

# Monitoring Inflammation Key To Living Well

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The baby boomer generation is very concerned about living well in the next 20 years, especially when it comes to brain and heart function. People spend money on the things that are important to them. The question is "can we identify what's important to our patients and demonstrate how wellness therapies relate to what's important to them?"

One way is to use a patient's family history to identify potential genetic family weaknesses. If dad died of heart disease or mom has a history of autoimmune or neurological disease, we need to monitor inflammation markers at an early age. In fact, cancer, pulmonary diseases, Type II diabetes, arthritis, and Alzheimer's all have inflammation as a common link. Monitoring inflammation then is a key to any wellness program.

A very inexpensive lab test to monitor inflammation is with high sensitive c-reactive protein. We know that CRP is a global marker for inflamma-



tion. Most doctors suggest levels above 3 to be harmful. Dr. David Perlmutter, a neurologist, in his book "The Better Brain Book" shared that men with the highest CRP levels at midlife, long before the onset of any clinical symptoms, had triple the risk of developing dementia or Alzheimer's disease later in life compared to men with the lowest levels of CRP.

Russell Jaffe, an MD who holds a PhD, has been a mentor of mine for years. He is more aggressive in his preventative strategies. He asserts

a physiological range should be identified and factors which alter normal physiology should be addressed years before disease manifests. A high sensitive CRP of less than 0.5 reflects normal physiology and that inflammation is not an issue. Dr. Jaffe describes inflammation as repair deficit.

The body wants to repair itself; however, there is a deficit in its ability to establish and maintain homeostasis. A repair deficit, "inflammation" can be due to toxins, reduced levels of antioxidants and es-

sential nutrients or immunological food reactants. Increased or long term inflammation in essence represents increased or long term deficiencies of the factors that are needed for cellular repair and maintaining homeostasis.

Another lab test you can use to monitor inflammation is homocysteine. I mentioned that baby boomers are interested in healthy brain function. Dr. David Perlmutter comments that brain inflammation can be caused by elevated levels of homocysteine. Elevated homocysteine can shrink your brain, dull your reflexes and lead to depression. Excess homocysteine can enhance free radical damage in the arteries causing formation of plaque. Homocysteine is also a reflection of the body's methylation capacity. Methylation is vital for life and is involved in hundreds of different processes in the body from producing neurotransmitters in the brain to preserving bone health and turning on the genes that help repair DNA.

In the body, B vitamins especially B12, folic acid and B6, breakdown homocysteine into methionine which is a building block for SAM-e, an amino acid associated with mood. SAM-e increases the activity of an enzyme that converts methionine into glutathione, one of the most important detoxifying enzymes in our body. So we need sufficient B12, folic acid and B6 to maintain healthy homocysteine levels. Most labs suggest the upper limit for homocysteine is 11 micromoles per liter.

Dr. Perlmutter says a level of over 9 dramatically increases your risk of neurological problems and therefore should be treated. Dr Jaffe believes we should strive for healthy physiology and that means employing therapeutic measures to bring homocysteine levels under 6. That is a pretty aggressive number but remember homocysteine levels also reflect the body's ability to detoxify.

The first line of treatment then to help reduce homocysteine is supplementing with B12, folic acid and B6. I like using B12-2000 Lozenges for several reasons. First it has hydroxocobalamin as a source of B12 which is the preferred source of oral B12. Methylcobalamin, another source of B12, is well absorbed in the gut but may chelate and change the inorganic mercury that is still in our patient's dental fillings into Methylmercury, a toxic bioavailable form of mercury.

Second, B12 2000 Lozenges contains folate. Most supplements labeled "Folic Acid" are in an oxidized form, folate is in a reduced form thereby it still contains the ability to donate an electron. Folate is the better source found in food.

Third, B12-2000 Lozenges contain pyridoxal-5-phosphate or P5P the biologically active form of B6.

Finally, for the patient perhaps the greatest virtue is that it tastes great. It is important that you tell your patients not to chew it however. We want it to dissolve slowly in the mouth and get the maximum benefit of oral absorption. B12-2000 Lozenges contains 2000 mcg of hydroxocobalamin, 800 mcg of folate and 2.5 mg of pyridoxal-5-phosphate the active form of B6.

Assessing high sensitive CRP and homocysteine can have enormous benefits both on patient compliance and the degree of wellness your patients experience. Using these lab tests to look for global inflammation can be life saving and life giving. There's a link below for more treatment options; but remember, everyone needs accountability and monitoring inflammation especially for your baby boomer patients can be a key to "living well."

Thanks for reading this week's edition of the Tuesday Minute. I'll see you next Tuesday.