Antibiotics
marching on the path to human extinction

By Marlene E. Kunold

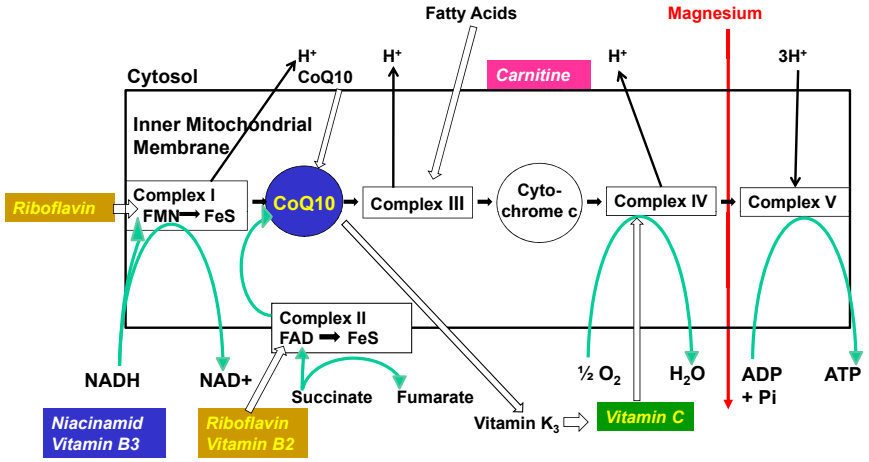
Take a deep breath. Do you ever think about breathing, while you are doing your everyday routine? Breathing is so natural, so automatic, that we hardly waste any thoughts on it happening, let alone *how* it all happens. You waste just as little thought on how the human organism is "put together" and how it keeps you running as a human being. The human body is actually a piece of art built from hundreds of billions of cells, and many times more bacteria that share space within us. Share? Yes, in its best sense. The majority of our body volume is made up by bacteria, which help ensure and support our survival. However, modern medicine has all too often defined bacteria as "evil," as something we better get rid of. This is an error with wide ranging consequences.

Our body truly is a piece of artwork. Within it up to 100,000 chemical reactions per second, per cell are being initiated by electromagnetic impulses, fine-tuned with light and applied or executed through chemical reactions. What an incredible coordination, but who or more appropriately what is coordinating all this?

Amongst many other organelles dwelling within our cells, there is a really astonishing crowd that deserves closer attention: the mitochondria. An average cell contains about 100 mitochondria. Cells working on a high energy level like heart, eye, nerve or liver cells hold up to 6,000 mitochondria, and the ovular cells actually give room to 100,000 mitochondria. (Sperm carry no mitochondria, so the maternal side only forwards this part of evolution. Mitochondria that get stuck in a male body end up in a dead end street. Sorry, guys.) Knowing this, we must face the reality that mitochondria have no chance to mix their DNA with another DNA to evolve or rid damaged DNA fractions. This means mankind must live and continue with what they have, with what has been erased in their mitochondria.

Despite the depressing reality that you are most likely living with damaged mitochondria, are you still breathing? Good. Ninety percent of your inhaled oxygen is being used in the respiratory chain of these little mitochondria.

Within your body's cells, about 180 – 190 trillion mitochondria are working for you. They work 24/7, without breaks. They are always on. When they stop their work, you're dead. Without oxygen, you may survive a couple of minutes, without water a couple of days, without ATP, two seconds. The main job of our mitochondria, besides coordinating literally ALL biochemical reactions, is to produce ATP, which is the energy transporter in the respiratory chain. They act as mini power plants within our body. Our body produces as



Respiratory chain

In a 5-step electron transmission and phosphorylation, ADP (Adenosyldiphosphate) and ATP (Adenosyltriphosphate) are being processed from sugar, oxygen and phosphor. Through enzymatic reactions and photon initiation ATP releases the cellular energy necessary to keep our body alive. In order to function, this respiratory chain requires certain nutrition, photons and glutathione.

many pounds of ATP as we weigh. If you weigh 120 pounds, that is how much ATP your mitochondria generate per day. When we physically work hard, or do heavy sports, this ATP production may well be in the 1,000s.

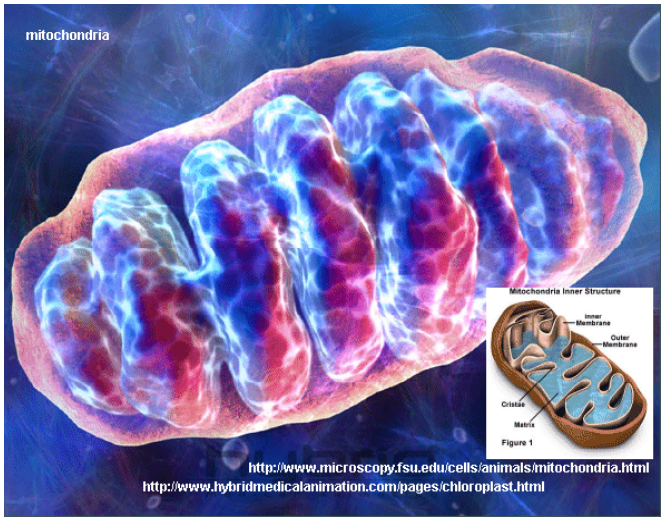
In a complicated biochemical and physical process this ATP is being synthesized, recycled and built. However, rather than asking how does this energy production function, the focus here is on *what actually disturbs this process*.

First, imagine how little these mitochondria must be, squeezing well over a thousand of them in just one cell. Mitochondria are little, smart and really quite sensitive. The list of circumstances disturbing the mitochondrial function reads like a list of the "Who's Who" of modern life and technology. Their sensitivity amidst a world of inner and outer potential pollutants, begs the question, "what causes our "power plants" to run at less than full capacity and potentially on only half of their actual power?" **(See box No. 4)**

In the search for damaging agents to mitochondria, we inevitably stumble across and run head long into *antibiotics*, given that they are western medicine´s favorite child and widely prescribed for everything from the common cold and flu to more serious infections. If that is not enough, even if one tries to avoid being treated with antibiotics, we inevitably get our fair share of them from meat, drinking water and preservatives in foods.

So what do antibiotics have to do with mitochondria? What is the connection?

Mitochondria are small beings. Yes, beings. They have their own DNA (Genome B), and live in our cells, which contain our DNA (Genome A). They pay rent in terms of producing ATP. In modern cell



biology, it is well known that mitochondria are not merely one form of cell organelle, but their own species. Let´s call them endobionts. According to the theory of endobionts, these little mitochondria used to be purple bacteria a long time ago. At some point they then got together with our hosting cell, and therefore made life possible as we know it today. There are only 7 known different strains of mitochondrial DNA in all of mankind.[1]

That means we still have the same mitochondrial DNA that our ancestors had thousands and thousands of years ago. Mitochondrial DNA has no chance to mix with other DNA coming into the picture because it is only forwarded from generation to generation through the ovular cells containing up to 100,000 mitochondria (or less, if damaged before). Whereas our own DNA mixes, because ovular cells and sperms contain a single helix of DNA that then blend together, the mitochondrial DNA will remain the same forever and a day. If human life will continue that long.

Microbiologists who speak about endobiontic theory are talking about the double gene in humans. So, we actually have our own genes, and the mitochondrial DNA/genes. When a cell mitoses, it is the signal for the mitochondria to mitose simultaneously. As the mitochondria are deleted, they cannot reproduce or proliferate. That is to say: When a cell that mitoses contain 1,000 functioning mitochondria, the next generation of cells will also carry 1,000 functioning mitochondria. If a cell contains fewer mitochondria and severely damaged ones, then the next generation will have to continue life with what they get. Please be aware: this means for *all generations to come*! However, there is some good news. When "only" damaged, a mitochondrium can be repaired or can fuse with ano-

Mitochondriopathy

All and any chronic illness boils down to mitochondriopathy. An acquired mitochondriopathy comes along with fatigue, neuroendocrinological dysregulation, immunological dysregulation, and nitric stress. All mitochondriopathy have the following in common: disturbance in cell control, and in cell performance. Severity and individual expression of subsequent functional disturbance characterize what kind of multisystem illness comes into existence.

ther mitochondrium in order to exchange healthy DNA fractions.

While some may question the theory of endiobionts´ scientific validity, there are certain facts about your cell structures and mitochondria that have an impact on literally all of mankind. Most importantly, mitochondria have very similar properties to bacteria.

Comparing: Mitochondria and Bacteria

Let us first look at the structural similarities of mitochondria and bacteria:

- Both have lipid-double-membranes that function likewise in the photon transfer of the ATP production and in the transfer of vital substances.
- Mitochondria contain DNA, which is „naked," i.e. not connected with proteins, just like prokaryotes (in this case, bacteria) do.
- Mitochondria have their own apparatus for protein synthesis consisting of the same parts (ribosomes, tRNA and RNA-polymerase) as prokaryotes.
- Mitochondria are generated solely by dividing themselves. Cells are not able to produce these organelles again once they are lost. The loss of mitochondria therefore is irreversible!
- Mitochondria have no cell wall, only a double membrane. Within their interior membrane, they contain certain lipids, otherwise only to be found in bacteria.
- Contrary to the body´s own DNA, mitochondrial DNA is not protected by a cell nucleus but floats freely within the cytoplasm. Just like the bacterial DNA floating within the cytoplasm.
- The enzymes that are necessary for the respiratory chain are arranged in the same way within the plasma membranes of bacteria as within the inner membrane of mitochondria.
- The ribosomal RNA of mitochondria shows great similarities with the RNA of prokaryotic (bacterial) ribosomes.

Whether you understand the complex science of the human body, the significant point here is that because of these similarities, mitochondria *react to some – not all – antibiotics that are directed against bacteria. This means that when one uses antibiotics, mitochondria are being damaged or even eliminated along with potential negative bacteria. This fact is of unanticipated importance.* When too many mitochondria are lost, it creates a potential lack of ATP, meaning energy, within cells. Once approximately 50 percent of mitochondria are functionally damaged or deleted, this creates a progressive disease state that is being referred to as *mitochondriopathy*. Mitochondriopathy is the basis of *all* chronic illness **(See box 2: mitochondriopathy)**. Knowing the importance of functioning mitochondria and their similarity to bacteria, the careless use of certain medications, and their potential impact on your cellular structures, appear in a whole new light.

In the case of an intracellular infection (i.e. the pathogenic agent, e.g. Borrelia or Chlamydia dwells within the cell in a "bubble" which is something like a vacuole separated from the cytosol/cellular liquid by a membrane, or is swimming freely within the cellular cytosol, or even lives deep within the cell nucleus), modern orthodox medicine applies antibiotics, making their way into your body's cells. There are antibiotics that work in the matrix, which is outside the cells in the tissue, but intracellular antibiotic action is what we are looking at in this moment.

The effective mechanism of antibiotics or How antibiotics affect your cells

All body cells contain a lipid double layer (the shell of the body cells), which can be penetrated by some antimicrobic substances, either by passive diffusion, by active transport or in other ways. The pharma industry has developed various methods or "tricks" for antibiotics to break through the "walls" of cells. In order to achieve an antibacterial effect within the body cell, an agent must be able to attack a central element of the metabolism in the assaulted organism (bacterium). The "smarter" the agent, then the wider the range of its effectiveness. The aims of assault are:

3 Glutathione system

The respiratory chain is oxygen dependant. That means that oxygen radicals like O or nitric radicals like NO arise. In a healthy system these radicals are being neutralized through Glutathione. Glutathione is the most effective and the most important antioxidant in our body cells. Glutathione with its various enzymes, but also different polyphenols from raw food can neutralize a few thousand industrial toxins from our body cells. Permanent exposition to those toxins can wear out and lower glutathione levels. This leads to a drop of oxygen dependant ATP production (ATP production must be done through glycolysation) because the cell will protect itself by lowering oxygen radical production. This leads to a drop of energy, more toxic waste within the cell, and less intracellular immune function.

- The synthesis of the cell walls (inhibition of cell wall/membrane replication kills some bacteria; others continue to live without this membrane)
- Protein synthesis, e.g. RNA and DNA polymerase (protein synthesis is vital for replication and survival. When inhibited, proteins cannot be built properly; the pathogen cannot proliferate or survive any longer.)
- Folic acid metabolism (Tetra Hydro Folic acid metabolism is an essential factor in the building of nucleic acids. When interrupted or disturbed, this has lethal consequences for bacteria.)[2]

The drugs in use are partially composed of components belonging to various of the above groups to increase their efficiency. But many antibiotics are aiming at the protein synthesis. Since ribosomes are universal protein manufacturing sites, they represent a preferable weak point for the attack of antibiotics. Once this synthesis is interrupted the bacterium dies; thus the mitochondria, being so similar to bacteria, are facing the same fatal and partially lethal consequences.

Like the bacterial ribosomes, the mitochondrial ribosomes are responsible for protein synthesis in the mitochondria, and therefore they are susceptible to antibiotic attacks as well. If the effect of the applied antibiotic is aiming at intracellular pathogens such as Borrelia, Chlamydia, Rickettsia, Yersinia, Mycoplasmas etc., then the mitochondria will in any case suffer from the treatment as well.

Rather than solely focusing on the impact of antibiotics on bacteria, if you examine the bigger picture of your whole system, the question then becomes *when all intracellular bacteria are being eliminated, do any mitochondria survive in the process?* The "cure" with antibiotics in fact inhibits the fundamental building blocks that support a patient's survival. If that´s not enough, there is also a high probability that some of the aimed bacteria will likely survive and inevitably proliferate again. This is seen in Lyme disease every day. The longer a patient's antibiotic treatment, then the more damage occurs. The more different antibiotics are used, then the more severe and diverse the mitochondrial damage and immune suppression. Never ever can anybody guarantee total elimination of Borrelia.

Here is a list of cell-entering antibiotics and their effective mechanism against bacteria within the human cell.

Antibiotics with impact on protein synthesis:

- *Tetracyclines*, e.g. Doxycyclin, Minocyclin, Chlortetracyclin and Oxytetracyclin
- *Lincosamides* (Clindamycin, Cloramphenicol, Makrolides: Erythromycin, Spiramycin, Chlarythromycin, Azithromycin, Telithromycin, Roxythromycin) Lincosamides cling to the ribosomes and thereby block protein synthesis.
- *Aminoglycosides* (Gentamicin, Netilmicin, Amikacin) penetrate the bacteria, cling to the ribosomes and block them. Vital

proteins produced thus become defective and dysfunctional. Aminoglycosides have an ototoxic effect. When applied too long, they cause deafness.

- *Gyrase inhibitors* obstruct DNA replication (Quinolone, Ciprofloxacin, Oxoflaxin, Enoxacin, Levofloxacin, Moxifloxacin, Nadifloxacin, Norfloxacin)

Antibiotics affecting cell wall synthesis:

Glycopeptide antibiotics (Vancomycin, Teicoplanin, Penicillin etc.) are obstructing the production of the cell wall protein *murein*, which eventually leads to the death of some of them. This refers to bacteria like *streptococci* and *staphylococci* as long as they are not yet resistant. On the other hand there are bacteria which are able to survive without an exterior cell wall. This fact is of importance because this "therapy" brings CWD (cell wall deficient) bacteria into existence. They cannot be recognized any longer by the immune system, and therefore cause problems on a steady basis, without ever being addressed by the immune system again. In the case of infections with Borrelia/Lyme, patients know this too well. It means they have no immune reaction, no antibodies. Lab tests will turn out negative. No one will ever believe they still have Lyme, no matter how severe symptoms may be.

Antibiotics affecting the folic acid metabolism:

- *Sulfonamides* (Bactrim, Trimethroprim, Cotrim) interfere with the production of *tetrahydro folic acid* (THF). When no more THF is produced there are *grave consequences for the building of nucleic acids*. THF is an essential factor in the metabolism of nucleic acids. As for bacteria this fact is fatal. Dr. Heinrich Kremer sees a connection between the disastrous effect of Bactrim and the development of AIDS.[3]

Other antibiotics working within the body cells:

- Cephalosporine such as Ceftibuten
- Azalides, Ketolides
- Nitroimidazole (Metronidazol)
- Fat soluble antibiotics e.g. Chloramphenicol, Rifampicin, Trimetroprim, Br***o***dimoprin
- Chinolones (Oxoflacin, Ciprofloxacin, CI 934)
- Rifampicin
- Ampicillin
- Cephalosporine
- Imipenem
- Hydrxychloroquin
- Gemifloxacin
- Antimycin A., O***l***igomycin
- Streptomycin

What does all this mean to mitochondria?

Given the parallels between mitochondria and bacteria, the demise of various amounts of "attacked" bacteria from an antibiotic assault will

These factors have a damaging impact on mitochondria

- Cigarette smoke (contains a few thousand toxins including Cadmium and Formaldehyde)
- Heavy metals (mercury, lead, cadmium)
- Chemicals (perfumes, vehicle exhaust fumes, disinfectants, preservatives in foods, dental materials, additives in foods, plasticizer, mineral oil derivatives, chemicals in cosmetics, in carpets, furniture etc.)
- Pesticides and insecticides (including pyrethroids!)
- Solvents in household and industry
- Intracellular infections caused by viruses, bacteria/CWD, fungi and parasites
- Basically *all* allopathic medication
- Foods rich in nitrate (smoked fish or meat, greens having been grown with artificial fertilizer, especially arugula)
- Foods rich in carbohydrates
- Electrosmog, artificial electromagnetic fields, (devices running on "standby modus" also generate an electromagnetic field)
- Pulsed frequencies from cordless telephones, cell phones, and especially wireless LAN
- Physical, emotional, mental and psychological stress and trauma, overworking
- Gut problems

likely create a similar incidence of mitochondria death. Inevitably, the number of energy producing mitochondria will be reduced. Some mitochondria are lucky; they will only face some functional damage or deficits. These mitochondria might recover when properly supported through mitochondrial therapy. When these repaired and recovered mitochondria reproduce, the next generation will start out with better "equipment."

The important point that we must realize is that antibiotic treatment decimates, deletes and damages mitochondria causing a lack of ATP, leading to fatigue and an acquired mitochondriopathy. May I stress the word "acquired?" As previously mentioned, the antibiotic Bactrim, which was ubiquitously used in the 1980's, played a major role in the development of the acquired immune deficiency syndrome, known to us all as AIDS, according to Dr. Kremer.[4]

Damaged mitochondria, as far as we know today, can be recovered to some extent, dead mitochondria are gone forever. Not only in the existing body, but gone forever and a day for all generations to come.

Depending on the severity of the mitochondrial damage, the cell slides into a circumstance called nitric stress. Nitric stress is based upon oxidative stress and can truly be called a "cellular vicious circle."[5] Oxygen radicals are further being processed to nitric oxide, then to peroxynitrite, which has an extremely destructive effect on body cells. This is what creates a so-called auto immune disease. Cells being destroyed are irreversibly destroyed. When a person's body progresses to this point, it is rather difficult to stop the avalanche of destruction.

Intracellular infection

Throughout the past decades more and more of these infections or autoimmune diseases have increased as part of conventional medical treatment. Knowing that mitochondria **(and glutathione, see box No. 3)** play an important role in keeping the cell clean, healthy and full of energy, we come to understand why intracellular infections come into the picture. When mitochondria and glutathione are damaged and reduced, how can they keep intracellular infection away?

When confronting infection, we are facing a vicious circle if we use conventional means to treat it. What came first, the chicken or the egg? The mitochondrial weakness or the intracellular infection? Knowing what is causing the mitochondrial damage, we must assume that the damage was there first. So, when treating an intracellular infection like Lyme disease, it makes no sense to apply antibiotics because the treatment will not be successful. It will only cause mitochondria to experience more damage, which will lead to further mitochondriopathy, multi-resistant, multi- infection and auto immune disease.

Mitochondrial therapy

When and if a person is (mis)treated with antibiotics, it is vitally important to simultaneously take substances and nutrition that supports the respiratory chain and protects mitochondria.

These substances include:

- High dosage coQ10 (at least 300 – 400 mg/day. In Germany we use liquid Nano Coenzyme Q10 called Sanumit. In many studies this turned out to be most effective, in terms of getting all the way into the mitochondria)
- Omega 3 fatty acids (2000 – 3000 mg/day)
- Glutathione forming agents such a NAC, glutamine and selenium (intracellular glutathione can only be generated within the cell. Extracellular glutathione cannot penetrate the cell.) There is a German remedy called Glutacell. It works fantastically, as we were able to see in various lab test results testing intracellular glutathione.
- B-vitamins, especially Vitamin B 1, 2 6 and 12. Best taken as a coenzyme B complex
- Nicotinamide adenine dinucleotide (NAD) + hydrogen (H) (NADH)
- High dosage Vitamin C (3 – 5 grams/day)
- Vitamin D (before beginning a lyme treatment, accompanied by mitochondrial treatment, it is wise to "fill up" with vitamin D. During therapy it is better to cut down the intake)
- Galactose, Ribose, Carnitine and Creatine

- Alkaline minerals especially magnesium and trace elements such as iron, chrome, copper, manganese
- Natural enzymes

What else can you do?

- Get enough sleep, meaning go to bed before 10 pm in order to get a sound sleep. Only in the phases of sound sleep, the immune system can recover and the glutathione levels can be risen.
- Get sun and fresh air.
- Apply photon therapy. The mitochondria are being "driven" by photons, the respiratory chain depends on photons. Photons are on the very top of all regulation taking place in living organisms. How this is happening, you may read in one of the next issues, if you wish.

In our clinic we have seen tremendous effects in the rising of ATP production with mitochondrial therapy. It may take a few more years before we can really say how far mitochondrial therapy can reach. There remains the question whether it must be applied lifelong or whether the mitochondria remain repaired after stopping treatment.

As a positive first step in your own cellular health, when taking your next deep breath send a loving thought to your mitochondria.

Conclusion

As we uncover more about the miraculous work of art that is the human body, we come to know the power and weakness of modern medical interventions. Recognizing the importance of mitochondria that help make us who we are and ensure our survival as a species, it is vital that we learn to protect rather than attack them. Despite the supposed modern miracle of antibiotics, inevitably we know that some intracellular bacteria will always survive antibiotic treatment and begin to proliferate again. We also now know that mitochondria are being destroyed, damaged and reduced in number from the "cure" of antibiotics. This creates a platform for serious and irreversible illness and immune deficiency, impacting generations to come. What this review and my own clinical experience bears out is that if we are to truly treat intracellular infection, it can only be done by supporting cell symbiosis and mitochondria. This is the pathway to true healing and health that modern medicine must move towards. It is a vital step to ensure our survival and success as a species.

Endnotes

1 Bryan Sykes, The Seven Daughters of Eve: The Science That Reveals Our Genetic Ancestry, W.W. Norton, 2001, hardcover.

2 Dr. Heinrich Kremer, MD,The Silent Revolution in Cancer and AIDS Medicine, Xlibris Corporation,(First published in German in 2001, English in 2008).

3 Dr. Heinrich Kremer, The Silent Revolution in Cancer and AIDS Medicine.(First published in German in 2001, English in 2008.)

4 Ibid.

5 Dr. Martin Pall, Explaining 'Unexplained Illnesses:' Disease Paradigm for Chronic Fatigue Syndrome, Multiple Chemical Sensitivity, Fibromyalgia, Post-Traumatic Stress Disorder, and Gulf War Syndrome, The Haworth Press Inc., 2007.

Books and publications

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