

PALEO 3.0, MEET EPIGENETICS

READERS SUMMARY:

1. What dietary context really means.
2. What is epigenetics?
3. How a thread can help thousands of people?
4. Sharing thoughts can really help us all out.
5. How did grandma and mom turn off or turn on your metabolism? And what have you done to it recently?

The Quilt took me years to lay out in my own mind based upon my experiences as a surgeon. Sometimes it is really neat when I get a bolt of lightening from a person that I am communicating with. That occurred this AM when I was giving some feedback to a fellow “netitizen” on a forum about his labs he posted. My inclination was not to really give my feedback because I tend to be a polarizing presence at this place. But based upon some of the responses in the thread and the “ambient awareness” I have with this particular poster over the net for the last 6 months, I decided it was prime blogging landscape.

Some background is needed. Mr. Kronk posted his VAP (lipid profile) on a website and asked for feedback. Since I have been interacting with this particular person for sometime I think I have a pretty good handle on him over the last 6 months. He is quite fit and he eats a “classic Paleolithic diet” by most standards. In the past year he has consumed 150-200 grams of carbohydrates per day by his own admission. His labs prior to this have always been acceptable to him. He has admitted freely that his carb intake has gone up over the last year with few ill effects. On many threads he, and many others like him, advocate a much higher carb intake than I would advocate “generally”. In fact, the feedback I was going to give him was precisely that. I knew if I did it would cause a shit storm on the forum with many others who think root tubers and fruit at this level are perfectly fine.

As a surgeon who sees many patients a year, I know this belief is valid for a much smaller subset of people that walk the streets of the USA. But that is when the light bulb went off for me. I am constantly harping on "context" with so many people about dietary micro's and macro's. I have seen many respected paleo bloggers talk about what is and is not paleo and what how paleo is lifestyle not a diet. Well, I look at Cordain, Wolf, and Sisson's work as Paleo 1.0. I look at DeVany as paleo 1.5, and Kurt Harris latest manifesto as paleo 2.0. I like their ideas when they are put in proper cellular context. But the more clinical experience you have you can analyze things quickly like a doctor does in clinic; you quickly realize there is no uniformity in to how people respond to the advice of these gurus. Moreover, I think Jack Kronk's VAP is going to help lots of people understand why that happens because I fully expect this will open a lot of discussion somewhere on the net.

Most reading this will likely agree with me that a paleolithic diet is how a human should eat. But where many of us will disagree is the breakdown of the carb and dairy content of the particular paleo diet. I think Paleo 3.0 for me is quite simple. It should be based upon the context of what your epigenetics was then and is now.

What does that mean, doc? It means go find out what kind of diet and body your grandmother had before she got pregnant with your mom and when she was pregnant with your mom. Then find out the same thing about your mom with respect to you. This will tell you more than you can imagine. When I was in med school we learned about Darwin and Watson and Crick whose dogmas both said we are what our genes are and how natural selection of evolution acts upon those genes. That is called genetic determinism. It has been dogma for a long time. It still is in most of the medical literature up until the last few years. We now know that our genes are not the most important thing to our life. It appears that epigenetic

modifications to our DNA are what determines what genes are turned on and turned off. This is where grandma and mom come in. We inherit all our mitochondria from our mothers. Mitochondria are how we make energy from food to live. We also know that grandma has a bigger impact on the type of mitochondria and metabolism we inherit than it does from our mothers. Mom is still important in this, but the key is to know about both of them in determining what kind of metabolism you're likely have today. Now think about how you have epigenetically altered your own DNA with the food choices you have made since you can remember. Where you a thin person most of your life or normal sized? Were you always heavy? How about your body composition throughout your life? Write them down. If you don't know about grandma or mom go ask someone who does know. Write them down. And ponder what and how you eat now.

The variability we see in patients who eat a paleolithic diet are most likely due to epigenetic factors that I just mentioned. That is why people like JK have always believed that high carbs are not a problem for their entire life. Their experience made them believe that. The converse is also true for someone like me. I knew carbs had to be kept low because of what I knew about my own grandmother and mother and what I did to myself the ten years before I became a morbidly obese surgeon. In the last 5 years I have treated hundreds of people and seen just how variable their clinical response was to the guidelines in Paleo 1.0 books, in Paleo 1.5 and 2.0 advice. This advice however will help a large segment of the population eating a SAD, but it is too general for the N-1 that I work with daily. In the last three years, I "thin sliced" my observations and started to make recommendations based upon the epigenetic clues I get when I speak and observe my patients and my fellow posters. My observations have lead to my clinical treatment changes and evolution in thinking. The results have been nothing short of a miracle for the people who shared this information with me.

It is now the main reason that I believe deeply in a “quantified self” path of change as the Paleo 3.0 way to live. We need to eat in a fashion that gets our epigenetic programming back to optimal evolutionary environment our brain is designed to work best in. **We know that our DNA off and on buttons are all controlled by methylation and acetylation of chaperone and histone proteins now.** Take a guess where the methyl and acetyl groups come from biochemically. The answer is from our diet and the environment our food grows in. That environmental info is codified in the electrons our food is broken down into in our bodies and delivered to our mitochondria.

My belief is Mr. Kronk’s VAP shows what his **recent diet** choices have done to his current “on and off” switches in his liver. The current epigenetic modification of his DNA’s off and on buttons so to speak. He clearly does not like what he sees. Well, Jack...I have great news for you. Epigenetic science says you can alter the “on and off” genetic switches minute to minute and get your liver back to optimal if you make the changes that optimize you. **Our genes don’t control us, but our thoughts do.** Thoughts are epigenetic signals too, but too few think that way. What we do with our thoughts control gene expression. **In a sense, in a mammal with an expanded neocortex thoughts are biologic endocrine secretions that change behavior by altering dopamine levels in our brain.** That is what epigenetic is all about. This is a great opportunity to help thousands of people in my view. This may begin to get people to start thinking differently about how to make their own correct decisions about what type of paleo diet they need to be eating for them based upon the current status of their off and on switches. It gives complete context to what a paleolithic diet can and should do for a human. None of us are currently representative of Kitavans, Inuit, or Okinawans so comparing what they ate to us is useless because our epigenetic signals are far removed from theirs historically. When we get back to an optimal baseline then it matters big

time.

Paleo 3.0 is all about eating in context of our “on and off” switches. These are monitored via our labs and clinical responses. This is how I do it in my clinic. The labs tell us precisely what food does to our switches. You can choose to discount it or you can listen to them. It is your choice. Most of you know I listen to labs all the time. Here is a chance to tear my QUILT apart.....or add a giant piece to it. What say you JK?

CITE

CITE 2

Also see Chris Masterjohn's June 30, 2011 blog at the Daily Lipid