

Urine Formation

There are 3 main steps to how urine is formed:

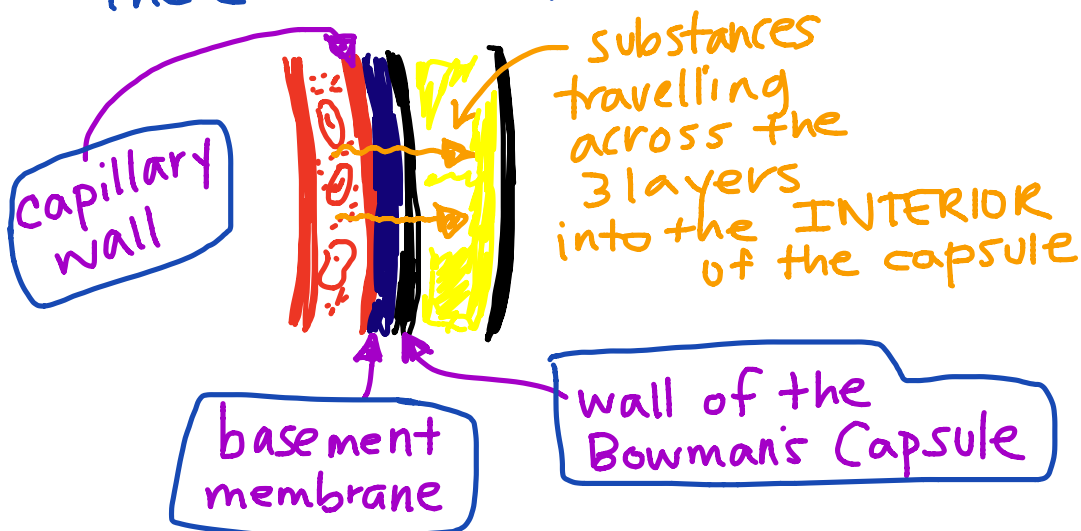
1. Glomerular Filtration
2. Tubular Reabsorption
3. Secretion

1. Glomerular Filtration

* Only some substances pass from the blood (capillaries = tiny blood vessels) into the INTERIOR of the BOWMAN'S CAPSULE.

* The substances that do pass through are called the FILTRATE. ("pre-pee"!!)

There are 3 layers that do the filtering:



- What substances can cross these layers?

Cl, K, Na, Glucose, Amino Acids,
H₂O → we'll focus on these.

- What substances CANNOT cross?
Proteins, Cells, Platelets

2. Tubular Reabsorption

* 99.5% of the filtrate is reabsorbed into the bloodstream!

* Diabetics may not reabsorb glucose!

What is reabsorbed?

Glucose, H₂O, NaCl, Vitamins,
Hormones, Amino Acids.

3. Secretion

The capillaries surrounding the nephron create (secrete!) substances into the tubule, such as K, H ions.

