CO₂ diffuses into bloodstream

7% remains dissolved in plasma (as CO₂)

93% diffuses into RBCs

23% binds to Hb, forming carbaminohemoglobin, Hb•CO₂

70% converted to H₂CO₃ by carbonic anhydrase

H₂CO₃ dissociates into H⁺ and HCO₃⁻

H⁺ removed by buffers, especially Hb

HCO₃⁻ moves out of RBC in exchange for Cl⁻ (chloride shift)

Cl⁻