**Excretory System**

**Kidney Location**

* Located near on the left & right sides of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at the small of the back.
* Kidneys are \_\_\_\_\_\_\_\_\_” long & \_\_\_\_\_\_\_\_\_” wide.
* Left kidney sits \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than the right due to the large size of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Kidney Physiology**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of waste products
* Maintenance of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the body
	+ Balance of water in the blood.
	+ Balance of electrolytes in the blood.
	+ Regulates pH of blood.
* Release of important \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Kidney Anatomy**

* **Outer** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Inner** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Renal Artery**: Receives \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ blood
* **Renal Vein**: Removes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ blood
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Make urine

**Nephrons**

* Major functional unit
* Makes urine by:
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_blood of water, salt, glucose & urea
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ useful solutes back into the blood stream.
	+ Allowing waste molecules to filter into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Kidney Hormone Function**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Increases reabsorption of ions & water in the kidney.
* **Erythropoietin**: Acts on bone marrow to increase production of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells.
* **Calcitriol**: Promotes the absorption of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the food in the intestines and acts directly on bones to shift calcium into the blood stream.

**Ureters**

* \_\_\_\_\_\_\_\_\_\_\_\_ inch slender tubes that connect the kidneys above to the urinary bladder.
* Transport \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Ureters contain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ muscle tissue and
	+ about every \_\_\_\_\_\_\_\_\_\_\_\_\_ seconds, peristaltic contraction sends urine to bladder!
* Uretal openings are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, to prevent backflow of urine into kidney

**Bladder**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sac that temporarily stores urine.
* Connects to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Can hold up to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of urine
* Has an internal & external \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Urethra**

* Thin-walled tube that carries urine from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the outside of the body.
* Located above the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_opening in females (\_\_\_\_\_\_\_ inch in length)
* Serves to carry urine and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ out of the penis in males (\_\_\_\_\_\_\_\_\_\_\_ inches in length)
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: The act of urinating.

**Disorders**

* **Urinary Tract Infections**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ invades the urethra & bladder. Much more common in females than males because it is shorter and positioned closer to the anus.
* **Kidney Stones**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ deposits, magnesium salts, or crystal of uric acid can form solids within the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* **Incontinence**: Inability to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ urination
	+ Babies, women after birth, elderly