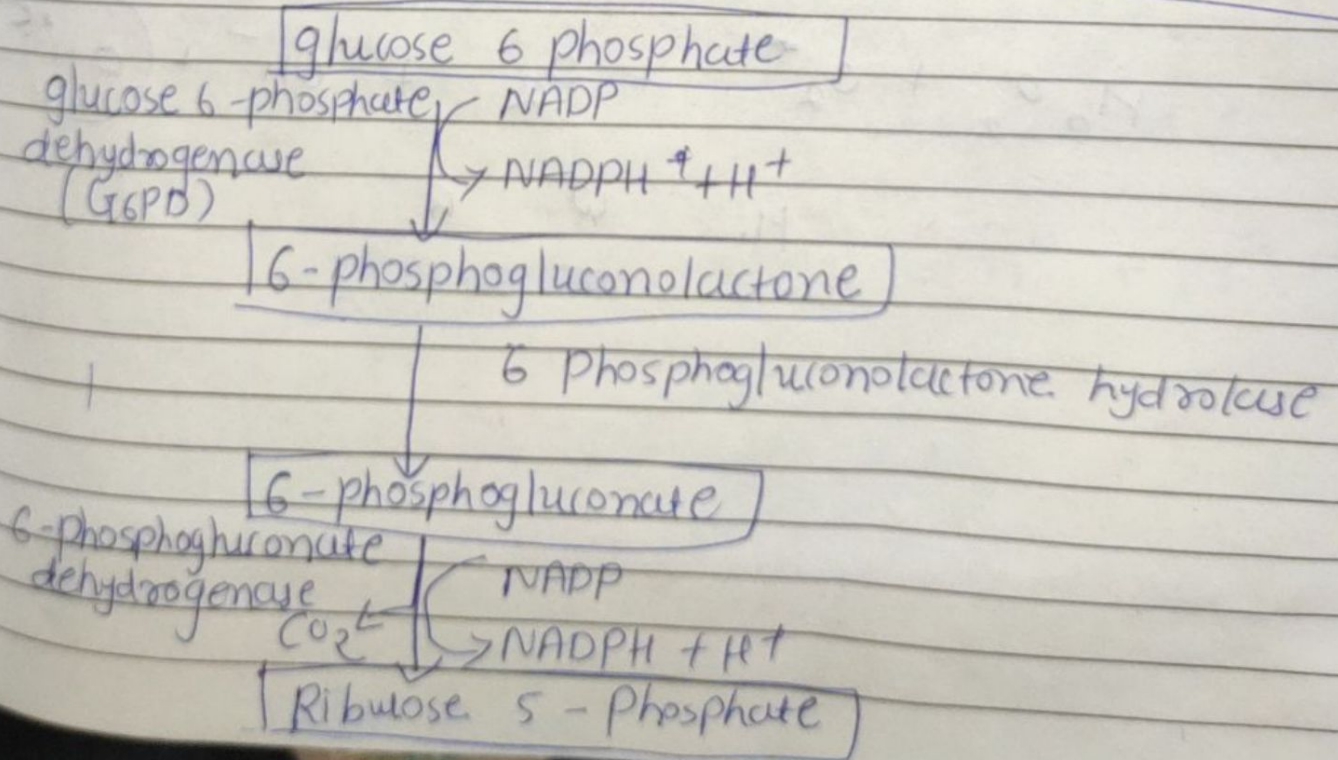
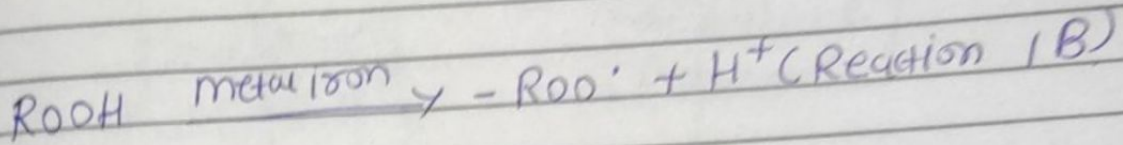
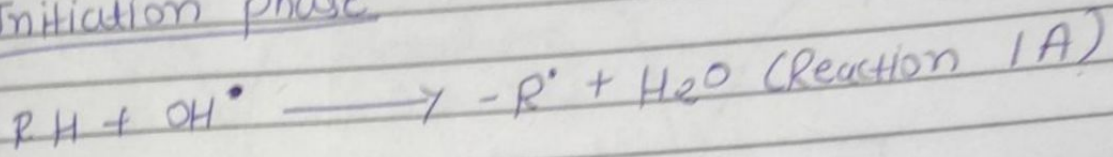


NADPH formation pentose phosphate pathway



H₂O₂ mediated damage to cell membrane lipid
PUFA of cell membrane easily destroyed

① Initiation phase

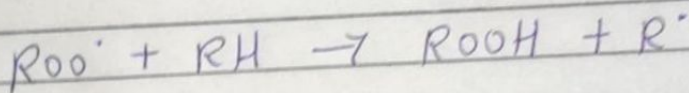
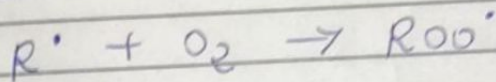


R - PUFA

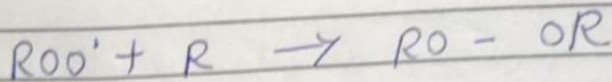
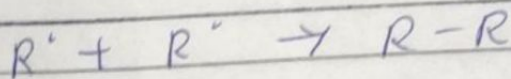
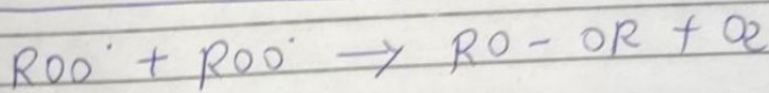
R[•] - Carbon centered radical

ROO[•] - lipid peroxide radical

② propagation phase

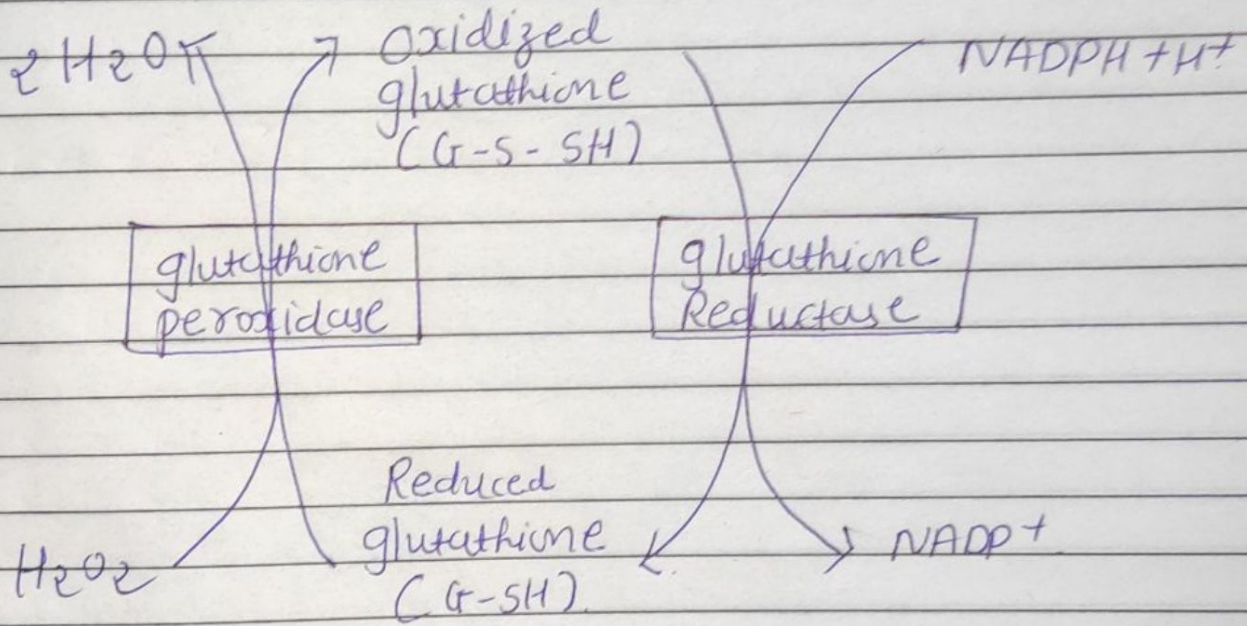


③ Termination phase



How NADPH used to metabolize H_2O_2

①



Biochemical events causing hemolysis in G6PD deficiency

Mutation in gene for G6PDH



↓ led. activity of G6PDH



↓ led levels of NADPH



↓ led regeneration of GSH from GSSG by glutathione reductase



Oxidation, due to ↓ led levels of GSH & ↓ led levels of intracellular oxidants of SH groups of Hb, membrane protein, altering membrane structure & ↑ ing. susceptibility to ingestion by macrophages



Hemolysis