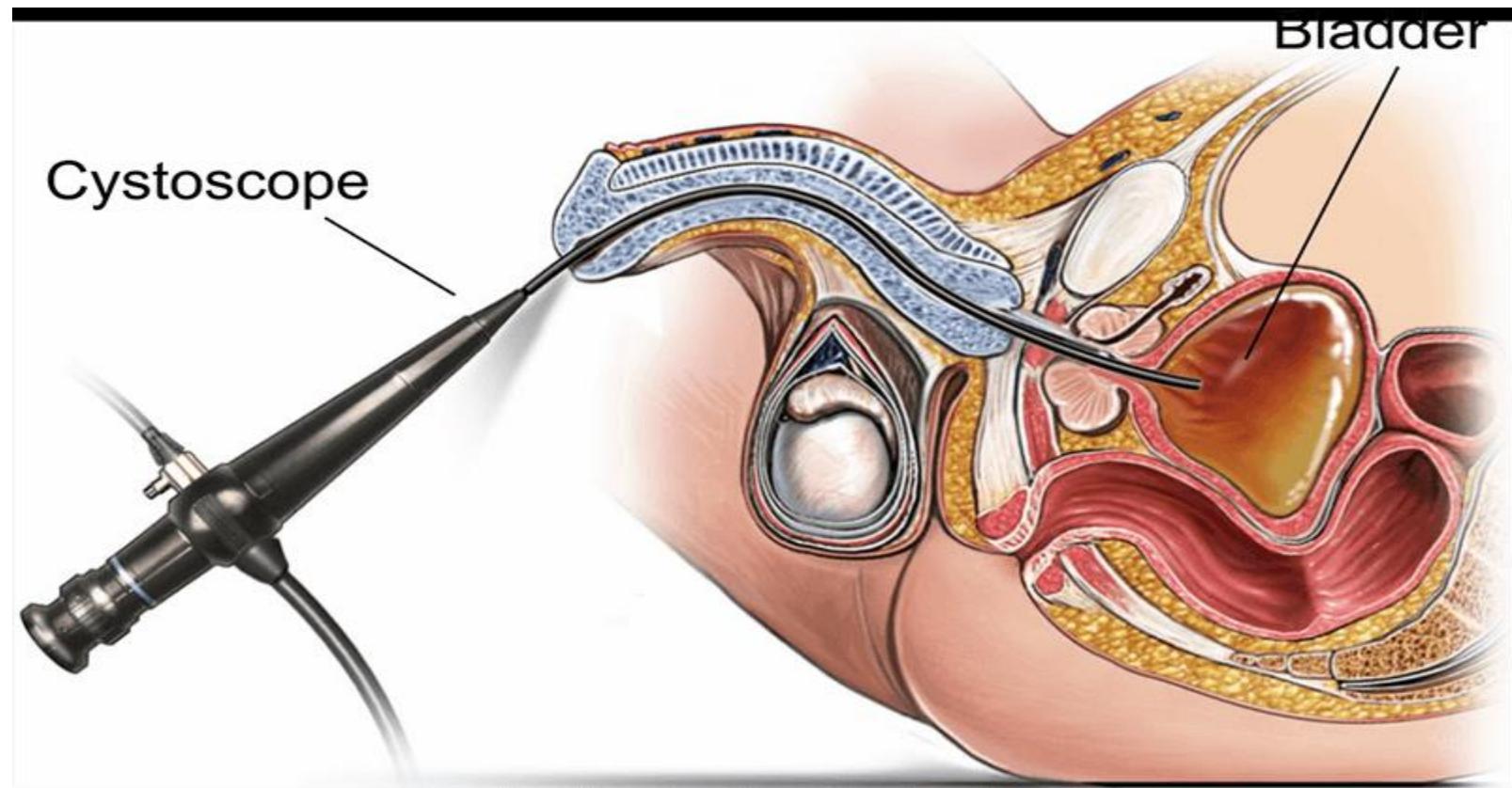
Peritoneal dialysis



Lithotripsy	Crushing of a stone.
Renal transplantation	Surgical implantation of a donor kidney into a patient.
Foley catheter	A urinary tract catheter .
Cystoscope	An instrument for examining the inside of the urinary bladder .

Foley catheter

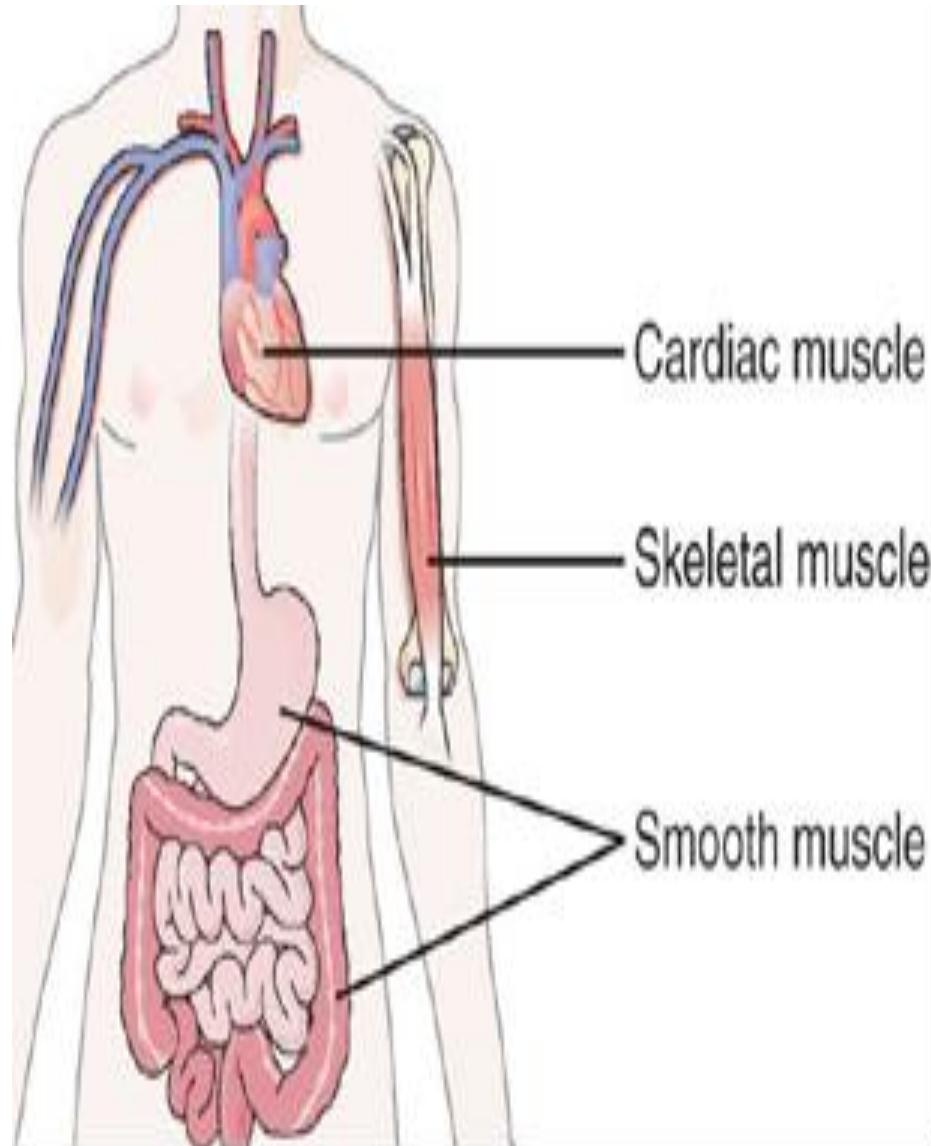




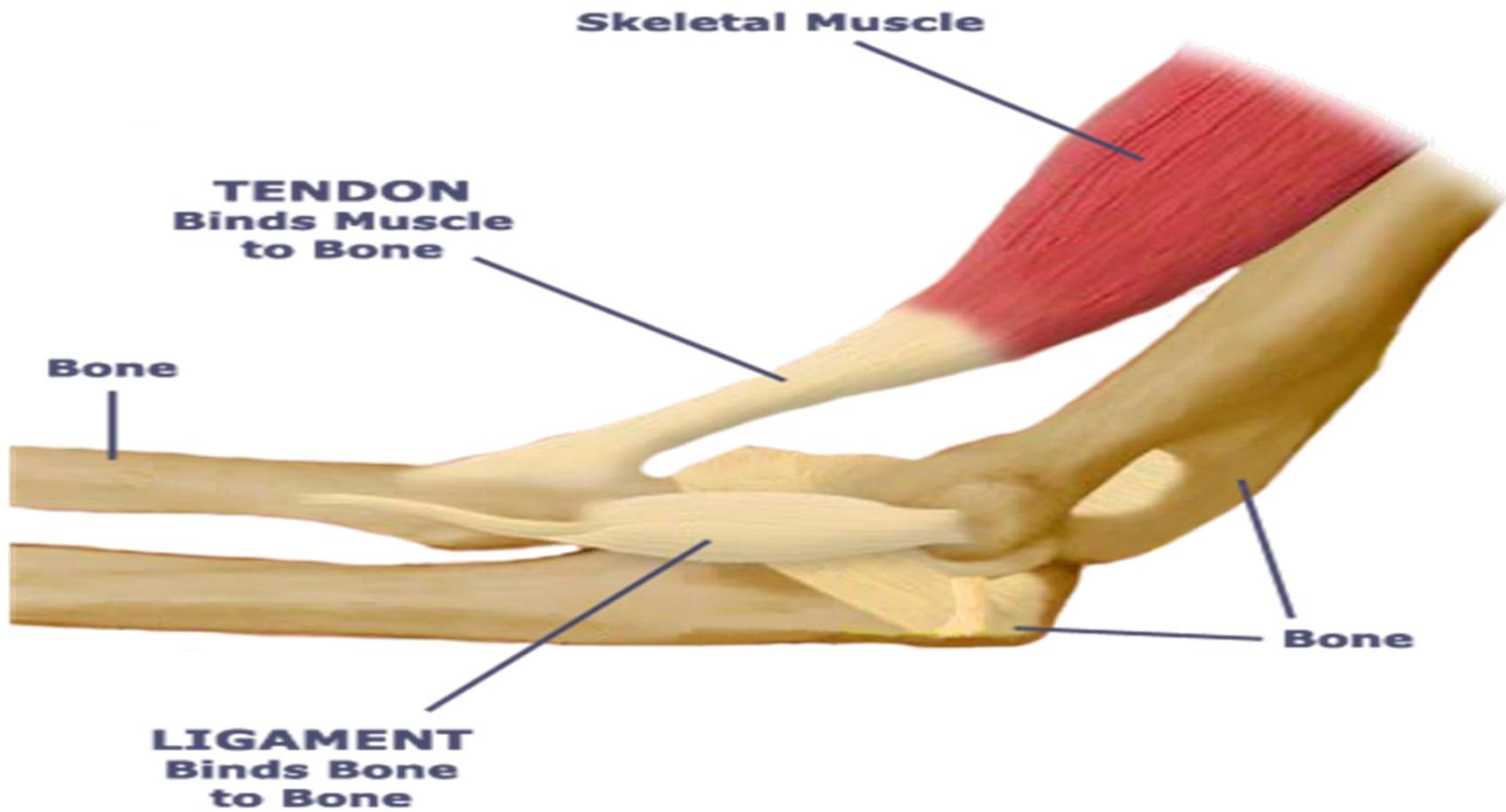
The Muscular System

There are three types of muscle tissue in the body:

- 1-Smooth (visceral) muscle.
- 2-Cardiac muscle.
- 3-Skeletal muscle.



B-Tendons are made of connective tissue that connects **muscle to bone**. **Ligaments** are bands of fibrous connective tissue that **connect bones to bones**.



Word parts related to the muscular system

Word	Part Meaning	Word	Part Meaning
fibr/o	fiber	my/o	muscle
hemi-	half	para-	alongside, near
kine-, kinesi/o	movement	- paresis	partial or incomplete paralysis
ligament/ o	ligament	-plegia	paralysis
muscul/o	muscle	tend/o,	tendin/o tendon

Disorders related to the muscular system

Asthenia	Weakness.
Ataxia	Lack of muscle coordination
Atrophy	wasting of the muscles.
Fibromyalgia	Is a disorder characterized by widespread aching and stiffness of muscles.
Hemiparesis	Partial paralysis of one side of the body.

Ataxia

Fibromyalgia



Hemiplegia	Total paralysis of one side of the body.
Myalgia	Muscle pain.
Myositis	Inflammation of muscle.
Paralysis	Is the loss of voluntary muscle movement.
Paraplegia	Paralysis of both legs and generally the lower trunk.

Quadriplegia	Paralysis of all four extremities .
Spasm	A sudden, involuntary muscle contraction .
Tendinitis	Inflammation of a tendon .
Tetanus	An acute infectious disease caused by the bacteria <i>Clostridium tetani</i> . It is marked by persistent painful spasms of voluntary muscles .

Tetanus

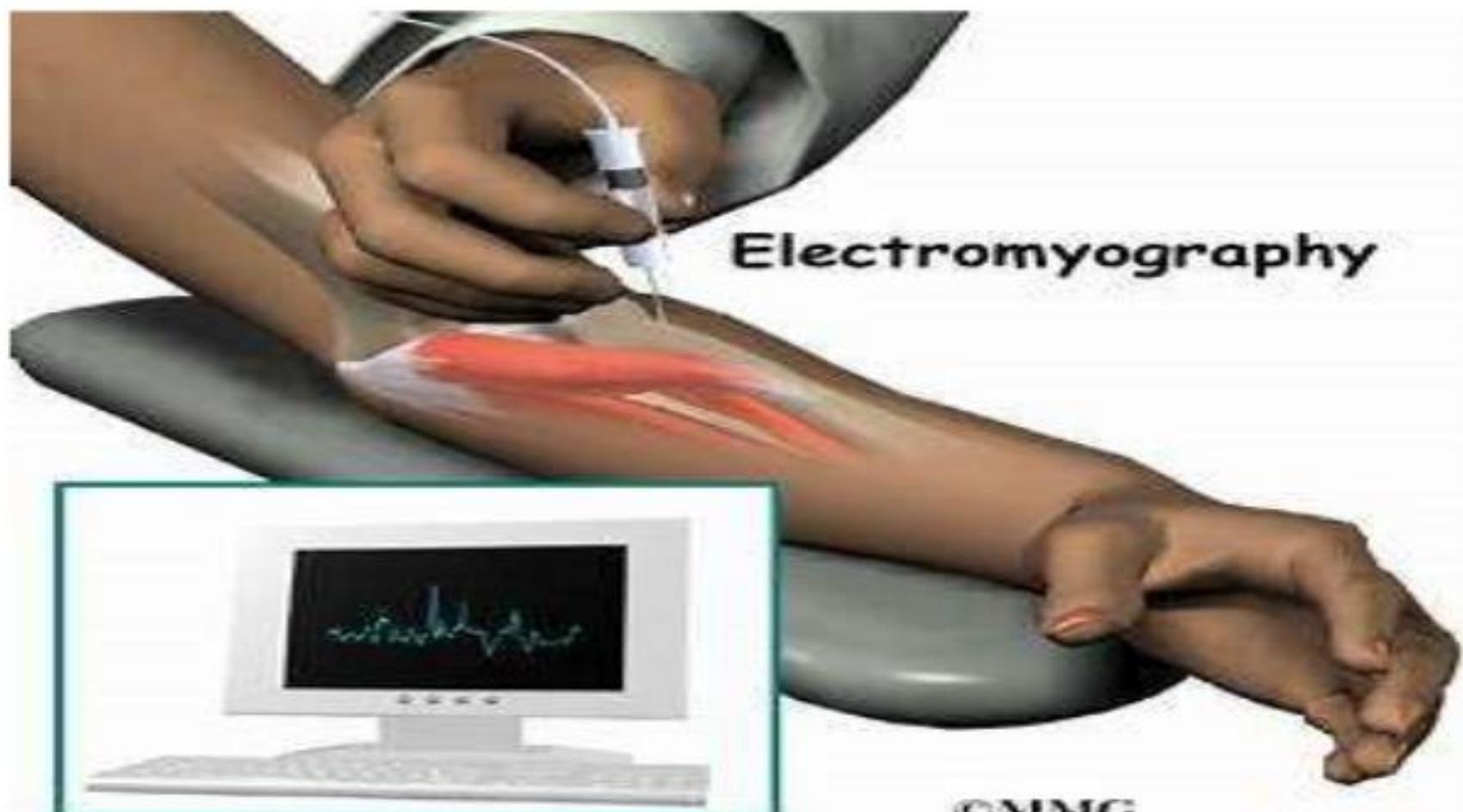


Diagnostic Tests, and Treatments

Term	Meaning
Electromyography (EMG)	Study of the electrical activity of muscles during contraction

Drugs	Use (action)
Muscle relaxants	Medications used to reduce muscle spasm.
Physical therapy	Treatment to prevent disability and restore function through the use of heat, exercise, and massage.

ELECTROMYOGRAPHY (EMG)



Physical therapy



Thank You