

## Dr Junger's Recommended Blood Tests

Western medicine offers certain tools that will help you maintain and improve upon the benefits you get from Clean. Take advantage of them, and they may be priceless in helping you avoid unnecessary suffering. As a cardiologist, I value blood tests for giving early insight into obstacles and lacks that might exist in the patient's body, things that if not corrected, could tip them off balance and sow the seeds of coronary artery disease. When imbalances are caught early, changes in diet, exercise, additions of supplements, and a Clean detoxification program can very often shift the balance back, as you've read throughout this book.

If this is so, why then is it still the case that a patient with a "normal" annual blood test can drop dead days after from a heart attack? Why are so many people on statin drugs and heart medication as precautionary measures? Sometimes it's because they and their doctors aren't gathering all the information they could gather, early enough. Almost every doctor today sends for cholesterol levels, cardiologist or not. But there are a few other basic blood tests that, when done yearly as part of your maintenance plan, can give you a hint of a heart attack in the making. Get your doctor to check the following tests. A good doctor schooled in integrative healthcare will use the information from them to guide you to your goal of staying Clean, healthy, and youthful in a toxic world.

**1: Inflammatory markers.** A test called CRP (C Reactive Protein) is a marker of inflammation. When it is elevated, it means your inflammatory system is turned "on" making you a candidate not only for heart disease but for all the other conditions now linked to inflammation. Work with your doctor to figure out why it is turned on: is it from nutritional deficiencies, a hidden infection (such as parasites) or another insult somewhere in the body? The investigation you will do together will be priceless. Other markers of inflammation are ESR (erythrocyte sedimentation rate), blood insulin levels

(insulin is a pro-inflammatory hormone) and fibrinogen (where inflammation and blood clotting systems meet).

**2: AA/EPA ratio.** The ratio between the omega 3 and omega 6 fatty acids is a more sophisticated marker of systemic inflammation, detecting it at an even subtler level than the CRP test. It is the true marker of silent inflammation. If its greater than ten, you have inflammation . A good ratio would be three, and the ideal ratio is about 1.5. The higher the ratio, the greater the amount of silent inflammation you have. (The average American score today is 11, and for those who already have developed inflammatory diseases it can be over 20). This will cause you to age faster and lose health quicker. Remember that inflammation is one of the body's necessary and potentially life-saving functions. The problem is when it happens for no apparent reason because the balance between pro-inflammation and anti-inflammation is lost. Too much anti-inflammation can be as bad as too little. If the AA:EPA is too low, you might not be able to mount an appropriate inflammatory response when you need to. If the ratio falls to 0.7, you will be more prone to infections. You can get this test through Nutrasource Diagnostics Inc. at 1-877-557-7722 or 519-827-8129.

**3: Lipoprotein a .** This type of fat is actually thought to be worse than LDL, the so-called "bad" cholesterol, and is associated with a sevenfold incidence of coronary disease. Statin drugs don't touch it, nor does exercise. Niacin works, but not always. When I find it elevated on my patients it is the factor that makes me order a CT Angiogram for them.

**4: Uric acid.** A waste product mainly of the processing of animal proteins uric acid is toxic and causes gout (inflammation in the joints) as well as corrosion of arteries increasing chances of arterial plaque deposit.

**5: Vitamin D.** More and more evidence links the lack of Vitamin D with heart disease and also depression, osteoporosis and cancer. Since humans today protect ourselves from the sun so much we have become a species depleted of Vitamin D. The consequences have been devastating. Early detection of low levels will help you modify diet, take supplements if necessary, and get more sun.

**6: Homocysteine.** Is a waste product of the processing of proteins that is toxic when not effectively cleared by the liver. Predisposes people to Coronary artery disease, Alzheimer's and in younger women, premature birth and other ob-gyn related issues. High levels usually respond to detoxification programs and Vitamin B complex supplementation.

**7: Thyroid function.** Most doctors order TSH and T4 but the Free T3 is the active thyroid hormone that needs to be checked. When T4 is converted to Free T3 and thus activated, it needs certain vitamins and minerals. Supplementation of these boosts thyroid activity and therefore metabolism and is often enough for mild clinical presentations of low thyroid activity.

**8: Thyroglobulin Antibodies.** The disruption of the intestinal lining exposes the GALT to antigens that should have been filtered and many allergic reactions are generated this way. Gluten, a protein that appears in wheat and other grains, can generate an immune response. When severe, it can be fatal and it is known as Celiac disease. But autoimmunity generated by gluten can have subtler expressions like the creation of antibodies against proteins of your thyroid system. Catching it early can avoid future bigger problems.

**9: Iodine levels.** Iodine is what the thyroid gland uses to manufacture its product (thyroid hormones). Our food supply is depleted of it. When lack of iodine is severe, we

develop goiter, but there is growing evidence that milder iodine deficiencies are associated with heart disease, among other things. If there are thyroid abnormalities or if you have symptoms you suspect have to do with your thyroid, ask your doctor to order an Iodine absorption test (Doctor's data laboratory will provide you with the kit).

**10: Mercury and other heavy metals.** Mercury toxicity is called “the great mimicker” because it can show up as many different diseases from psychiatric problems and cancers to autoimmune diseases. When your symptoms are not that clear, or do not seem to get better despite great efforts, or when you suspect exposure to heavy metals (too much tuna and other mercury-laden fish or you have silver amalgam dental fillings), have your doctor test you for it. Blood mercury and hair analysis have their uses, but are not the way to determine if you are mercury toxic. The only reliable test is a 24-hour Urine Challenge Test with a chelating agent like DMSA. Metametrix or Doctors Data are the labs I use. Following is a list of the heavy metals and the possible sources of exposure.

**11: A personalized supplement regime.** Design a supplement regimen tailored specifically for your needs, instead of blindly taking every vitamin or other supplement that happens to be making the news. The Organic Acid test by Metametrix in combination with simple blood levels of magnesium, zinc, selenium, Vitamin D and the B vitamins will give lots of information in order to do this.