



Inflammation, Free Radicals and Mitochondrial Dysfunction

THE HIDDEN CAUSE of AGING & DISEASE

by Dr. Jack Tips

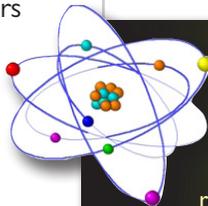
We live and die at the cellular level. Today, science is discovering the irrefutable law of Nature that Doc Wheelwright taught in 1978, “*Energy is everything.*” In this case, we know that energy refers to the cells’ production of ATP (Adenosine TriPhosphate) by their unique ‘energy engines’ called *Mitochondria*. This same energy funds the life energy called *ch’i* in Chinese Medicine or *prana* in Ayurveda. In fact, ATP is the ‘funding’ for all life processes, and regarding the cells, it’s the energy that: 1) facilitates cell signaling of activities and immune alerts, 2) allows the passage of nutrients into the cell, 3) repairs DNA for optimal function, 4) constructs RNA to manage the DNA coding and biochemical life-processes, 5) repairs and maintains cellular integrity, 6) detoxifies metabolic wastes and xenobiotic¹ chemicals, and 7) conducts cellular life-work. All this life-enhancing power is governed by the cell’s innate intelligence.

When the cells work optimally then the tissues work optimally. When tissues work optimally then the organs and glands work optimally. When the organs and glands work optimally, the body lives in the optimal health of youthful vitality and adaptability. Thus, we do indeed live and die at the cellular level. And the cellular level is exactly where we must target our clinical nutrition to help our patients’ bodies correct their less than optimal health expressions.

Here is a synopsis of a recent research study. This study directly reflects Systemic Formula’s mission for 2011 –

¹ Xenobiotic – a completely synthetic chemical compound, which does not naturally occur on earth and thus believed to be resistant to environmental degradation. Loosely refers to all chemicals that do not belong in the human biosystem, thus includes all synthetic drugs and hormones, food additives, preservatives, pesticides, fungicides, herbicides, chemicals, plastics, heavy metals, etc.

Total Support For Optimal Cellular Health. And this means that Systemic is your source for Graceful Aging protocols. Systemic, since it’s inception, has been a world leader regarding nutritional support of cellular health—cell membranes, organelles, nucleus and RNA/DNA. Now, when the time is so dire, Systemic is researching and developing herbal/nutritional formulas to address the most critical challenges that natural health clinicians face – cellular inflammation, free-radical damages, cell membrane integrity, mitochondrial support, and DNA repair. Once again, we affirm that: Cellular nutrition funds both cellular energy and the myriad cellular functions



Energy Is Everything

Energy is the foundation of health. Energy and health are so closely allied in an interchangeable cause-and-effect relationship, that one can say, “Energy is synonymous with health.” If your body can make energy, it is healthy. If your body is healthy (properly nourished), it can make plenty of energy.

Energy and persistence conquer all things. – Ben Franklin

Energy is eternal delight. – William Blake

Energy is the essence of life. – Oprah Winfrey

that support life and the individual’s innate optimal health blueprint. Properly supported cells reward the body with graceful aging, accurate self-regulation and regeneration, clear thinking, and that great ‘well-being’ feeling everyone instinctively desires.

Let’s take a look at the following research study to discover a deeper cause of people’s ‘energy crises’ and how natural health clinicians are the vanguard of The Solution. In a tight correlation, **AGING = DISEASE** unless there is proper

nutrition and cellular energy. Here we'll look at cellular aging with the understanding that an "Aging Solution" is also a solution to the ever-burgeoning bucket of mitochondrial diseases that are responsible for the terrible health afflictions affecting millions of people today. We live in exciting times where the latest scientific research testifies, again and again, that nutrition and herbs are indeed the true medicine for human health.

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A decline in mitochondrial function plays a key role in the aging process and increases the incidence of age-related disorders. A deeper understanding of the intricate nature of mitochondrial dynamics – the balance between mitochondrial fusion² and fission³, has revealed that functional and structural alterations in mitochondrial morphology are important factors in several key pathologies associated with aging. Indeed, a recent wave of studies has demonstrated the pleiotropic⁴ role of fusion and fission proteins in numerous cellular processes, including mitochondrial metabolism, redox⁵ signaling, maintenance of mitochondrial DNA and cell death. Additionally, mitochondrial fusion and fission, together with autophagy⁶, have been proposed to form a quality-maintenance mechanism that facilitates the removal of damaged mitochondria from the cell, a process that is particularly important to forestall aging. Thus, dysfunctional regulation of mitochondrial dynamics might be one of the intrinsic causes of mitochondrial dysfunction, which contributes to oxidative stress and cell death during the aging process.

I know. That was a brain-full of cellular biology upon which to cogitate. One can delve deeper and deeper into the

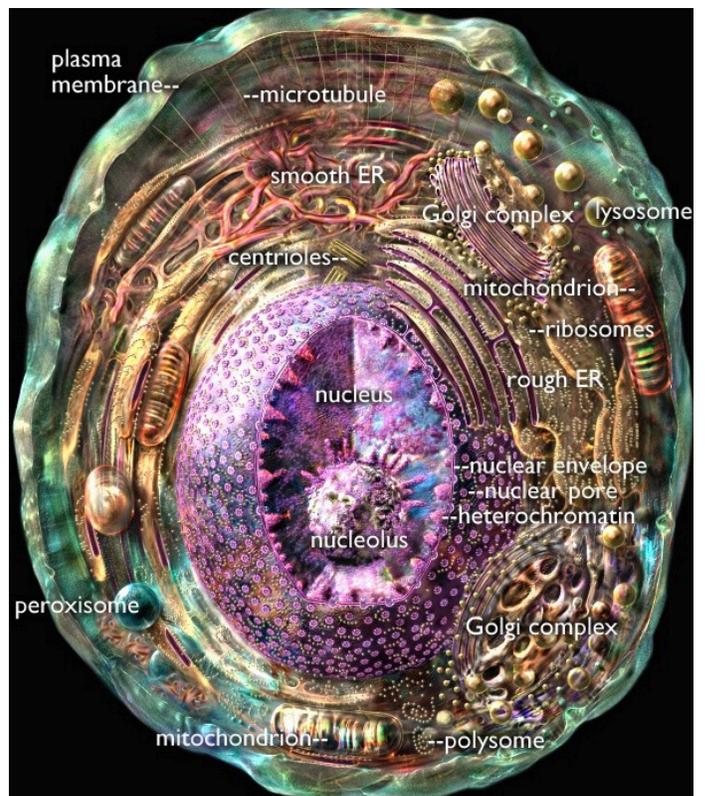
2 Mitochondrial Fusion – Merging of two or more mitochondria within a cell to form a single compartment.

3 Mitochondrial Fission – In biology, fission is the subdivision of a cell or a multi-cellular body into one or more parts and the regeneration of each of the parts into a complete individual.

4 Pleiotropic – Producing more than one effect. Pleiotropy occurs when a single gene influences multiple phenotypic traits. Consequently, a new mutation in the gene may have an effect on some or all traits simultaneously. This can become a problem when selection on one trait favors one specific version of the gene (allele), while the selection on the other trait favors another allele. Consequently, a new mutation in the gene may have an effect on some or all traits simultaneously.

5 Redox – Oxidation + reduction = redox. Reduction describes the uptake of an electron by a molecule or atom. Oxidation describes the loss of an electron by a molecule or atom. These two terms go together, because in a chemical reaction, one cannot occur without the other; electrons lost by one compound must be gained by another.

6 Autophagy – The process of self-digestion by a cell through the action of enzymes originating within the same.



mysteries of the body, but that is not necessarily equivalent to finding "The Solution." Fortunately, for the purposes of this commentary, we do not need to delve quite so deeply. The body is enormously complex, but have you noticed that the solutions are often so very simple that knowledgeable, brilliant people often fail to see them?

Simply put, when the mitochondria become damaged, they can become like a nuclear reactor meltdown and cause cellular malfunction, destruction and aberrant cellular behavior. Mitochondria are most often damaged by free radicals that ruin their energy-producing mechanisms and create a free radical cascade that destroys or alters the mitochondrial and cellular DNA. When the energy-producing system goes awry the cell can become a rogue cell and the immune system must intervene and destroy that cell. Nutritionally, mitochondria are damaged by xenobiotic⁷ molecules (environmental pollutants, toxins) and refined sugar that crashes through their ATP energy-producing

7 Xenobiotic – a completely synthetic chemical compound, which does not naturally occur on earth and thus believed to be resistant to environmental degradation. Loosely refers to all chemicals that do not belong in the human body, thus includes all synthetic drugs and hormones, food additives, preservatives, pesticides, fungicides, herbicides, chemicals, plastics, heavy metals, etc.

mechanisms like a bull in a china shop. A large underlying cause is a lack of antioxidants in the diet.

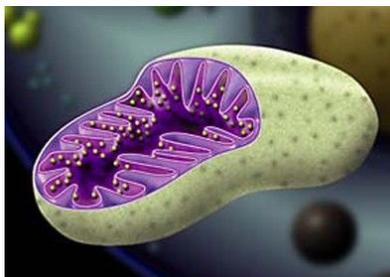
Here we discuss the recent convergence of consensus regarding the involvement of mitochondrial dynamics in key cellular processes including aging and mitochondrial diseases (the new catch-all reason for all the “no known cause, no known cure” diseases that have puzzled researchers forever). Here, we’ll discuss the link between abnormal mitochondrial dynamics with aging and disease, and most importantly the unnamed causes behind mitochondrial diseases – improper nutrition, free radical damage, lack of cellular energy. Of course the solution to these overlapping causes resides in the realms of nutrition and herbology. As with so many aspects of human health, the solution exists before science can define the problem.

Mitochondrial Damage – “A decline in mitochondrial function plays a key role in the aging process and increases the incidence of age-related disorders.” Let’s use this new research to examine and answer five key questions:

- What Causes Mitochondrial Damage?
- What Causes Cellular Inflammation?
- What Health Issues Result from Mitochondrial Damage?
- What Can Natural Health Practitioners Do Right Now to Reduce Cellular and Mitochondrial Damage?
- What Supplement(s), Universally-Needed, Help the Body Reduce the Ravages of Aging?

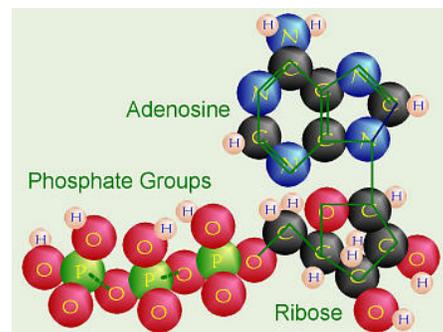
Introduction to the Mitochondria, ATP, and Aging

Mitochondria are our fountains of youth, and we have billions and billions of them. And the healing water they pour forth is called ATP (Adenosine TriPhosphate, the body’s life energy.)



As the human body ages, the number of mitochondria organelles (pictured left) decreases and elderly people often have less energy than younger people. The decline

in the number of mitochondria may not be a function of time, but a function of the lack of energy needed to repair all cellular functions including the maintenance



of mitochondria. Also, as cells lose their identity (*telomeres* on the ends of DNA strands), the cells lose their ability to function properly. Why did they lose their identity? Lack of energy. Mitochondria have their own genetic code and require energy to maintain themselves in addition to maintaining the cell and the entire body. [More information on telomeres is in the booklet, *New Dimensions in Herbal Healing* from Systemic Formulas 800-445-4647.]

Further, the mitochondria create free radical molecules as by-products of producing ATP. They also produce the antioxidants (glutathione, catalase, superoxide dismutase) to neutralize the free radicals—so there is a balance in Nature, provided the individual has the proper nutritional intake of phytonutrients that provide anti-oxidants. One theory of mitochondrial decline is that, without adequate energy, they are unable to control the free radicals and thus become damaged by their own metabolic by-products. Genetically, some people are more susceptible to free radical damage than others. Today’s diet is simply not including enough vegetables and fruit to keep the mitochondria supplied with the phytonutrient raw materials to function properly—and thus we have the fact that our errant diets are the primary cause of our diseases. But there are other issues that must be addressed – the free radical damage from xenobiotic toxins (pesticides, heavy metals, vaccinations, food additives, air pollution) as well as from ionizing radiation⁸ (excessive sunlight, cell phone radiation, airport body-scanners, X-rays, air travel, nuclear radiation, smoke detectors, radon gas, etc).



⁸ Ionizing Radiation – particles or electromagnetic waves energetic enough to detach electrons from molecules or atoms, thus ionizing them and thus producing free radicals.

One interesting fact about mitochondria is that many cells can create more of these energy generators if the body perceives it needs more energy and has the fuel and oxygen available. This is called “mitochondrial biogenesis.” Thus athletes’ muscles can create more mitochondria as their muscles make demands for more energy via their aerobic and anaerobic exercises. Also, the mitochondria render energy for every cellular function including the repair of the genetic code so the cells replicate themselves with minimal damage from aging. For a human being, there is an optimal range of active, energy-producing mitochondria that are associated with optimal health. Most people today are suffering from a lack of energy, especially cellular energy, thus there is a rampant mitochondrial issue.

ATP – the Miracle Molecule of Life-Energy

Now let’s take a brief look at the miracle molecule of life-energy called ATP. As we’ve discussed, within your cells the mitochondria (organelles called ‘power plants’) make the *pure chemical energy of life*—a molecule known as ATP. When healthy cells are stoked and making energy, there is optimal tissue performance resulting in a more optimal health. Human beings in optimal health can experience all that life has to offer and better serve their purpose—physically, emotionally, mentally, and spiritually.

Fuel For Life—ATP. To emphasize this point, ATP is the very biochemical currency of cellular life required by every body function. When your cells make the right amount of ATP, everything works well—everything including your brain, digestion, nerves, metabolism, hormones, muscles, libido, immune system, and your detoxification systems. You name it—if you want it to work better, your cells need to make

the right amount of ATP. At the cellular level, this means that nutrients enter the cell, toxins and wastes exit the cell, the mitochondrial and cellular DNA’s repair themselves, antioxidants are utilized to prevent free-radical damage, and the mitochondrial processes, e.g. fusion, fission, autophagy, energy generation, all function according to the body’s optimal blueprint.

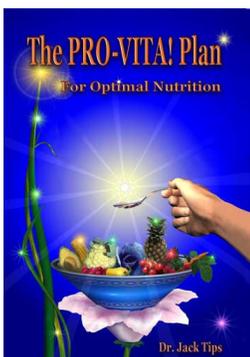
If you don’t make enough ATP for your cells to function optimally, then there are consequences, and the body’s gentle “messengers of consequences” are called “symptoms” in the



English language. And if your ATP levels drop below what is required for fundamental life processes, then you die. If you run low on ATP, your body can allow dread disease processes to occur – it’s the best a body can do under the circumstances. The reason that a deadly poison, such as cyanide, is so deadly is because it stops the enzymes and processes that make ATP by denying oxygen to the cells for mitochondrial function—that’s why it results in a quick and dramatic demise.

So making ATP for life-processes is the activity that separates the living from the dead, the healthy from diseased, the vital from the weak. Making ATP is tantamount to both survival and optimal health.

To complete our biochemistry discourse on energy, ATP



Practically every cell in our bodies has miniature power plants, called the mitochondria where glucose and other simple sugars (and amino acids) mix with oxygen and burn to keep us warm, active and alive. If the fuel mix is correct, it contains a mixture of mostly glucose/ribose, a tiny amount of amino acids and fat, and the right amount of oxygen for proper combustion. When this mixture is present, then the cellular life-fires burn properly, providing stable health and optimal energy. Everything is fine as long as these elements can be maintained.

– The Pro-Vita! Plan For Optimal Energy (Tips) 1986

is often referred to as “packets of energy.” When the body needs energy for a life function, whatever it may be, it releases the energy stored in ATP by splitting that molecule into the combustible and explosive energy molecule called ADP (Adenosine DiPhosphate) and phosphorus. So ATP is the body’s currency or wealth of energy, and ADP is the actual spending of that currency for a high quality life experience.

When ATP is reduced to ADP, there is a tiny explosion of phosphorescent light. This is why human beings are often called ‘beings of light.’ Within our bodies, millions of tiny lights blink on as energy is applied for the body to accomplish its vital functions.

Different tissues will spend ATP for different functions. The heart will expend it for muscular contractions over and over with every beat. [Systemic’s HQ (Heart Energy) product addresses this specific process.] The leg muscles will contract and expand for movement. The kidneys will use it to filter the blood and make Vitamin D and repair their tissues. The brain will use it for thought. The immune system will use it to make antibodies or to kill an invading virus. The intestines will use it to allow the importation of food nutrients. Again, ATP is the universal currency, and ADP is its payload.

Armed with that general overview, let’s answer our first question: *What causes mitochondrial damage?* And our general and simplistic answer is “Life in the 20th and 21st Centuries”. More specifically, here is a list of some or just some of the causes of mitochondrial damage:

Damaged Mitochondria = Errant Mitochondrial Performance

- Air pollution – thousands of xenobiotic chemicals are dispersed in the Earth’s air
- Water pollution – thousands of xenobiotic chemicals are dispersed in the Earth’s water
- Pesticides, Fungicides, Herbicides – including Round Up®
- Household cleaning chemicals – ammonia, oven cleaner, dryer anti-static sheets
- Ionizing Radiations – cell phone, radar, airport scanners, solar (thinning of ozone layer)

Mitochondrial Diseases

<ul style="list-style-type: none"> • Alzheimer’s Dementia • Arteriosclerosis • Ataxia • Atherosclerosis • Autism • Blindness (non injury) • Congestive Heart Disease • Cancer, metastasis • Cirrhosis, liver (non-viral, non-alcohol) • Crohn’s Disease • Deafness (non injury) • Diabetes, Type 2 • Epilepsy • Fatigue • Fibromyalgia • Hypercholesterolemia • Hypertension 	<ul style="list-style-type: none"> • Gastrointestinal encephalopathy • Insulin Resistance • Irritable Bowel Syndrome • Kidney failure • Liver failure • Lupus, systemic • Multiple Sclerosis • Muscular Dystrophy • Myasthenia Gravis • Neuropathy • Obesity • Parkinson’s • Retinitis Pigmentosa • Rheumatoid Arthritis • Strokes • Wilson’s Syndrome <p style="margin-top: 10px;">And many more yet to be listed</p>
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- Electromagnetic disruptions – electrical transformers, geopathic stress, cell phones, electrical appliances
- Industrial chemicals – thousands of xenobiotics
- Building materials – formaldehyde, arsenic, paints, thinners, primers, glues, carpets, carpet pads, etc.
- pH imbalances – overly acidic, overly alkaline
- Poor circulation – toxin accumulation, low O2
- Heavy metals – mercury amalgam, aluminum antiperspirants
- Vaccinations – contain many toxic additives, heavy metals
- Lifestyle – tobacco, excessive alcohol, OTC drugs, Rx drugs
- Terrain issues – bacteria, virus, parasites, fungi (cause immunological free radical generation)
- Food additives
- Excessive caffeine

Most all cellular damage is caused by free radicals and inflammation-responses, but ionizing radiation injures DNA as well as causing cellular inflammations. As you can see, NO ONE IS EXEMPT from encountering cell-damaging, inflammatory, free-radical-generating substances every day. Not if you breathe, eat, drink, or live.

Hormone Resistance. Mitochondrial and cellular DNA damage is also associated with hormone resistance – insulin, estrogen, progesterone, testosterone, leptin, thyroxin. When the cells do generate enough ATP, hormone messengers may not be able to effectively alter cell behavior thus the message is not ‘heard’. Of even greater importance to hormone resistance is the free-radical damage to the cell membrane, which in effect shuts down the hormonal cascade, and thus again, the message is not heard. The unheard messengers may then cause unwanted cellular proliferations and neuro-endocrine confusion since their mission was never completed. **The effective nutritional support of hormonal issues must include mitochondrial support with anti-oxidants.**



Cellular Inflammation.

A primary mechanism that damages cellular function is inflammation. Free radicals cause inflammation. And inflammation causes free radicals. Pathogens also cause inflammation and free-radical activity throughout the body. This is the underlying process that can tip the body into altered

tissue function and autoimmune activities.

Cellular inflammation is a severe “terrain” issue based on having too many toxins in the body. Imagine a city in the throes of a garbage strike. The trash bags are stinking on the sidewalks and pedestrians are angry and yelling at each other. This is the condition of many people’s bodies as their metabolic wastes and acquired toxins become more than their detoxification pathways can eliminate.

Antioxidants help the body avoid and quench the cellular free-radical damage so the cells can once again perform

optimally. The SAD (Standard American Diet) lacks in anti-oxidant nutrients and thus many people supplement their diets with anti-oxidant supplements such as Systemic’s ROX and EPIC formulas. Both formulas address free radicals and are powerful anti-inflammatory formulas.



Tips from Tips: Clinical Applications of Anti-Oxidants ROX & EPIC

ROX is a “blanket,” whole body, whole cell anti-oxidant complex that helps protect cell membranes as well as the cell’s interior and DNA. A particular focus for ROX is cardiovascular inflammation and thus it has a bearing on cholesterol levels, arterial plaque, and blood pressure.

EPIC helps the body prevent metabolic, mitochondrial damage and specifically targets the NO/ONOO (nitric oxide/peroxynitrate) chronic, self-perpetuating inflammatory process, and thus is specific for the mitochondria and interior cellular regulatory processes. [See Research Report #2 for more info on this.]

This commentary is particularly focused on the **ROX** formula and the benefits of its **Resveratrol** antioxidant and cellular rejuvenative components for whole body nutrition. In Research Report #2, we will discuss the medical paradigms of disease and the NO/ONOO inflammation cycle. For practical clinical purposes, you will find that using **both the ROX and EPIC formulas together provide a marvelous array of antioxidants that work throughout the body and the inner-cells as proven by the inexpensive and insightful Meta-Oxy lab test** (available from Systemic).

It is absolutely essential that clinicians first help the body remove the *cause* of cellular inflammations while supporting

the body's requirement for more anti-oxidant nutrients.

Graceful Maturity. A primary cause of aging (as well as a general decline in health) is damaged DNA. We understand that: 1) our environment and food supply presents an overabundance of inflammatory, free radical proliferators in the human body, and, 2) inflammation and free radicals damage the cell membranes (including mitochondrial membranes). But most importantly regarding aging is the integrity of the DNA which contains the cell's identity.

Viable DNA is required to rejuvenate and regenerate



collagen, skin, and the extra-cellular matrix. Loss of tissue integrity results in the body replicating an inferior tissue and state of health. [This is why Doc Wheelwright was an

avid proponent of *cellular identity factors*⁹ such as those used in many of the BioFunction's and other Systemic formulas. The cellular identity factors provide the body the nutritional molecules already arranged to help re-establish the genetic code so the body has the specific tools to repair damaged DNA.

When the body is able to repair its damaged DNA, it is able to conserve telomeres and reproduce new cells that have youthful vitality. When the body is unable to repair DNA (due to a lack of: nucleopeptides, healthy RNA and enzyme systems, ATP energy), then subsequent generations of cells lack the integrity and energy to perform optimally. That lack of integrity and ability to perform optimally is called "aging".

Now for the hormonal component of aging. In a large extent, we're back to our same story. "Hormonal issues from pre-menstrual mood changes and menopausal difficulties to dread diseases are really about the cell membranes and not so much about the

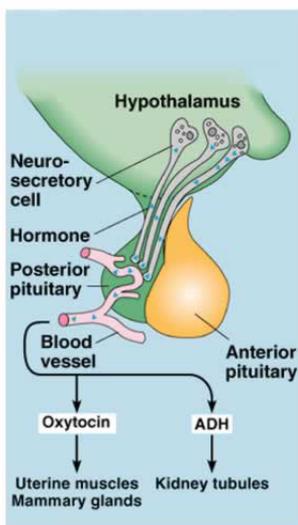
producing gland (tumors, reversed hormones excepted). The body's prime directive is to do what it thinks is right for survival. If the body is found doing something wrong hormonally, it's probably an issue of the receiving cell's membrane resisting the hormonal messenger." – Dr. Jack Tips, Neuro-Endocrinology & You

Understanding this, we have a new understanding of the age-old campaign of the Natural Health movement:

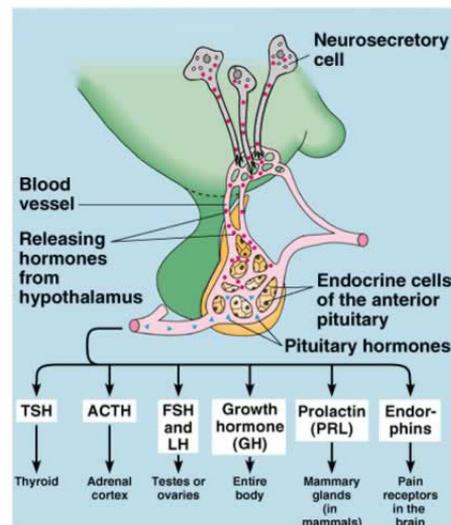
- 1) Nutrition – we must feed our cells every day [See *The Pro-Vita! Plan for Optimal Nutrition*¹⁰]
- 2) Detoxification – the body must have assistance to detoxify acquired toxins and metabolic wastes [See *The Healing Triad – Your Liver, Your Lifeline*¹⁰]

In this discussion we find that anti-oxidant support helps the body with both nutrition and detoxification.

The situation of poor diet, increased environmental toxicity, and increased stress, coupled with the knowledge that inflammation and free-radical damage is a major contributor to metabolic diseases and aging, we can understand that nutritionists and natural health practitioners are at the vanguard of the true solution to the body's inability to prevent chronic-degenerative diseases, painful inflammatory conditions, energy shortages, wrinkled skin, and an unnecessarily rapid rate of aging because the SOLUTION is



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⁹ Cellular identity factors are the alphabet of the cellular intelligence. They remind the tissues how to construct and re-construct their fundamental structures so that they function properly. It is vitally important in the healing of weakened, damaged, aged, tissues; and without it, the tissue can never fully recover its optimal function. – A.S. Wheelwright, discussion with nutritionists, Austin, Texas 1986

¹⁰ The Pro-Vita! Plan For Optimal Nutrition, The Healing Triad—Your Liver, Your Lifeline – Books based on Doc Wheelwright's dietary and herbal research. The Pro-Vita! teaches people how to "think" for themselves regarding nutrition as well as how to design the perfect meal for human nutrition. Your Liver—Your Lifeline discusses detoxification, rejuvenation. Available at www.apple-a-day-press.com

NUTRITIONAL. Nutrition is where the body gets its tools to maintain optimal health. With this information we understand the critical importance of anti-oxidant supplementation to help the body counter the excessively high rate of damage occurring daily within our bodies.

Q. Can a person take too many anti-oxidant nutrients and inadvertently inhibit the body’s necessary redox processes?

A. Yes, but it would have to be a very large amount because the causes of free-radical activities within the body are ubiquitous and constant. Not even ‘health nuts’ are escaping the need to supplement with anti-oxidants because a person’s exposure to multiple sources of potential free radicals happens with every breath. **This is why it is important to use the Meta-Oxy test occasionally.** It measures the amount of lipid peroxidation (e.g. free radical damage of cell membranes) in the body. People with a dark magenta result need to increase their anti-oxidant intake (ROX + EPIC) and look to minimize sources of free-radical generators (e.g. correct the cause). When the dark magenta color fades to very light, the body is operating in a safe-zone – a better balance of the oxidative/anti-oxidative processes. The safe zone means more optimal hormonal responses and youthful cells.

Find Out Your and Your Patient’s Oxidative Stress Levels – The Meta-Oxy Test



Meta-Oxy Test.

The time-honored nutritional researcher, Adelle Davis, said, “As I see it, every day you do one of two things: build health or produce disease in yourself.” So the questions are: 1) Are you aging faster than you should? 2) Are your patients aging faster than they should? The way to know for sure can be so easily tested via Systemic’s

**Two hydrogen atoms meet.
One says, “I’ve lost my electron.”
The other says, “You sure?”
The first replies “Yes, I’m positive.”**

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What clinicians like about the Meta-Oxy test is that it is VERY INEXPENSIVE. It reveals the general oxidative stress level in the body, and it shows the efficacy of

the program. The clinician can have a patient take this test on arrival and literally one minute later know if that person is suffering oxidative damage to the cell membranes that could be: 1) responsible for endocrine hormonal issues, 2) causing neuro-endocrine confusion, 3) a root cause of low cellular energy, 4) blocking detoxification pathways, 5) causing chronic fatigue, 6) setting the stage for free-radical pathologies, 7) a hidden cause behind practically all health concerns. This means that people need to know if their bodies are struggling with free-radical damage. And so important to clinicians, if this matter is not addressed, the patient will not improve as much on the selected program.

“Systemic’s ROX formula with Resveratrol has become a mainstay of my clinical practice because it provides over a dozen anti-oxidant complexes plus anti-inflammatories that address free radical damage throughout the body. I know it’s working because the Meta-Oxy test shows consistent improvement in lipid peroxidation in every case. ROX helps solve what is often the turning-point element for the body to improve hormonal as well as the degenerative issues of aging. Once a person understands the dire need for this formula to counter the cellular damage caused by the massive level of environmental toxins, ROX becomes a necessary daily supplement for life in the 21st Century.” – Dr. Jack Tips

View the short webinar, “The Attack On Your Cells” and download protocol sheets at www.SystemicFormulas.com.

Disclaimer: This Research Report does not propose a method for diagnosing or treating any disease whatsoever—a process exclusive to the practice of medicine by licensed individuals. This information is for educational purposes only.

TAKE ACTION NOW:

1. Order the Meta-Oxy Test vials from Systemic, 800-445-4647.
2. Order ROX (and EPIC)
3. Test yourself and learn your daily anti-oxidant requirements
4. Implement Meta-Oxy in your practice – you’ll see more rapid improvements