

CO_2

A diagram illustrating the exchange of carbon dioxide (CO_2) between red blood cells and the plasma of a blood vessel. At the top, several yellow circular cells represent red blood cells, each containing a purple nucleus and internal structures. A single CO_2 molecule is shown above one of these cells, with a curved arrow pointing downwards towards the plasma. Below the plasma, a chemical equilibrium is shown: $\text{CO}_2 + \text{H}_2\text{O} \rightleftharpoons \text{H}_2\text{CO}_3 \rightleftharpoons \text{HCO}_3^- + \text{H}^+$. This equilibrium represents the dissociation of carbonic acid into bicarbonate and a hydrogen ion. Another curved arrow points upwards from the plasma towards the bottom red blood cell, indicating the movement of CO_2 into the cell.

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