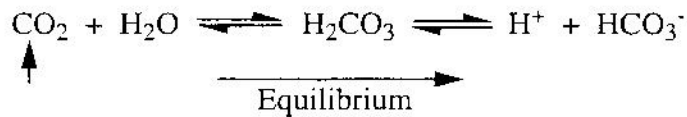


RESPIRATORY ACIDOSIS (low pH, high H^+ concentration)

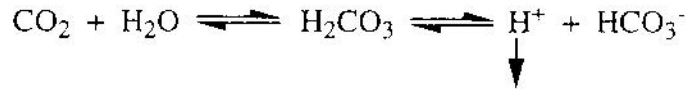


CO_2 increases (slow or shallow breathing)

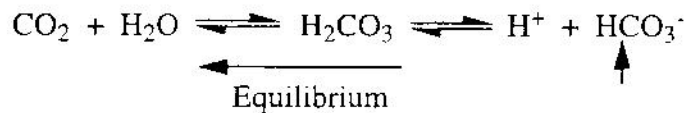
Equilibrium shifts to right

H^+ increases

Kidneys respond:



H^+ excreted

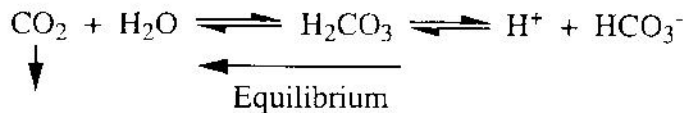


HCO_3^- increased

Equilibrium shifts left

H^+ decreases

RESPIRATORY ALKALOSIS (high pH, low H^+ concentration)

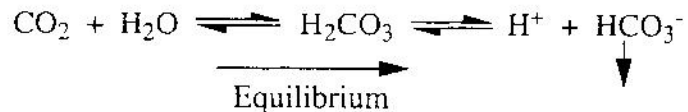


CO_2 decreases (hyperventilation)

Equilibrium shifts left

H^+ decreases

Kidneys respond:



HCO_3^- excreted

Equilibrium shifts right

H^+ increases