E=MC2: MAKING FACTOR X ACTIONABLE

READERS SUMMARY:

1. How does the fossil record prove that epigenetics is the most dominant factor in biology today?
2. How does this lack of insight create a huge mismatch for patients trying to get to Optimal?
3. Does epigenetics change they way we think?
4. Does the way we think alter our biology and can it alter the medicine we practice?
5. How do we make this actionable for patients?

In the famous equation E=mc2 we all know that the speed of light is the most important variable in the power of the equation. This has become the logical syntax of science the last 100 years. This is why a nuclear weapon has the energy it does from two small blocks of metals that get exploded into us. The equation is now being challenged by new wave scientists. In fact, one of them spoke at the TEDx Nashville event I participated in and I found his talk fascination on many levels. I love people who challenge scientific dogma.

Might there be a similar 'weighted or squared factor' in biology that does the same thing to a biologic system?

Might that one factor have the same magnitude on modern man? In a phrase, I believe the answer is, unquestionably yes. There are too many anomalies between modern humans and our recent ancestors, the chimps of Africa that just make no sense based upon today's CW dogma of todays evolutionary biologists. They need to be explored in my view.

The speed of epigenetics is the driving force to mammalian

survival and dominance but it is also the very thing that is killing us today. Well you might ask now why does epigenetics trump genetics these days, Dr. Kruse? The best way to answer this is with an example. Let us take two humans with identical DNA, like identical twins. They have identical DNA and a genome at birth. Why do they not have an identical life as they live it out? Their DNA does not change but the way it is expressed however does because of the envirnoment they are in throughout their lives. What environmental pressures their genome faces determines the genomic expression they have and ultimately life they get. The life they get is not 100% determined by the genes their mother and father gave them.

This is a revolutionary concept just realized in the last 15 years in genetic research. Since we know this is true just imagine what would happen if that process that determines expression is sped up 4 times, then ten times, then hundred times. This is precisely what has happened every generation from the KT event until now. It also helps explain the massive difference in humans and chimps even though we share very similar DNA. Since KT it has sped even faster than we have imagined. As time evolves, epigenetics picks up more speed. 67 million years ago this rapid adaptation to environmental change was a huge survival advantage to eutherian mammals. As we saw in the last blog, often the way evolution works in one eon can be turned upon its head when the environment changes once again. This is precisely what has happened in primate and hominid evolution. I believe the rapid adaptation is the source of many of modern man’s maladies. In fact, in my opinion it is a recipe for disaster from neolithic diseases. The more circadian mismatches we face the faster epigenetics goes via methylation and acetylation of our DNA. This is why children now are dying from diseases of aging before they reach adulthood.

When life began 4.5 billion years ago it was a single cell organism. Life went from a single cell all the way up to a T.

Rex in that time frame. This is an oversimplification of the timeline, of course, but it directionally accurate as a scientific truism based upon timing of fossil data we have today. In the last short 67 million years from the K-T Event, we went from coelurosaurian theropod dinosaurs and small mammals to modern birds and modern hominids. That explosion of evolutionary advancement in that short of time really has never been well explained by any branch of science. It is considered an anomaly even today. The reason for the explosive growth and expansion of life can be traced to how we survived the last extinction event where the dinosaurs died and where eutherian mammals began to dominate a planet. We come from those animals.

Science has a way of avoiding anomalies that don't fit into its current paradigm. This anomaly is well explained by my theory of eutherian mammalian development due to the explosive sped up epigenetics in all survivors of K-T extinction. It may even lift some other theories in evolution that are considered fringe, like the aquatic ape theory. The fossil record shows that the recovery of life from K-T was nothing short of amazing compared to other extinctions life has faced. Today, since understand how epigenetics works to speed advancement without a single change in the DNA code helps explain that rapid development. As the Human Genome Project was just being completed, our understanding of genetics was rapidly changed in a series of experiments done at Duke University that showed epigenetics was far more powerful than genomics. This belief has been rapidly expanded in the last decade by genomic science. Many scientists and physicians do not even know this basic fact today. I learned about this power of epigenetics in 2003 from a small study in Duke University (see Cites) and it changed how I thought about disease and medicine ever since. The speed of epigenetics is the most dominant factor in all of mammalian biology evolutionary development. This one study is a small tsunami wave that came all the way from the Tidal Wave that was K-T event 67 million years ago.

This one small fact is at the source of why our modern healthcare system is severely broken and chronic diseases and illness are poorly treated or under treated today. My thoughts changed back then but I never realized that medicine has not……until recently. Modern medicine relies, almost to a fault, on science these days. Scientific knowledge is cumulative, and it is based upon previous benchmarks that allow us to scale new peaks as time elapses. But a revolutionary thought can disrupt that continuity. Medicine needs that type of disruption.

We need to move far away from our previous conceptions of the world that have run us aground. Today, medicine is hamstrung by a lot of 'bad science' it calls evidenced based. In my opinion, It needs a new beacon to follow. Today's evidence is tomorrows fallacy based upon some political or social paradigm set up by groups that are using it for its own ends. That beacon must be founded in what really drives our biology. I think evolutionary principles need to be the currency we use to "*scale the peaks*" healthcare has in its shadows now. This is why there is discontent in healthcare's customers and some of its doctors.

THE PROSPECTIVE OF PATIENTS:

One thing I have realized in doing all the educational consults I have to date is that the frustration of patients comes from the impoverished thinking that is born in our literature and regurgitated by the healthcare complex. I think most of the "**actors**" playing leading roles actually know and feel that discontent of the patients but the system penalizes you if you '*step out of line*'. The rules are constructed for conformity of the system and not the effectiveness of the message. If the goal is to change the system and solve the problems of the customers, we first must define the problem. The first tenet of change is having the responsibility to define the current reality we are in. Sadly, that state is quite poor today.

Realistically, thinking about medicine today we have been tripping over the truth for hundred years while dusting ourselves off and acting as nothing has really happened by our actions. Modern medicine bases its decision processes and calls to action on “evidence-based medicine” found in the literature. I think when we approach a systemic wide problem we need to step up to the plate and strip ourselves of all preconceived notions of right and wrong and all the dogma we hold near and dear to our heart. We need then to reassemble the facts and learn the facts as they exist today and make an honest assessment of the situation and make a decision to change the course we are on. Modern medicine continues to use the research literature as its gold standard and not the wisdom found in evolutionary medicine and biology. The literature is really only 150 years steeped in experience and is biased and flawed in how it is constructed, completed and disseminated. I honestly believe that physicians today do think soundly, **but it really does not matter how sound your thinking is if it is based upon faulty data or assumptions?** That is where I think we find ourselves today.

To solve our problems I think we need an honest assessment of what the current status is on the pros and cons of patient care. We also need to be mindful that not all pro’s carry the same weight as all the cons. But this manner of introspection will reveal the value of the mental exercise so we can dig at the core facts of why we are where we are. Moreover, it will allow us to view the problems from different perspectives and really illuminate the proper course of action to repair the problem. I have done that for me and my own practice I realized that relying on the research data alone and not considering the epistemological basis of where our species comes from was a dramatic oversight that allows us to continue to make the same errors over and over again. Modern medicine looks at the published research like a fundamentalist looks at the Bible. That must end. When I uncovered Factor X as the root cause of most of the diseases I treat today I realized

that many of them were not diseases at all. Somewhere results of impoverished thinking and socialization of a faulty idea imprinted by the status quo of medical education.

Most physicians I speak with today ask me what my goal really is now. I tell them I want to change the way we practice medicine and deliver it to the masses. Most of the facial gestures I get from them confirm for me what I already suspected. They have an '**it can't be done mindset**'. People who think this way usually expect the worst and continually experience it. (modern healthcare breeds this thinking) Or, they decide to change the way they think. I have said many times on this blog and in the comments that we can change our DNA with a thought.

I now fully believe this and this is why I am no longer the person I was just 5 years ago. I can not honestly say that 5-7 years ago I was a very positive person. I apologize that I am made entirely of flaws. The best part is I am sutured and stapled together with good intentions as I work to find out what makes us tick. I am human and I have my flaws. I was very cynical because of the world I came into. The real problem for me is that I allowed that world to alter me. I realized that I had the control to change my environment to get to the change I wanted. This one thought made me think deeply about how the environment, and then epigenetics could affect a biologic system rapidly and dramatically. That one thought made me realize how a small change could impact any mammal. See environmental changes do not alter our DNA, but it radically alters the way our DNA is expressed. I immediately thought about my own thinking in this light and wondered instead of focusing in on what I believed to be true about medicine, I could instead focus in on how to express how epigenetics actually dictates all wellness and disease decisions.

Factor X used the sped of epigenetics to change the entire living animal kingdom on our planet in a few short seconds without radically changing our DNA at all. It is the C, in

E=MC2. That is truly awesome power that we just realized in the last ten years. That one small chemical ability had a magnificent power when you look at what it did to eutherian mammals after KT. I was blind to its power until I really thought about where humans really came from. I was always taught to believe that we needed to look at our nearest cousins on the tree of life. When I looked at our genesis as a family, I got a completely new perspective on how to think about wellness and disease. When I realized the impact of a sped up epigenetic program on mammalian DNA, most of the oddities we see today in science and biology began to make a lot more sense to me. Moreover, when I applied the lesson of this new foundational perspective, my patients got better by the truckload.

IF WE HAVE ALL THE RIGHT ANSWERS, HOW COME WE'RE IN SUCH A MESS TODAY IN HEALTHCARE?

Medicine and science are very cynical, so as a result of realizing this truth I decided to change my mindset and I forced myself to think very positively. It was a conscious choice to change the manner in which I thought and how I behaved. I stopped thinking it was impossible to change medicine and decided to focus in on what was right about changing the paradigm. I also began to move away from the so-called experts. Dean Dwyer's new book also mentions this concept and when I read it there I smiled in my head. See, critics like to call themselves experts, and they are expert in one respect. They routinely enjoy shooting people's dreams down before they ever get started. I began to realize that being an expert in the system I wanted to change was no benefit at all. Moreover, I knew that the power of evolutionary design using the lever of epigenetics was the single most important change agent for any eutherian mammal on this planet left standing after 67 million years ago. I found when I began to question the status quo, and used evolutionary biology to guide me things radically got better all around.

I began to look for possibilities of how the speed of epigenetics showed its power to alter the mammals. When I came upon them, I wrote them down for myself to think about into a larger framework that could change a paradigm. I began to look for these possibilities in all places and because I was looking for something new, I found a lot of examples of what modern scientists call anomalies. Scientist hate outliers to any paradigm in power. Well, the modern day neolithic diseases that are killing our civilization are that perfect storm. No one seems to explain obesity, diabetes, Alzheimer's, Autism, and Cancer explosions over the last 100 years. Yet, it is present and here now. I decided to think about those outliers and the anomalies in a new way. When I did, I put that knowledge to the test and actually cured myself and my family of some of those "outlier diseases".

The very nature of getting a medical education (any allied health field) makes us very cynical, and as a result, the best defense we have is to become optimistic. I had to practice that for several years before I was able to master it. Once I began to become more optimistic, I was able to realize how to creatively use what Factor X taught me, and creatively use it to make actionable plans and decisions for my patients with a disease I routinely treated in my clinic. I began to realize that the most valuable resource I brought to the table as a surgeon and my work was to make Factor X actionable for my patients. When you add creative thinking to your arsenal as a surgeon you begin to add value to everything you dispense to a patient and their satisfaction rises and their outcomes improve tremendously. I think the people who have sat down with me for an educational consult can attest to this.

I knew that the speed of epigenetics was the single most important evolutionary clue in how to get people well pretty quickly in 2007. But I had no plan for how to make it actionable when I began my quest to help them. So I sat down and thought about how to accomplish it. **I realized immediately**

with epigenetics, the present condition of modern humans was not the key to our past, but rather, it was the major exception to the rule. When I embraced that paradox I began to ask the following questions about every malady and remedy I was taught. How did I make Factor X actionable for my patients?

1. Why did things have to be done this way in medicine and surgery?
2. What is the real etiology of the patient's problem?
3. What are the foundational issues in this case?
4. Does this case or situation remind me of anything else I have ever seen in any other disease?
5. If this is the correct way to do it, what is the polar opposite way to do it and does it work too?
6. Is there any cipher or symbol out there that may help explain the paradox too?
7. Why is this case or problem particularly important?
8. Did my training give me the easiest and cheapest way to repair this problem or not?
9. Is there anyone else out there treating this issue differently than me and getting different results?
10. What would happen if I did not surgery at all and just change the speed of their epigenetics using diet, sleep, and cold?

In 2007, I think Factor X allowed me to ask better questions of myself than my training allowed me to ask myself. It was because I allowed the thought I was socialized to believe in training to be ultimate truths when they really were not. They were based on a lot of faulty data and assumptions in the literature. I began to use evolutionary biology, specifically a new perspective, where epigenetic speed was driving the expression of our genome and the lifestyle decisions that modern life allowed. By asking better questions and not focusing on just answers, and challenging the process, I got to more creative answers that also worked for my patients and

customers. I began to trust my instincts here and I focused in on the innovation of my thoughts. There was really nothing groundbreaking in what I found or what I realized post-Factor X. What I did realize as a surgeon is that by combining the things I did learn in residency training to the epistemological basis of Factor X a new reality was created for patients. **Innovation is really combining a few existing elements that we already know to be completely true and the synergy they create together forms a "new concept" that we can all benefit from.** Small thinkers do not think like this. They expect massive change to come from massive findings. That is pretty rare in science if you have followed it historically at any time in our history.

The realization of the power of epigenetics turned me into a new person and physician. I began to realize what I knew was limited and that there was much more for me to challenge and question to get to the answer I sought and my patients needed. I stopped believing I had the answers and realized I had the vision to get to some new ones that might do someone some good. I began to share these things with my local physicians and they also began to report very positive results in treating diseases and maladies using a sped up epigenetics program as a backdrop.

WHAT IS OUR GOAL?

The goal is really to slow epigenetics down to our benefit now. At the K-T event, a sped up epigenetics guaranteed our survival as a species of eutherian mammals. Today, modern hominids are on a fast track to extinguish themselves because as time has marched on, reproductive fitness is no longer the battle of the day for us. Today, surviving to reproductive fitness is easy but remaining well as we age is now the biologic novelty that is the issue of the day. We now have children born into disease because of the power of transgenerational epigenetics. Just looked at the rates of Type 1 diabetes, Type 2 diabetes, ADHD, and Autism over the

last few decades. They are exploding just as we should expect, but we do not expect it, because we don't understand the power of epigenetics. It's not the genomes, dummy; it is how it is expressed that really matters.

Science often ignores anomalies that the current paradigm can not explain. But when anomalies accumulate the job of a medicine man is to embrace the paradox of what they are and seem and try to solve the riddle. When enough of the anomalies accumulate they may trigger a paradigm shift. This belief falls in line with Thomas Kuhn's "***The Structure of the Scientific Revolutions.***" Anyone who questions an old paradigm stands on the shoulders of the past as they try to take them out simultaneously. This paradox of scientific reality sometimes leads to major problems in the present day before things change. The old guard is threatened by the new world order because they do not understand the new paradigm. They have no way to objectively judge it. So the ridicule it. You can argue forever with them over it, but you will never resolve the basic differences. Science is both subjective to your perception and your reality whether you realize it or not. It is a subjective and political ideal. Scientists hate that moniker but it is deadly accurate in my view.

Most people today are frustrated with healthcare because we are focusing on answers to issues instead of asking better questions about why this is all happening. All Neolithic disease we see today generally increase in prevalence and incidence as time elapses so disease of aging is now showing up in young humans. Moreover, we are ravaged and succumbing to these diseases at an alarming rate and we have few answers why this is the case. This rate is further intensified when eating the wrong modern foods in deep supply, do things to disrupt our sleep, and use modern conveniences designed to make our life easier. We are finding the use of these products, while convenient, may shorten our lives biologically.

When you realize our problems from this perspective…….you

begin to understand how to repair things and maybe even change a paradigm.

We are all anecdotes, but science is not based upon anecdotes, medicine, however, was founded upon anecdotes amassed together. The RCT of the last 150 years is nothing but flawed subjective, politicized, and paid for advertisements of the status quo. Science never fixed my obesity or many of my patient's ailments either. This is why medicine remains an art within a science. Neither can be held above one another no matter how much we want it to be true. This was a tough pill to swallow for a long time because I was socialized to believe the answers I was taught in med school and residency were always firmly based in science. Scientists rarely understand the real world or solve the puzzle of the health of disease. That puzzle can only be solved by your inner guru, your primal sense.

Kuhn had it right when he asserted science, like life on earth, really does not evolve toward anything…but away from something instead. We like to think science evolves with the "truth" but it really only changes as our culture allows that change to happen. This is why conventional wisdom rules today and living your life against the grain might just save your life. Medicine, like evolution, is firmly based in ambiguity by modern socialization……..until we realize what we don't know we will never know where we need to go. Epigenetics studies highlight the importance of environmental factors in the inheritance of complex traits. Our interaction with the world now has been shown to have effects well beyond our lifetime. I believe it sheds life on not only where we came from but also where we need to go. It has changed me, even with all my flaws.

Science believes in the convention of "*ultimate scientific truths*", but medicine is based in the arts where the ultimate truth is in a constant flux of evolutionary change. There are no ultimate scientific truths, contrary to popular belief

anywhere in the literature or in the blogosphere. This is just another logical fallacy. Human history shows that every ultimate truth heretofore has been toppled by a ‘new giant’ or paradigm. Just as the many extinction events on this planet have shown us, **life persists and exists in its current form** because of this flux. **It adapts no matter the hand that is dealt.** It is time we begin to practice medicine using this Primal Rx.

We need to become comfortable with this uncomfortable reality.

Please take a look at a new MD blog. Please read it and support it. We need all the doctors we can get to change the world. Brad is at
http://lowcarbpediatrician.com/

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