



Placental CO₂ Exchange

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1. Transferred as dissolved CO₂, carbonic acid, bicarbonate ion (predominant form), carbonate ion, and carbaminohemoglobin
2. CO₂ is 20× more diffusible than O₂ and readily crosses the placenta
3. Only dissolved CO₂ crosses the placenta. Carbonic anhydrase in RBCs convert bicarbonate ion to CO₂.
4. CO₂ transfer is augmented by the Haldane effect (higher affinity for CO₂ in maternal deoxyhemoglobin than fetal oxyhemoglobin)