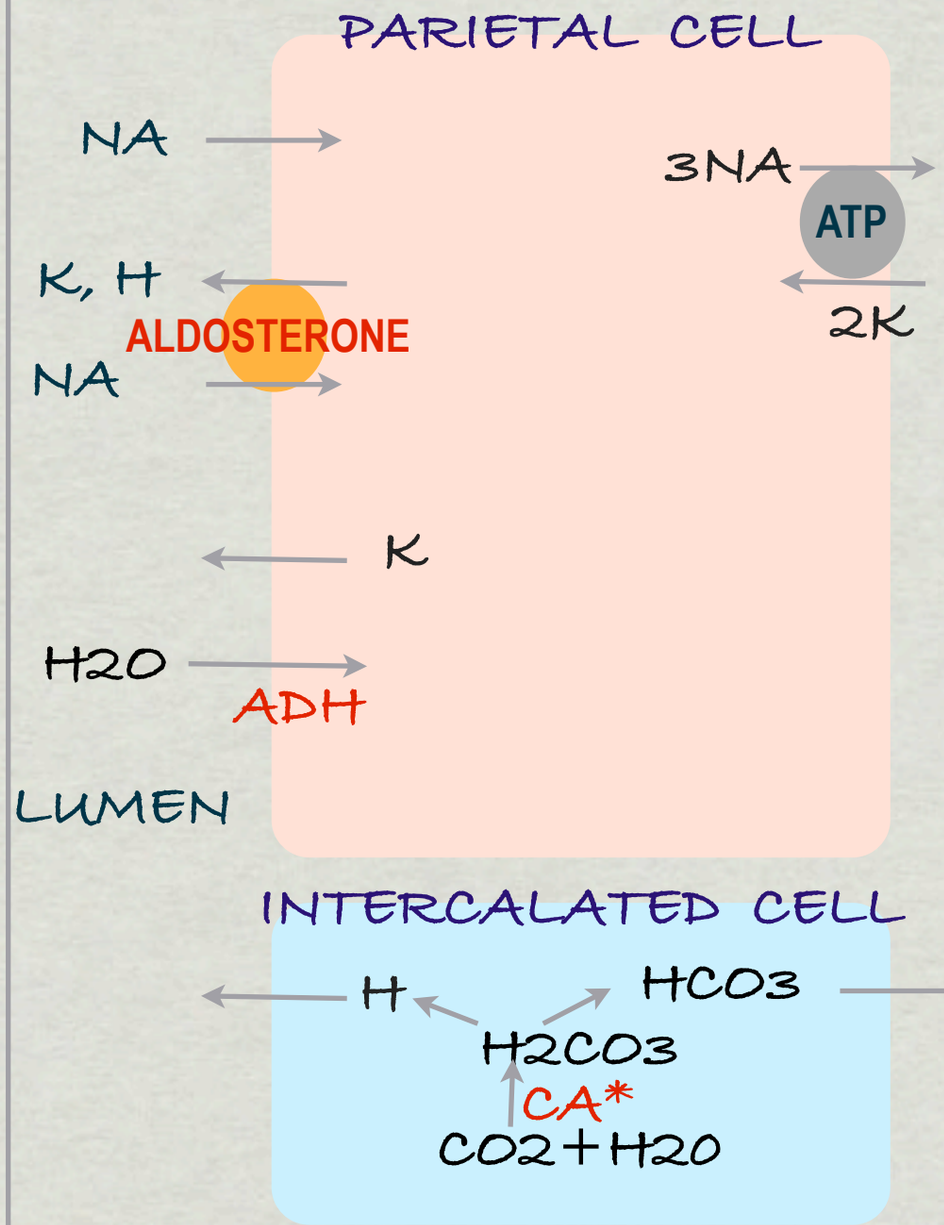
CD physiology



Na reabsorption	~ 1-2% in CD
NA/K,H	~ 1-2% Na from filtrate is reabsorbed through Na/K,H exchanger. It reabsorbes Na and secretes K&H. ALDOSTERONE through Zn fingers regulates the expression of this pump based on Na conc. If Na conc is low ->hyperALDO->increased Na reabsorption in exchange w/ K&H.
Na, K	on apical membrane, Na is reabsorbed and K secreted through 2 un-gated channels.
H2O,HCO3 reabsorption	
H_2O	ADH stimulates Gs coupled receptor(V2) ->prot kinase A-> phoshorilates water channels(aquaporin)-> open-> H2O diffusion. Li uncouples the receptor-> Neph. Diab.Ins. Amiloride directly recouples them.
HCO_3	produced by CA from CO2 and H2O. Reabsorbed 10% in CD while H is secreted.