CELLULAR ENERGY PRODUCTION

Testing

Testing the energy pathway is critical to understanding where the cells may be blocked from making energy (ATP). There are several primary steps that should be evaluated to verify the patient is making energy.

Use the vials in the test kit in the following order to verify where the patient may be blocked.

Muscle test in the following order as shown on the chart.

If patient weakens to the vial being held, we must find the substance that negates the weakness. The substance that strengthens diabetics will be required substance needed

1. STEP 1: **Weakening to Glucose**
   Challenge with: HM-ET Binder, MitoATP, BioToxin Binder, CT-Minerals, GCO, Mg
2. STEP 2: **Weakening to Pyruvate**
   Challenge with: BioToxin Binder, HM-ET Binder, Mito-ATP, CT-Minerals, HydrOxygen, Mg
3. STEP 3: **Weakening to Acetyl-CoA**
   Challenge weakness with: BioToxin Binder, HM-ET Binder, CT-Iodine, ViRadChem Binder, MitoATP, HydrOxygen, CT-Minerals, Mg, Para 1, Para 2, Para 3, Para 4
4. STEP 4: **Weakening to Mg-ADP**
   Challenge with: MitoATP, BioToxin Binder, HydrOxygen, HM-ET Binder, ViRadChem Binder, CT-Minerals, IS-BORR, IS-BAB, IS-BART, IS-BOOST

These are the most common places that the patient may be blocked causing most of their symptoms due to a lack of creation of ATP.

Where do you get stuck?

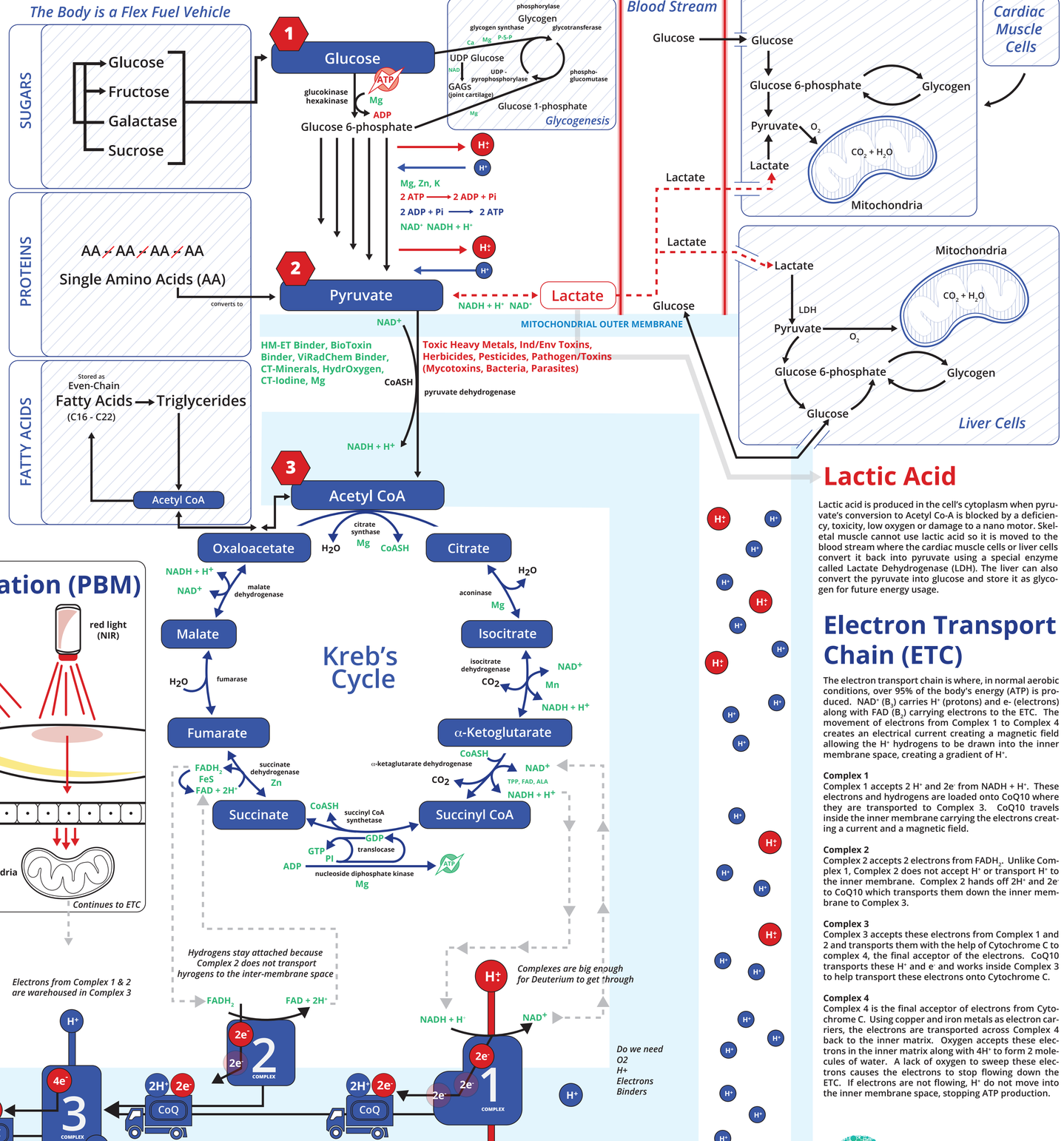
Statin Drugs
Statin drugs block the cells from making CoQ10. Loss of CoQ10 paralyzes the Electron Transport Chain causing a cellular deficiency in ATP. Decreased ATP production causes muscle and joint pain, memory loss and overall loss of well-being.

Lactic Acid
Lactic acid is produced in cells when pyruvate's conversion is blocked by a vitamin or mineral deficiency, toxicity, oxygen deficiency or damaged nano motors. Symptoms include: light headaches, foggy or unclear thinking, and soreness with fatigue.

Heavy Metals
Heavy metals (arsenic, cadmium, mercury, lead) are most commonly found in mitochondria causing excess lactic acid production or lack of ADP to ATP conversion. This is the most common cause of free radical damage in cells from ROS. Symptoms include: fatigue, fogginess, exhaustion, depression, inability to repair, anxiety, CRS, DGS.

Chemical Toxins
Herbicides, pesticides and fungicides are commonly used today in large agricultural production to meet the ever-growing need for our food supply. Handing over the growing of our foods has greatly increased our exposure to these toxins. Many of the enzymes in our metabolic pathways for making energy and removing toxins are greatly inhibited by these chemicals. Evaluation of these detoxification and energy pathways allow us to open these pathways for normal energy flow and detoxification.

Deuterium ^2H
also called "heavy hydrogen"
Deuterium is a stable isotope of hydrogen with an atomic weight of 2 (hydrogen + neutron) capable of damaging the nano motors of the mitochondria with significant implications. **One in every 6,600 hydrogen is a deuterium and is put into the inner mitochondria matrix.** As we convert glucose to pyruvate, cells work to remove deuterium from the carbon-hydrogen chains. As pyruvate enters the mitochondria a few deuterium remain. As hydrogens are pulled from the carbons in the Citric Acid Cycle (CAC) deuterium are transported using B_2 and B_3 to the Electron Transport Chain.



Lactic Acid

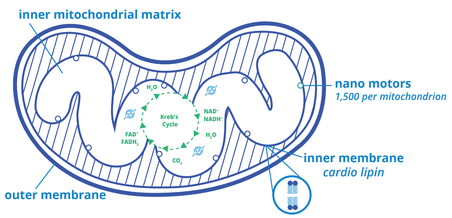
Lactic acid is produced in the cell's cytoplasm when pyruvate's conversion to Acetyl Co-A is blocked by a deficiency, toxicity, low oxygen or damage to a nano motor. Skeletal muscle cannot use lactic acid so it is moved to the blood stream where the cardiac muscle cells or liver cells convert it back into pyruvate using a special enzyme called Lactate Dehydrogenase (LDH). The liver can also convert the pyruvate into glucose and store it as glycogen for future energy usage.

Mitochondria

Mitochondria turn food into fuel and fuel into energy. Mitochondria are called the "Power House" of the cells since almost all energy the body uses is created in these mighty bacteria. We should think of mitochondria as engines since they create power by converting ADP to ATP using O_2 and Hydrogen and electrons (H_2O) from the foods we eat. Combining these with Oxygen creates ATP and molecules of low deuterium water in the inner matrix.

Mitochondria control nucleus DNA. Energy decline in mitochondria causes parts of the genome to be shut off (survival mode). The human body does not desire to be perfect, it desires to survive.

There are over 37 trillion cells in the body, each containing mitochondria. **Muscle Cells:** at rest require 1 unit of energy and 1 unit of oxygen (800-1,000 mitochondria per cell). **Heart Cells:** require 2 units of energy or 2 units of oxygen (2,000 mitochondria per cell). **Brain Cells:** require 10 units of energy and 10 units of oxygen per cell (5,000 mitochondria per cell). The brain uses 20% of the oxygen and 20% of the energy created by the body.

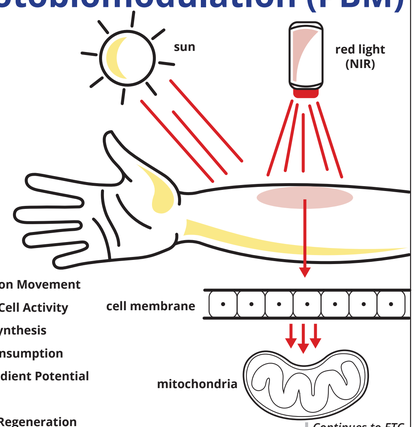


Nano Motors: Basic calculations show that every 4.5 seconds a nano motor is destroyed, which, estimates indicate, completely destroys a mitochondria every 75 minutes. Losing mitochondria in our cells causes severe energy loss and eventually cell death.

Mitochondrial Inner Membrane: The 4 tails make this membrane much tighter than the double phospholipid membrane of the cell. Chemical and metal toxins create oxidative damage, causing the cell membrane to become rigid and stiff. The loss of fluid cell membrane can cause low oxygen and toxic metabolites to build up, lowering cell energy and function.

Water: Gallons of water are made in the mitochondria daily.

Photobiomodulation (PBM)



- Electron Movement
- Stem Cell Activity
- ATP Synthesis
- O2 Consumption
- H^+ Gradient Potential
- NO
- Liver Regeneration

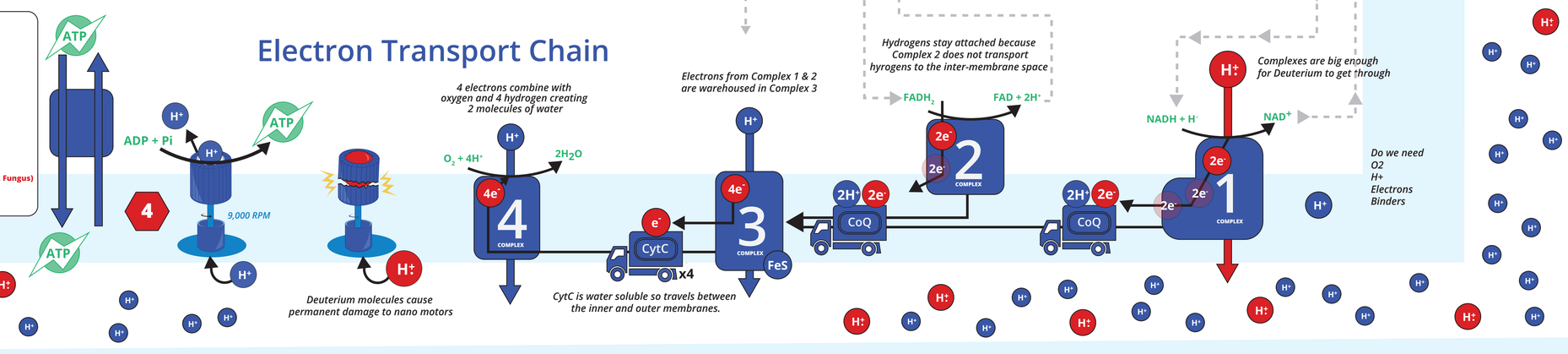
Continues to ETC

Inhibition

Of Electron Transport Chain (ETC)

1. Toxic Heavy Metals
2. Mycotoxins
3. Herbicides
4. Pesticides
5. Industrial/Environmental Toxins
6. Pathogen/Toxins (Mycotoxin, Bacteria, Parasite, Fungus)
7. Radioactive Elements

Electron Transport Chain



Electron Transport Chain (ETC)

The electron transport chain is where, in normal aerobic conditions, over 95% of the body's energy (ATP) is produced. NAD^+ (B_3) carries H^+ (protons) and e- (electrons) along with FAD (B_2) carrying electrons to the ETC. The movement of electrons from Complex 1 to Complex 4 creates an electrical current creating a magnetic field allowing the H^+ hydrogens to be drawn into the inner membrane space, creating a gradient of H^+.

Complex 1
Complex 1 accepts 2 H^+ and 2e^- from NADH + H^+. These electrons and hydrogens are loaded onto CoQ10 where they are transported to Complex 3. CoQ10 travels inside the inner membrane carrying the electrons creating a current and a magnetic field.

Complex 2
Complex 2 accepts 2 electrons from $FADH_2$. Unlike Complex 1, Complex 2 does not accept H^+ or transport H^+ to the inner membrane. Complex 2 hands off 2H^+ and 2e^- to CoQ10 which transports them down the inner membrane to Complex 3.

Complex 3
Complex 3 accepts these electrons from Complex 1 and 2 and transports them with the help of Cytochrome C to complex 4, the final acceptor of the electrons. CoQ10 transports these H^+ and e^- and works inside Complex 3 to help transport these electrons onto Cytochrome C.

Complex 4
Complex 4 is the final acceptor of electrons from Cytochrome C. Using copper and iron metals as electron carriers, the electrons are transported across Complex 4 back to the inner matrix. Oxygen accepts these electrons in the inner matrix along with 4H^+ to form 2 molecules of water. A lack of oxygen to sweep these electrons causes the electrons to stop flowing down the ETC. If electrons are not flowing, H^+ do not move into the inner membrane space, stopping ATP production.

CELLCORE BIOSCIENCES