

# Monitoring Inflammation

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As the baby boomer generation, we are very concerned about living well in the next 20 years, especially when it comes to brain and heart function. And the research is very clear – cancer, pulmonary diseases, diabetes, arthritis, obesity, and Alzheimer's all have one common link: inflammation. So, monitoring inflammation is a key to any wellness/longevity program.

But before we discuss the best ways to assess and monitor inflammation, I'd like to talk about inflammation in a way that is common sense but is not yet discussed in traditional medical circles. I learned it from Dr. Russell Jaffe, who holds both medical and PhD degrees. In his seminars, he says, “Inflammation isn't a bad thing to be stopped or squelched with drugs, rather see inflammation as a repair deficit signal.” The body wants to repair itself. However, there is a deficit in its ability to establish and maintain homeostasis. In other words, something is blocking the body's desire to repair. It can be due to toxins, reduced levels of antioxidants, and



essential nutrients. It could be foods like gluten or dairy that are triggering the immune system causing inflammation.

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 or balance. So, lab tests are indicators that something deeper is going on. They tell us there is an excess of something our bodies can't handle or a deficiency of critical nutrients are missing.

Don't forget inflammation takes other forms: pain, reduced range of motion, balance as in the Romberg

test, edema, etc. You can measure in inches how close someone can come to touching the floor. For me, if I eat out, I notice my wedding ring is tighter, but if I am eating clean it comes on and off with ease.

Let's discuss lab testing. A very inexpensive lab test to monitor inflammation is high sensitive C-reactive protein. CRP is a global marker for inflammation. Most doctors suggest levels above 3 are 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.

Dr. Jaffe 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 therefore an absence of inflammation. You can see a handout on some ideas to the right. But just as a reminder, once food sensitivities are ruled out, B6 is often the cause of an elevated CRP.

Don't forget to ask your patients if they remember their dreams, and if they don't, add enough B6 in the form of P-5-P until they do. 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 below 6. That is a pretty aggressive number, but remember homocysteine levels also reflect the body's ability to detoxify.

The first line of treatment to help reduce homocysteine is supplementing with B12, folic acid, and B6. I like using B12-2000 Lozenges for several reasons. B12-2000 contains the best form of B12 for oral use, a food grade folic acid, and B6 in its most absorbable form. Plus, it tastes great.

Assessing high sensitive CRP and homocysteine can have enormous benefits. Using these simple blood tests are two easy ways to assess and monitor inflammation. Of course, I always suggest an anti-inflammatory diet. It's what I basically live on. Talk to your patients about assessing and monitoring inflammation levels, and then use that data to develop a strategy that's doable and can be monitored every year.

Thanks for joining me, and I look forward to being with you again next Tuesday.