



Lectures in Holistic Health

Second in a series

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Cardiovascular Health





Screening for risk factors

- ★ - Body measurements (Arterial elasticity index, Ankle brachial index, Blood pressure, EKG, Waist size, Weight and body fat percentage)
- ★ - Lifestyle (Smoking, Exercise, Diet)
- ★ - Lab work (Lipid panel, Cardio CRP, Homocysteine, Lipoprotein a, Ferritin, Fibrinogen, FBS, Fasting Insulin, Hormone panel)
- ★ - Others (Gum bleeding?)





Body measurements



★ Arterial elasticity index

★ Ankle brachial index



★ Blood pressure

★ Electrocardiogram

★ Waist size

★ Weight and BF%



★ Cardiovision

★ BP monitor

★ BP monitor

★ EKG machine

★ measure

★ Scale and fat analyzer



Cardiovision

- ★ In office test that measures the elasticity of the brachial artery via a computer analyzed blood pressure measurement. Simple and fast.





Blood pressure

- ★ The systolic blood pressure ideally should be less than 140mmHg.
- ★ If you have high BP work on losing weight, decreasing stress, lower your Insulin level, increase your omega 3 fatty acid intake, eat more green leafy veggies, exercise, let go of anger and disappointments .





Electrocardiogram

- ★ An easy fast in office procedure that allows to recognize changes happening in the heart due to high blood pressure (LVH).





Waist size

- ★ Your waist size in inches should not be greater than half your height in inches.
- ★ The greater your waist size relative to your height, the greater your risk of cardiovascular disease.





Weight/BMI

- ★ Body mass index is the weight adjusted by height and gender.





Body fat percentage

- ★ Ideal range is dependant on age and gender.





Cholesterol

- ★ Ideal range for total cholesterol: <200
- ★ HDL >50 , LDL <130
- ★ Ideal ratio Total chol/HDL between 3 – 5 in men and 3.5 – 5.5 in women.





Caveats

- ★ Not advisable to have total cholesterol below 150 at any age, increased risk of internal hemorrhage, depression and suicide.





Case in point

- ★ Dutch study showed that men with chronically low levels of cholesterol showed a consistently higher risk of depression. *Psychosomatic medicine 2000;62*
- ★ 64 yo m with difficulty concentrating, decreased self confidence, fatigue and depression. On Vytorin 10/20 for 1 year. Cholesterol of 177.





Statins

- ★ Statin drugs lower vitamin A and CoQ10 levels.





CoQ10



- ★ Has been shown to help in neuromuscular diseases, neurodegenerative diseases such as Parkinson's and dementia, in congestive heart failure and other illnesses.
- ★ Effect partially due to antioxidant properties, as well as enhancement of energy production at the level of the mitochondria.



Cardio CRP

- ★ Ideal range : $< 0.3\text{mg/dl}$
- ★ Indicator of inflammation in the cardiovascular system.
- ★ 67yo gentleman had an ischemic stroke. Prestroke cholesterol 160 on Zocor. His CRP was off the chart.
- ★ I have seen elevated CRP's due to stress, sugar intake, drinking of tap water and a deficiency in omega 3 fatty acids.
- ★ The relative risk of CAD for persons with CRP $.0.3$ vs <0.1 was 1.8 *Circulation* 2005





Homocysteine



- ★ Ideal range : <8 mcmol/l
- ★ Positive association between homocysteine levels and risk for cardiovascular disease. *Ann o Int Med* 1999
- ★ Vegetarians have in general higher Homocysteine levels. *Annals o Nut and Met* 2000
- ★ PPI raise Homocysteine levels probably by blocking the production of intrinsic factor in the stomach. *Ann Pharmacother* 1999
- ★ Eggs lower Homocysteine levels because of their betaine content in the yolk. *Arch o Int Med* 2000



Furthermore

- ★ High Insulin levels will increase Homocysteine levels. Diab Care 2000





Fibrinogen

- ★ Framingham Offspring Study showed that patients with the highest fibrinogen level had a threefold greater risk of CVD. *Circulation* 2000
- ★ Fibrinogen increases tendency towards clots. *JAMA* 1998
- ★ Systemic enzymes can help lower fibrinogen levels (Nattokinase).





Lipoprotein a

- ★ Ideal would be below 10mg/dl.
- ★ Lp a is mostly genetically determined but does respond to dietary changes.
- ★ High Lp a levels seem to increase heart disease by 70% Circulation 2000





Iron

- ★ Ideal range for Ferritin is 20 – 80 ng/ml.
- ★ Increased levels were found in people taking a multivitamin containing 12 – 30mg of iron.
- ★ To store iron is a fast way for a body to become oxidized, speak age.
- ★ Iron creates free radicals by which mechanism it damages the cardiovascular system.





Testosterone

- ★ Low testosterone levels are associated with an increased risk of heart disease. Eur Heart J 2000
- ★ Men with low testosterone levels have a higher likelihood of serious heart disease. Sc News 1994
- ★ Diabetes and CAD were significantly linked to the value of free testosterone/estradiol ratio. Cor Art Dis 2004





Dietary misconceptions



★ Moderate fat diet is superior to low fat diet for heart disease. Am J o Clin Nut 2004



★ Omega 3 fats reduce the risk for heart disease in four ways : prevention of arrhythmias, lower triglycerides, decrease blood clots, improve endothelial elasticity. Refined cereal grains increase heart disease. JAMA 2002





Grassfed Beef ?



- ★ Grassfed beef is high in omega 3 fatty acids.
- ★ The omega 6:3 ratio is close to 4:1.
- ★ If the animals receive more than 4 weeks worth of grains at the end, almost all the omega 3 fatty acids are gone, new omega 6:3 ratio 21:1!
- ★ Other beneficial fat is CLA that reduces the risk for diabetes and obesity.



How bad are eggs really?



★ Range fed eggs have omega 6:3 ratio of 1.5 to one.



★ “Supermarket eggs” ratio 20 to one.



★ Remember the betaine content.



Peanuts are both good and bad

- ★ They are high in beneficial fats, such as monounsaturated fatty acids. They contain many nutrients that decrease heart disease, such as : magnesium, folate, vitamin E, copper, arginine and fiber.
- ★ Unfortunately they are high in omega 6's and are very frequently contaminated with aflatoxins and many pesticides.





The real killers in the fat section

- ★ Trans fatty acids
- ★ Hydrogenated and partially hydrogenated fats.





THANK YOU

