GROOVIN’ ON THE NEPHRON LINE: Track 10

This song follows filtrate on its journey through a nephron to excretion. Notice that the vocal is low while passing through the descending loop of Henle and goes high again on the ascending loop. Note also that the reverb or wavery/distant quality of the vocal intensifies as the filtrate descends through the loop of Henle mirroring the increase in solute concentration as filtratetravels down the descending loop. Follow the lyrics as they trace the path of filtrate through the nephron.

It’s a wild ride, A rollercoaster stride
Down and up, To pee in the cup
Out ammonia waste
But rich nutrient baste
Is reabsorbed on the nephron line

Glomerulus has slits
Proteins won’t fit
Precious proteins move,
Efferent they groove

Nutrients, salts exit
Body needs it, gets it
Solute concentration decreases
Water follows the flow
Then more solutes go
On the Proximal CT line

“In the majority of reabsorption takes place on the proximal CT line”
Survivors tumble
A descending loop stumble
“Water move out!”
Osmotic gradient shouts
Solute concentration decreases
No, they can’t cross the fence
Of the Descending Loop of Henle Line

“Solute concentration increases as water leaves but solutes can’t leave the descending loop”

DCT takes toxins
Acids, drugs and ions
Aldosterone
Makes Na⁺ phone home
Hormones cause absorption
Calcium / sodium extortion
On the Distal CT line

“Still reabsorbing
Aldosterone performing Pump saves Na⁺ fate
Urea & bicarbonate
Reabsorb per gradient
Last place to vent
On the Collecting Duct Line

If the body needs the Na⁺ and Cl⁻ it can actively pump it out of the ascending loop”

Ascending loop wall’s a fort, Way out active transport
Sodium and chlorine, Pumped out using ATP
On the Ascending Loop of Henle Line

“Aldosterone increases Na⁺ permeability while ADH increases reabsorption of water in the collecting duct”

All right now y’all, we’re gonna go through the whole trip:
Glomerulus, PCT, Descending Loop,
Ascending Loop, DCT, Collecting Duct,
Papillary Duct, Papillae, Minor Calyx,
Major Calyx, Renal pelvis, ureter – Then you go to the bladder
Through the urethra then you’re free!

Hit loop’s bottom, Want solutes – got em

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