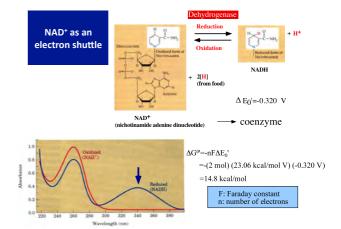
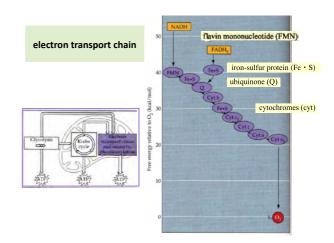


The sites of electron transfer that form NADH and ${\rm FADH_2}$ in glycolysis and the citric acid cycle.

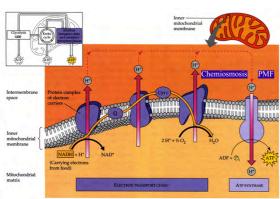




NADHとは、還元型ニコチンアミドアデニンジヌクレオチドの事です。お 昼後に、ウトウトしてしまう方や毎日帰ったらパタンキューという方など 集中力やスタミナを常に高いレベルに保ちたい方におすすめです。

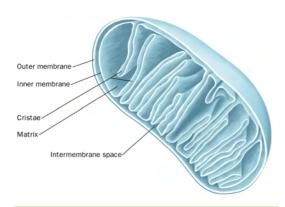


Chemiosmosis: How the mitochondrial membrane couples electron transport to oxidative phosphorylation

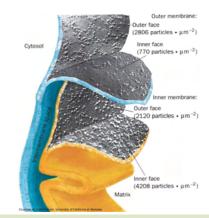




Mitochondria. (a) An electron micrograph of an animal mitochondrion.



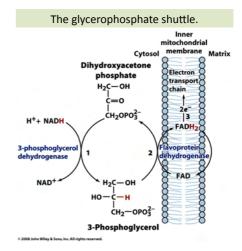
Mitochondria. (b) Cutaway diagram of a mitochondrion.



Freeze-fracture and freeze-etch electron micrographs of the inner and outer mitochondrial membranes.



Electron microscopy—based three-dimensional image reconstruction of a rat liver mitochondrion.



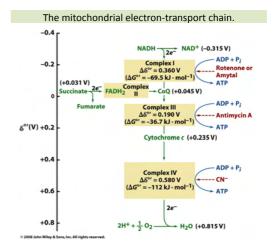
COO Cytosol minchondrial membrane chondrion HO — H
CH2
COO Malate

MAD* malate

dehydrogenase
NADH + H*

Oxaloacetate

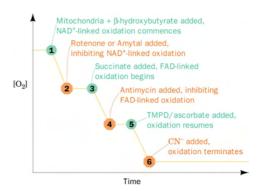
Oxaloacet

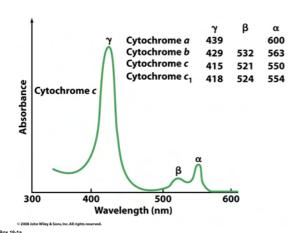


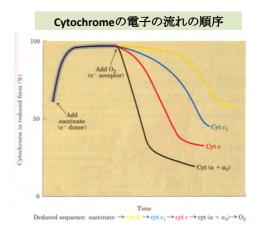
Effect of inhibitors on electron transport.

Mitochondria + β-hydroxybutyrate added, NAD+-linked oxidation commences Rotenone or Amytal added, inhibiting NAD+-linked oxidation Succinate added, FAD-linked oxidation begins Antimycin added, inhibiting FAD-linked oxidation TMPD/ ascorbate added, oxidation resumes CN* added, oxidation terminates 6 Time

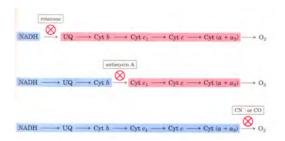
Effect of inhibitors on electron transport.

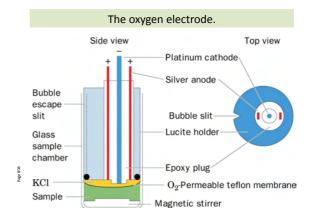






阻害剤と電子の流れ



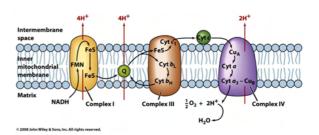


Electron micrographs of mouse liver mitochondria.

(a) In the actively respiring state.

(b) In the resting state.

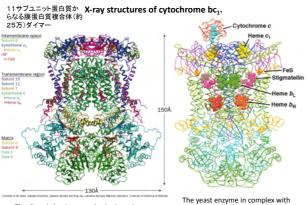
The mitochondrial electron-transport chain.



H₃CO CH₃ CH₃
H₃CO CH₂ CH₂ CH₂ CH₂ CH₂
Isoprenoid units
Coenzyme Q (CoQ) or ubiquinone
(oxidized or quinone form)

| [H-]
OH₃CO CH₃
| H₃CO CH₃
| COenzyme QH- or ubisemiquinone
(radical or semiquinone form)

Figure 18-10



The dimeric bovine complex is viewed perpendicular to its 2-fold axis and parallel to the membrane with the matrix below.

The yeast enzyme in complex with cytochrome *c* and the inhibitor stigmatellin viewed with a ~90° rotation about its 2-fold axis.

X-Ray structure of fully oxidized bovine heart cytochrome *c*

