Excretory System Review

December 11, 2019 10:36 AM

1. Identify the primary metabolic wastes, and the structures that eliminate them

ammonia - removed by kidneys Urea - removed by kidneys and skin Mineral salts - removed by kidneys or skin Carbon dioxide - removed by lungs, intestines, skin Water - removed kidneys, lungs, intestines, skin

***If removed by kidney = in urine
If removed by skin = diffusion or sweat

2. Identify the following structures on a diagram, and describe their functions:

 a. Kidneys = regulate body fluids (pH, volume, composition/solutes) by filtering the blood renal artery = brings blood into the kidney

renal vein = bringing filtered blood out of the kidney

Ureter = transports excreted wastes into the bladder

Urethra = transporting urine in bladder out of the body

urinary bladder = holds/stores urine until it is to be expelled from the body

urinary sphincters = circular muscles that control the removal of urine from the bladd

- internal sphincter (right below the bladder)
- -external sphincter (further down the urethra)
- 3. Identify where filtration, reabsorption, and secretion happen in the nephron, and what role each part of the nephron plays in filtration, reabsorption, and secretion.
 - a. Include:

Structure	What happens	What role
afferent arterioles	Bringing blood into each Bowman's Capsule (starts filtration)	Carrying unfiltered blood
Bowman's capsule	Site of filtration	Houses and protects the glomerulus
collecting duct	Site secretion	-Allows for the final secretion of substances (H ions, K ion, drugs) -removes all the wastes
distal convoluted tubule	Reabsorption ending here, and secretion beginning	Allows for final removal of substances (water and other substances)
efferent arteriole	Bringing blood out of Bowman's Capsule (end of filtration)	Connect the filtered blood, with the capillaries that are reabsorbing substances
Glomerulus	Site of filtration (inside of the Bowman's Capsule)	Increase in blood pressure, to allow filtration to occur (separating the blood cells from plasma)
Loop of Henle	Site of reabsorption	Increasing surface area to allow for substances to be reabsorbed into the bloodstream
peritubular capillaries	Site of reabsorption (surround the Loop of Henle and other tubules)	Increase in surface area to all for the uptake of the substances that are being reabsorbed.
proximal convoluted tubule	Beginning site of reabsorption (connects the Bowman's Capsule to the Loop of Henle)	Substances beginning to get transported out of the tubule for reabsorption

4. Describe the processes of ****ALL OF THESE HAPPEN IN THE NEPHRON!*****

: occurs in the Bowman's Capsule (glomerulus)

Reabsorption: reabsorption of substances that the body can still use/needs

: can be reabsorbed by passive or active transport

:Two step process = out of tubules*** into space, then from space into the capillaries

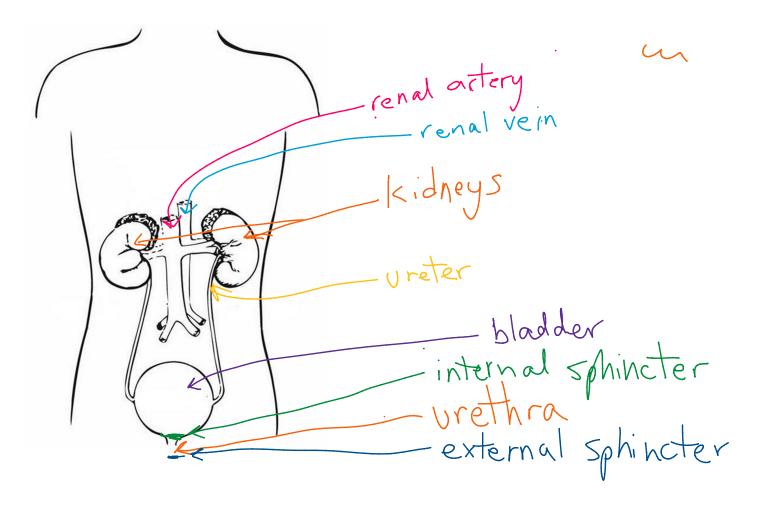
***proximal convoluted tubule, loop of henle, or distal convoluted tubule

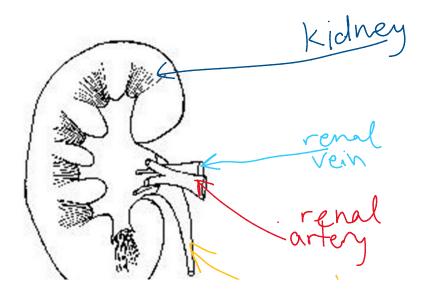
Secretion: the last stop for H ions, K ion, and drugs to be removed out of the blood.

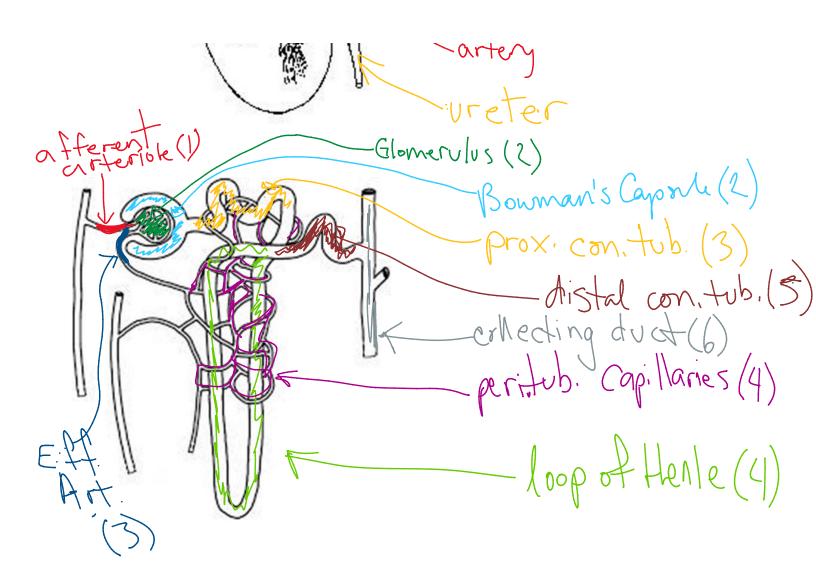
: All the is left is then urine

: occurs at the collecting duct

: anything left (urine) in the duct will be transported to the bladder via the ureter







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