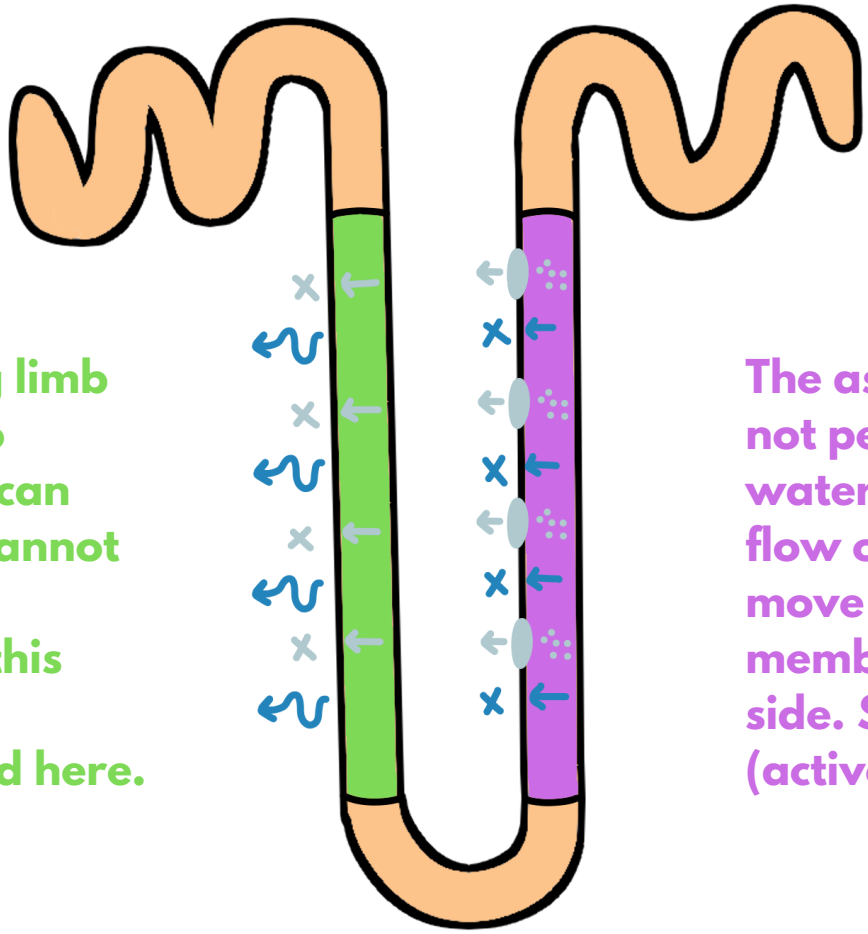
loop of henle

The Loop of Henle processes blood to recover water and salt from waste/urine. In doing so, a gradient is created, which helps keep the Loop of Henle in optimal conditions for osmosis. The further down you go, the saltier the waste is.

Salt
Water



The descending limb is permeable to water = water can flow out. Salt cannot move past the membrane on this side. Osmosis (passive) is used here.

The ascending limb is not permeable to water = water cannot flow out. Salt CAN move past the membrane on this side. Sodium pumps (active) is used here.

In various animals, their Loop of Henles will differ in size, based on climate and water retention. The longer the loop, the stronger the concentration gradient, meaning more osmosis and more water reabsorbed back to the body.

diagram not to scale nor in proper proportion to one another

created by emi matsumae,
for the daily dosage