

MITOCHONDRIAL ELECTRON TRANSPORT CHAIN

ENZYME COMPLEX

ELECTRON CARRIERS

I NADH-ubiquinone reductase	FMN, Fe-S
II Succinate-ubiquinone reductase	FAD, Fe-S
III Ubiquinol-cytochrome c oxidoreductase	Hemes, Fe-S
IV Cytochrome c oxidase	Hemes, 2 Cu
Cytochrome c	Heme

REACTIONS

<u>REACTIONS</u>	<u>E°</u>
$\text{NADH/H}^+ + \text{CoQ} \longrightarrow \text{NAD}^+ + \text{CoQH}_2$	0.42 V
$\text{FADH}_2 + \text{CoQ} \longrightarrow \text{FAD} + \text{CoQH}_2$	0.32 V
$\text{CoQH}_2 + 2 \text{ cyt c(Fe}^{+3}) \longrightarrow 2 \text{ cyt c(Fe}^{+2}) + \text{CoQ} + 2 \text{ H}^+$	0.18 V
$2 \text{ cyt c(Fe}^{+2}) + 2 \text{ H}^+ + 1/2 \text{ O}_2 \longrightarrow 2 \text{ cyt c(Fe}^{+3}) + \text{H}_2\text{O}$	0.52 V

