

Complex Chronic Conditions + J & J vaccine = Crash

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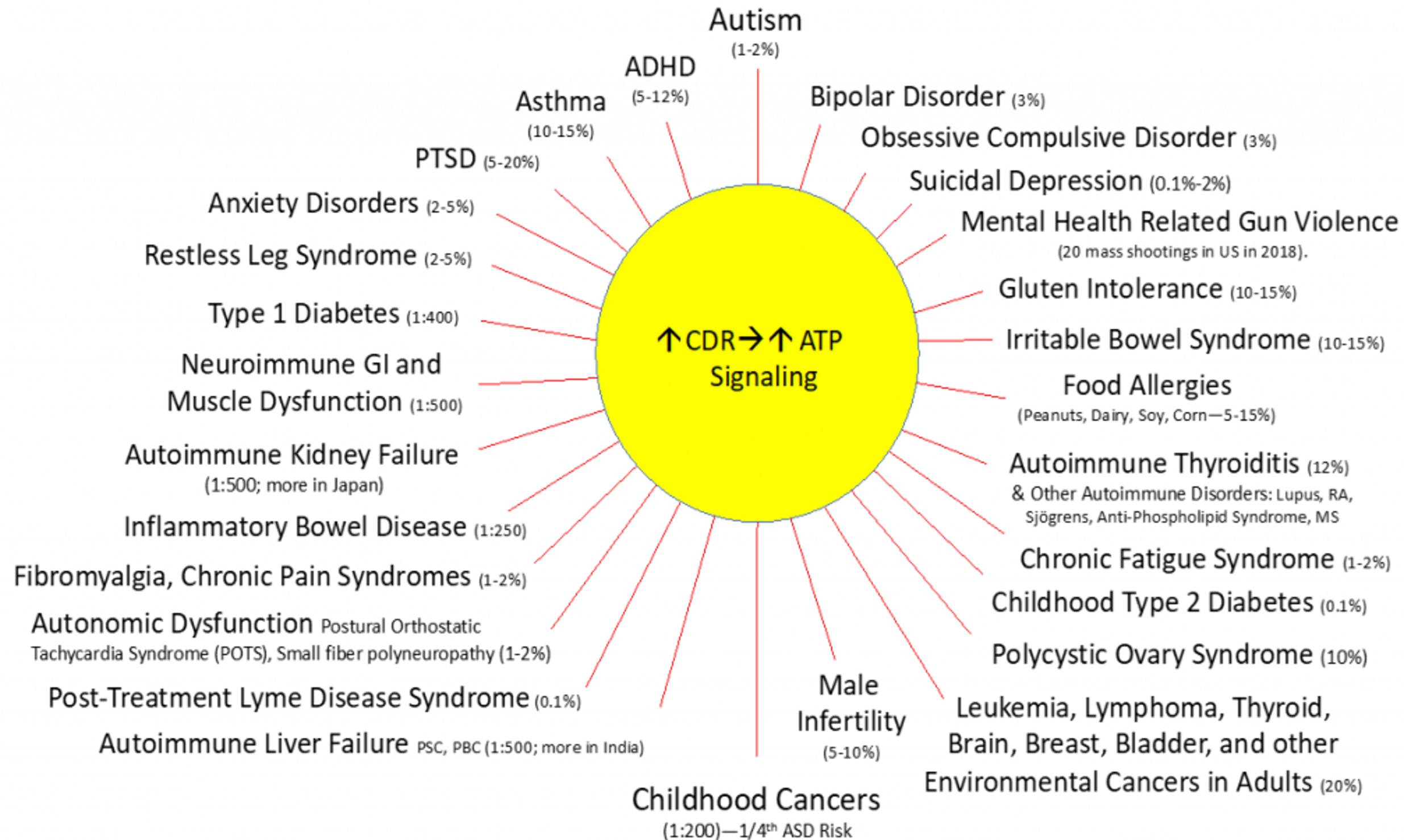
President and CEO Advocates for Families

Pediatric Advisor, FLCCC

Pediatric Advisor, Children's Health Defense



Children and Chronic Disease



- **40% of Children Born Today Suffer with Chronic Disease. The prevalence of over 20 diseases has increased 2-to-10-times since 1980s. <http://naviauxlab.ucsd.edu>**

Persistent Cell Danger Response

Pathogenesis  Salugenesis

- Repair at mitochondrial level crucial for every chronic illness
- Injury (like spike protein or foreign DNA) fractures mitochondria
- Exogenous DNA perpetuates mast cell activation
- ATP is needed for every neurotransmitter at every synapse

Bob Naviaux: Molecular geneticist and mitochondrial specialist at UCSF

Naviaux, Robert K. "Incomplete healing as a cause of aging: the role of mitochondria and the cell danger response." *Biology* 8, no. 2 (2019): 27.

Naviaux, Robert K. "Mitochondrial and metabolic features of salugenesis and the healing cycle." *Mitochondrion* (2023).



Stages of Healing on the Mitochondrial Level

- M1 – PRO-INFLAMMATORY
- M0 – SELF-PROLIFERATING
- M2 – PRO-RESOLUTION

M2 (CDR3)	M1 (CDR1)	M0 (CDR2)
Anti-inflammatory (pro-resolution)	Pro-inflammatory	Proliferative
Adapted for healthy functioning	Adapted for defense	Adapted for growth
Concert master of metabolism & remodeling	Important for glycolysis & ROS production	Dampen inflammation & prepare for resolution
OxPhos	Beginning	Middle
Low eATP	High eATP	Medium eATP



Fun Facts About the Mitochondria

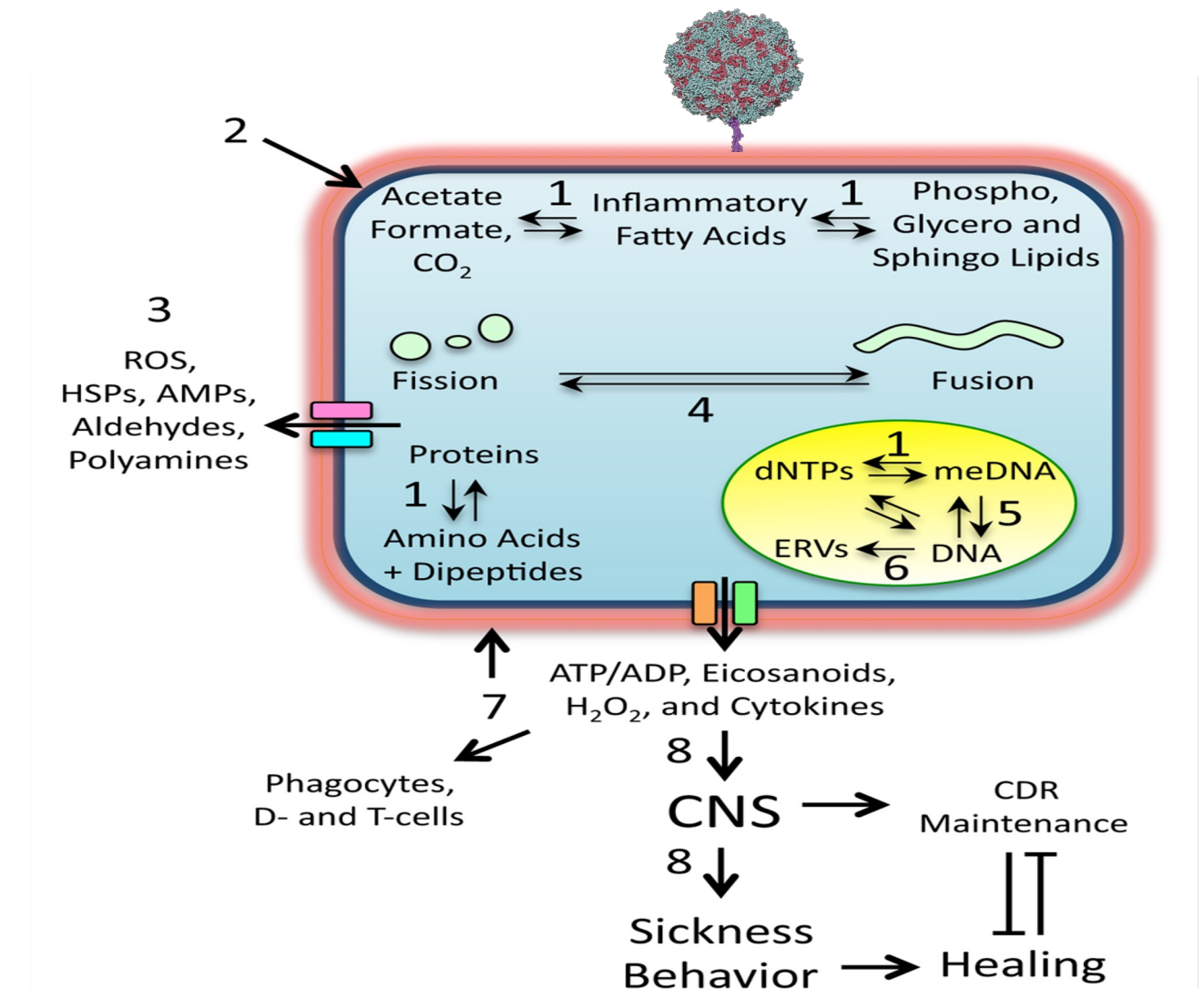
- Many cells have 500-2000 mitochondria
- Mitochondria have their own DNA (genome)
- Mitochondria must import Glutathione from the cytoplasm
- Mitochondria are the primary source of free radicals by electron leakage from electron transport chain
- Liver mitochondria detoxify ammonia

Rossignol and Frye, 2011 *Mol Psychiatry*, doi:10.1038/mp.2010.136

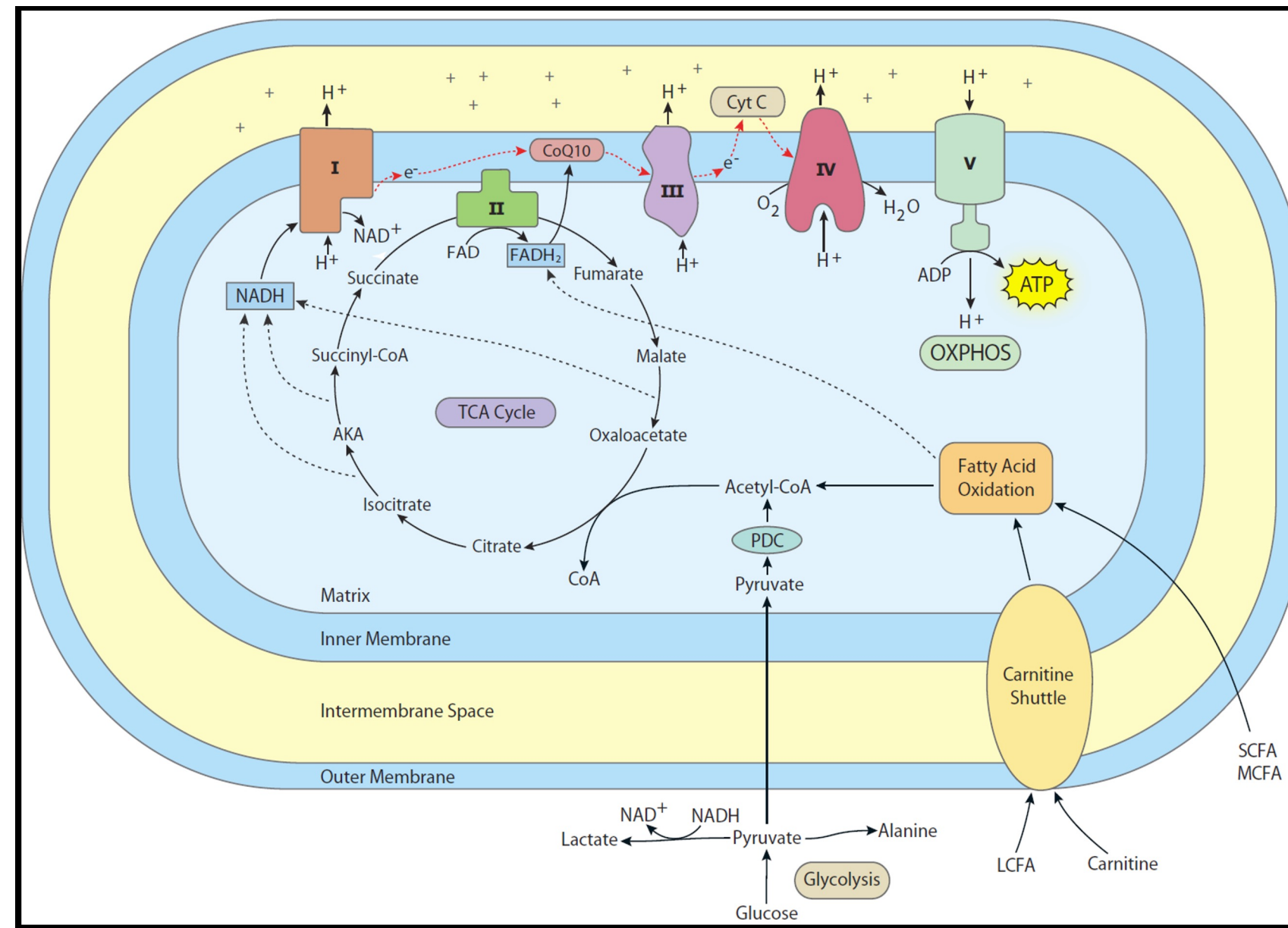


A Systems View of the Cell Danger Response (CDR)

- Decreased oxygen consumption with increased dissolved oxygen concentration
- Shift from polymer to monomer synthesis
- Stiffened cell membranes
- Release anti-viral/anti-microbial chemicals, like H₂O₂
- Increase mitochondrial autophagy
- Change DNA methylation
- Mobilize endogenous retroviruses
- Warn neighboring cells
- Alter host behavior to prevent spread of disease to kin



Switching from Playing Defense to Playing Offense



Rossignol and Frye, 2011 Mol Psychiatry, doi:10.1038/mp.2010.136



Switching From Playing Defense to Playing Offense

- Making ATP polymers
- Methylation
- Neuro messages
- Brain energy



INSERT VIDEO:

<https://www.youtube.com/watch?v=vyhSzylCcDU>

2:02 -2:25



Mitochondrial Dysfunction & Treatment

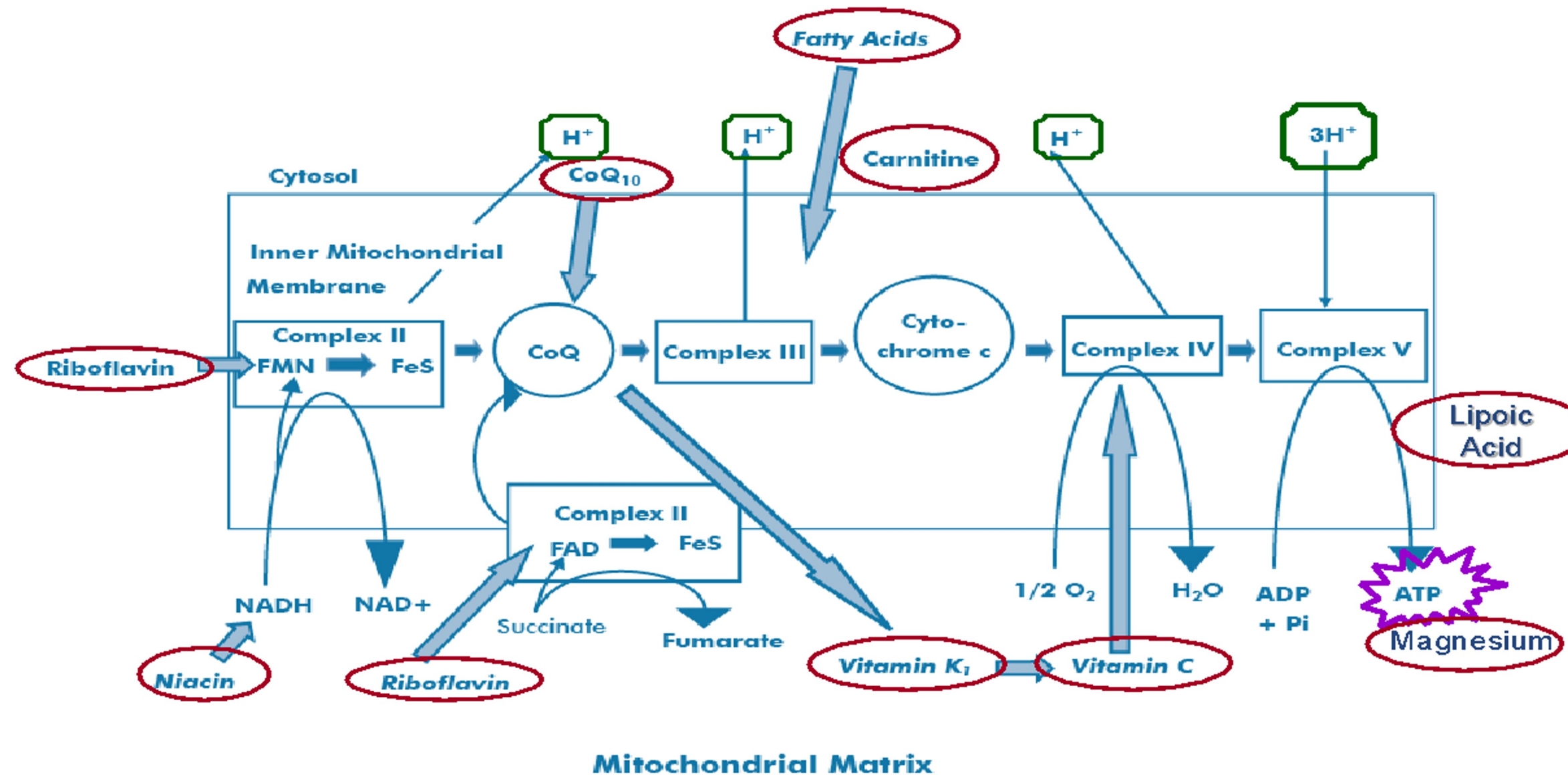
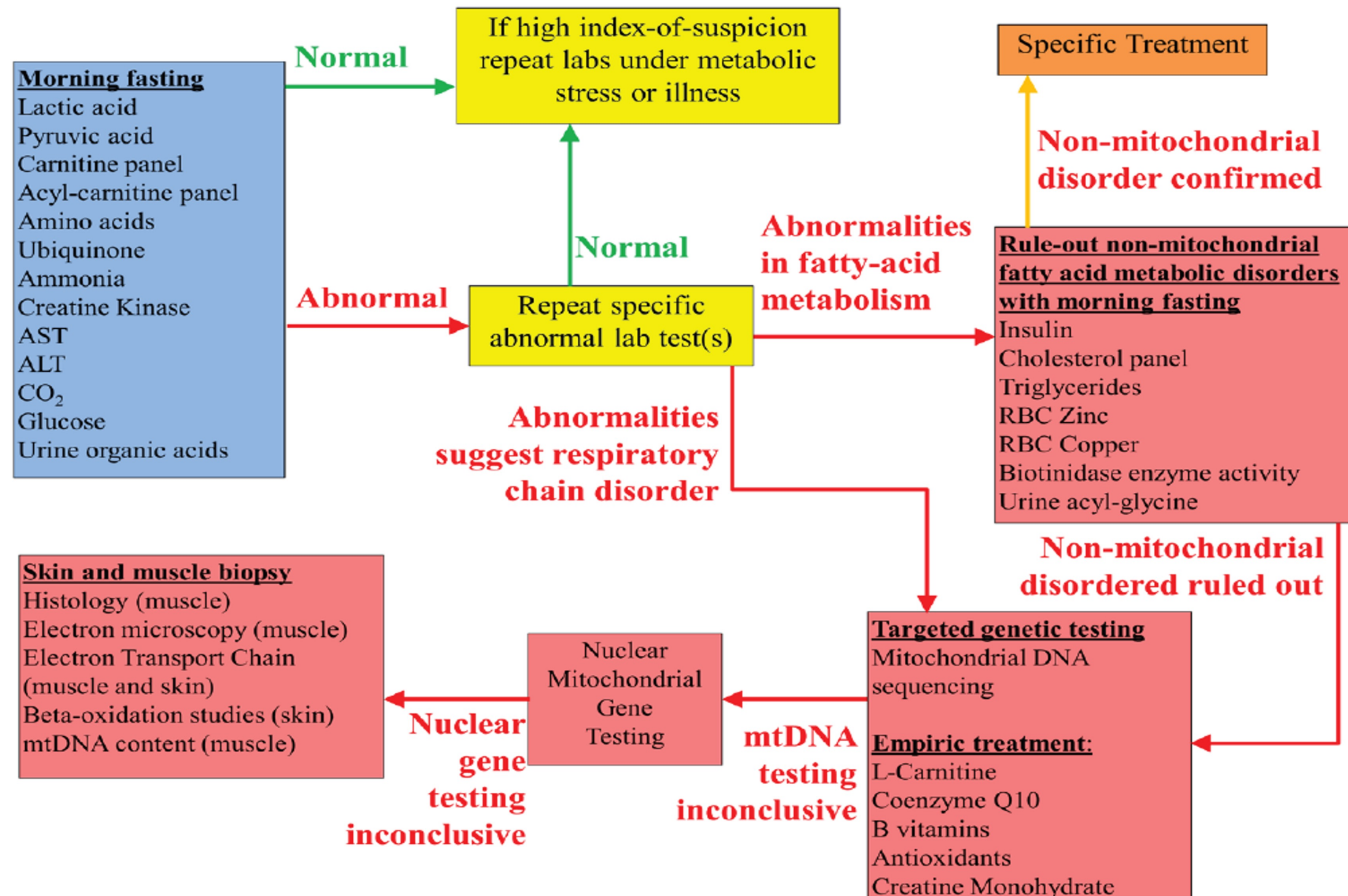


FIG. Mitochondrial Respiratory Chain. Protons (H⁺) are pumped from the mitochondrial matrix to the intermembrane space through complexes I, III, and IV. Complex V utilizes the proton gradient as a source of energy to produce ATP. Coenzyme Q₁₀ transfers electrons from complexes I and II to complex III. Riboflavin is a precursor of flavin mononucleotide (FMN) and flavin adenine dinucleotide (FAD). The amide form of niacin, (nicotinamide) is a precursor for nicotinamide adenine dinucleotide (NAD). Vitamin K₃ in combination with vitamin C serve as electron acceptors to bypass a deficiency in complex III. Carnitine function to transfer long chain fatty acids across the mitochondrial membrane.

Mitochondrial Dysfunction & Treatment



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