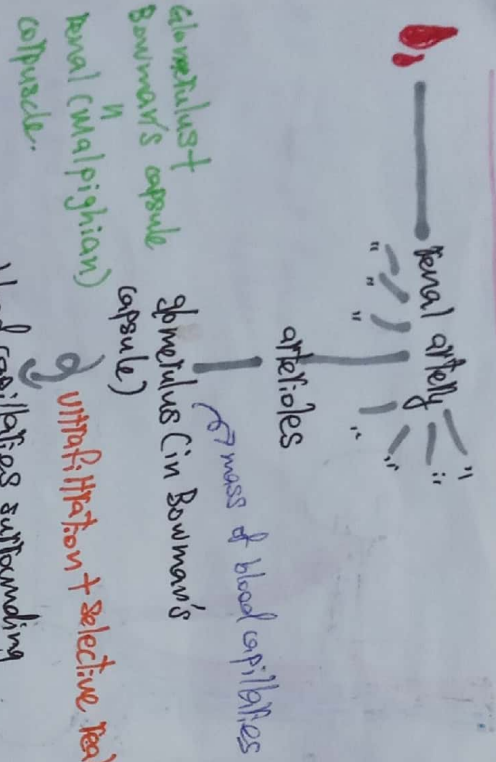


Blood circulation @ nephrons



Composition of urine:

water	mineral salts	urea	other nitrogenous substances
96.0g	1.8g	2.0g	0.2g

protein-rich diet: ↑ urea conc.

water-rich diet: ↑ vol. of urine; more diluted

high-salt diet: ↑ salt conc.

Diabetic: unable to store up excess glucose as glycogen → ↑ glucose conc. in blood → nephrons reabsorb all glucose fast enough →

↑ glucose conc. in urine

Δ differs by diet, weather & intake of drugs

Urine formation in nephrons

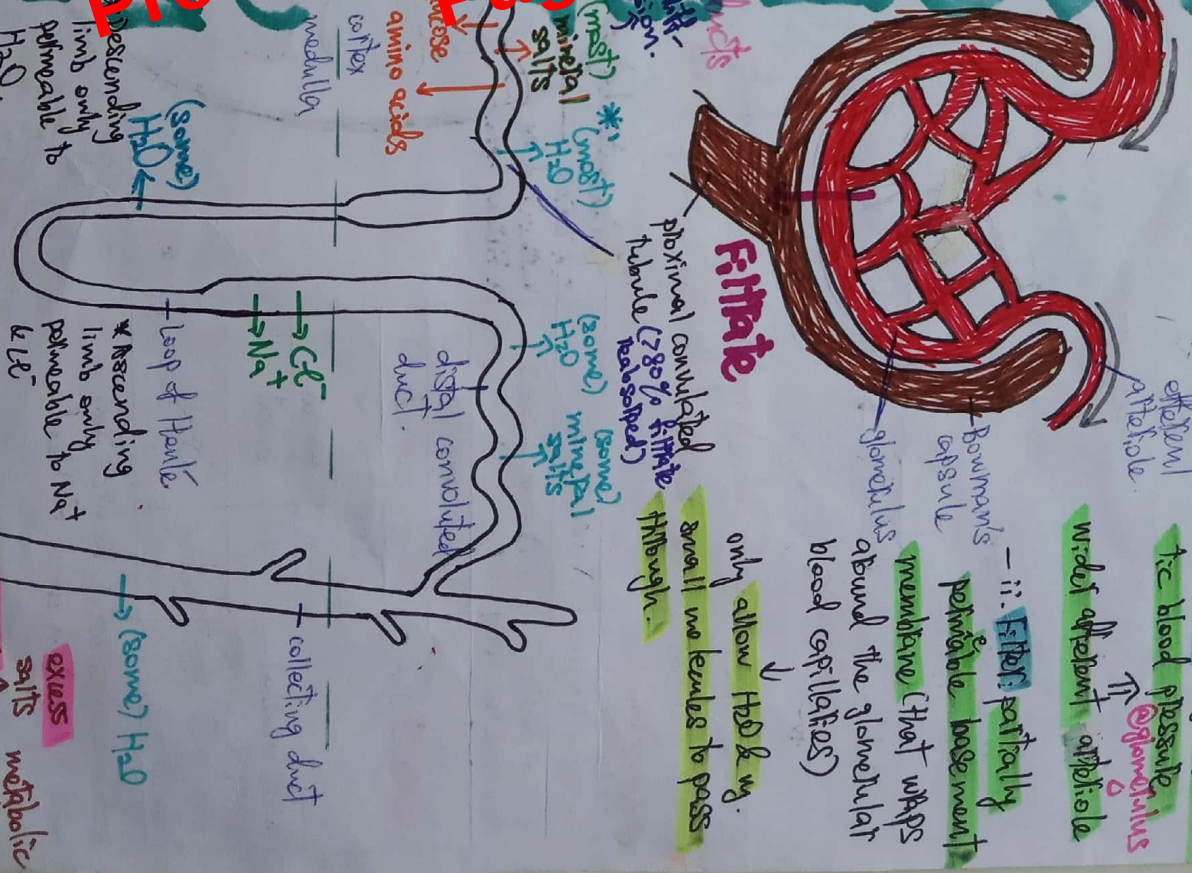
(1) Ultrafiltration @ renal corpuscle

- process where all ^{osmotic} ^{pressure} ^{difference} ^{across} ^{membrane} ^{between} ^{arteriole} ^{and} ^{venule} ^{capillaries} ⁱⁿ ^{the} ^{glomerulus} ^{is} ^{filtered} ^{out} ^{of} ^{the} ^{blood} ^{plasma} ⁱⁿ ^{the} ^{glomerulus}.

1. H₂O
2. Glucose
3. Amino acids
4. Mineral salts
5. Nitrogenous waste products

(2) Selective Reabsorption
- Reabsorption of useful substances from filtrate into the bloodstream.

Reabsorption of useful substances from filtrate into the bloodstream.



* Reabsorption of solutes → water potential difference → H₂O reabsorbed by osmosis