Blood Sugar and Heart Disease: Cardiac Metabolic Syndrome

THIS INFORMATION CAN SAVE YOUR LIFE

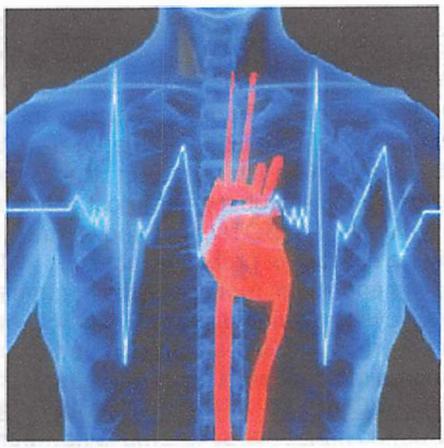
Blood sugar dysregulation is the cause of most cardiovascular disease in the United States according to Mark Houston, MD, Director of the of the Vanderbilt University School of Medicine, Hypertension Institute. Blood sugar dysregulation means that blood sugar (glucose) is either too high or too low. Normally it should be kept within fairly narrow limits.

PRE DIABETES: Glucose is the scientific name for blood sugar. When you eat any carbohydrate, that is all sweet or starchy foods, they are broken down into simple sugars and released into the blood stream. The pancreas, a large soft gland just behind your stomach, produces insulin. Insulin is a hormone, which moves glucose from your blood into the cells of your body where it is either burned for fuel or stored as fat. When things go wrong and there is too much glucose in the blood and not enough insulin you have diabetes. Type I diabetes is a failure of the pancreas to produce insulin. It is thought to be an autoimmune disease. These people need to inject insulin to keep their blood sugar under control. More common is Type II diabetes. This is the end stage of a long process which is now commonly referred to as metabolic syndrome, pre diabetes, or as I like to call it, **cardiac metabolic syndrome**, since this condition is the primary cause of cardiovascular disease: heart attack, stroke, atherosclerosis, high blood pressure as well as diabetes and a long list of other serious health conditions which we call aging.

LOW BLOOD SUGAR = HYPOGLYCEMIA: This progression commonly starts with hypoglycemia, in which you may experience periods of low blood sugar. Since your brain runs on blood sugar, you may feel brain symptoms such as fatigue, anxiety, shakiness or nausea. You may feel weak, shaky or spaced out if you don't eat regularly. You may feel better after eating. You may have low energy, or "crash" in the afternoon. You may feel depressed or have memory problems.

CARBOHYDRATE LOAD: Carbohydrates are things like bread, grains, potatoes and all sweeteners including sugar. All carbohydrates are converted into sugars. High blood sugar is very toxic so this blood sugar should be moved into the cells by insulin. If we eat sugar or simple carbohydrates such as white flour products, this dumps a large amount sugar in the blood all at once. It's like putting nitro fuel in your family car. Your body was not designed to handle such a sudden sugar surge. In response the pancreas puts out a large amount of insulin. Often the pancreas over reacts, which can results low blood sugar. This is called **reactive hypoglycemia.**

INSULIN RESISTANCE: If this goes on for a long time body cells become overwhelmed with high insulin surges and stop responding. This is called **insulin resistance.** Like every hormone, insulin works by attaching to specific receptors on the outside of every cell. When it binds to the receptor, it causes the cell to take glucose into the cell where it is burned for energy or stored as fat. If your the cells are regularly bombarded with high levels of insulin, typically due to high sugar or high carbohydrate diet, they start to reduce the number and sensitivity of receptors so that insulin has less effect. The pancreas then needs to produce more and more insulin to keep blood sugar under control.



HIGH LEVELS OF INSULIN CAUSE ARTERIAL DISEASE: Insulin is very necessary and important but insulin levels that are too high cause serious problems. Insulin not only regulates blood sugar but is also a growth factor – it causes cells to grow. As your body becomes more insulin resistant, the last cells to be affected are those lining the inside of all your arteries. Surging insulin levels cause thickening of this lining. All your arteries become stiffer from your brain to your toes and so these tissues get less oxygen. When your arteries become stiff, your heart has to pump harder to push the blood through. This results in higher blood pressure and increased stress on the heart. It also results in poorer oxygen levels to all your tissues. One long-term result can be cardiac failure and congestive heart disease. High blood pressure going through stiffened arteries can result in cracks in the artery walls. These cracks are repaired with scar tissue and cholesterol, which is a stiff, waxy substance. These plugs or plaques can calcify. So, high insulin causes atherosclerosis and high blood pressure, which increase the risk for stroke and heart attack. Eventually it can cause peripheral vascular disease and a host of other complications.

TYPE II DIABETES: Eventually the pancreas can no longer keep up with the high levels of blood glucose and starts to fail. Then people have low insulin levels and high blood glucose levels and this is called Type II diabetes. This is really just the end stage of **Cardiac Metabolic Syndrome.**

BLOOD SUGAR DYSREGULATION CAUSES AGING: Glucose is an oxidizer. It's like road salt causing rust. Insulin also tends to bind with proteins and connect proteins together. Imagine you are driving in bumper-to-bumper traffic and someone starts to weld a bar connecting your car to another car, and then another and another. That's cross-linking. It causes the blood to become more prone to clot. Every tissue that is elastic becomes stiffer and less elastic. That's what causes wrinkling of the skin, but it happens throughout your body in every organ and tissue. Cross-linking is associated with cataracts, peripheral vascular disease and many chronic degenerative diseases. As Ron Rosedale, MD, says, **"Insulin not only causes aging it IS aging."**

METABOLIC SYNDROME CAUSES MANY HORMONE IMBALANCES: All the hormones: adrenal, thyroid, sex hormones and many others are in a delicate balance with each other. Poor regulation of insulin plays havoc with this balance. Blood sugar dysregulation seems to be one of the main causes of what is called estrogen dominance – probably the most common hormonal dysfunction in BOTH men and women. This causes a huge number of problems including PMS, dysmenorrheal, menopausal symptoms, fibroid tumors, polycystic ovarian disease (PCOSS), cystic breasts, and in men, hair loss, loss of libido and impotence as well as increased cancer risk and decreased brain function.

EVEN CHILDREN IN OUR SOCIETY ARE AT RISK: Cardiac metabolic syndrome is now being diagnosed in children due to the American lifestyle. This is a lifelong disease that starts quite young, progressively causes a wide variety of symptoms that in conventional medicine will be treated with a variety of medications, and will eventually kill you or disable you. Early arteriosclerosis is seen the arteries of teenagers.

WHAT CAUSES CARDIAC METABOLIC SYNDROME?

Poor diet, lack of exercise and unrelieved stress. Your body can heal. Within typically a year, insulin receptors will return to normal. Arteriosclerosis, hardening of the arteries, seems to be reversible at least in the earlier stages. Hormones can come back into balance if given the chance. There is hope but the longer and more severe the problem, the more tissue damage has occurred, the less function you can regain. Start NOW before you are old and sick.

- **HIGH CARB DIET:** Simple carbohydrates increase blood insulin. Between 10,000 and 1,000 years ago, depending on what part of the world your ancestors came from, we shifted from hunting and gathering wild foods to growing grains. This dramatically increased population size but radically decreased general health. Why? Higher carbohydrates, lower protein and lower level of vegetable antioxidants resulted in poorer nutrition. Our bodies have not yet adapted to a high grain diet, much less a diet full of refined sugars. We have "cave man bodies in a modern world."
- **LACK OF EXERCISE:** The right kind of exercise has powerful effects on hormones and blood sugar. Interval training – short bursts of high intensity – rather than the long slow aerobic training that has been in vogue, along with weight or resistance training, seem to have the biggest effect. However some kinds of exercise can actually make the problem worse.
- **UNRELIEVED STRESS:** The stress hormone cortisol raises blood sugar. If your stress is out of control you can blood sugar dysregulation in spite of a good diet and lots of exercise. But for many people food is a coping mechanism. You may eat a poor diet because you are stressed. The techniques of energy psychology, along with herbal supplements and nutrients can help you overcome carbohydrate cravings.
- **ENVIRONMENTAL TOXINS:** Heavy metals such as mercury and cadmium can cause high blood sugar by poisoning cellular energy systems. Many synthetic chemicals such as pesticides, herbicides and pharmaceuticals in the environment can disrupt the delicate balance of hormones. Detoxification programs can help if this is an issue with you. Smoking or secondhand smoke is a major toxic risk factor.

EARLY DIAGNOSIS IS IMPORTANT: Recent studies show that heart disease and diabetes starts at least 15 – 20 years before it diagnosis. Meanwhile your health is being undermined. The first symptom of heart disease is often fatigue, which is rarely diagnosed correctly. Early detection and intervention can prevent serious compromise of your whole body system.

- **YOUR SYMPTOMS:** We can usually pick up early signs of cardiac metabolic syndrome based on symptoms alone.
- **FUNCTIONAL BLOOD CHEMISTRY ANALYSIS:** The trend in modern medicine is to shorter, cheaper blood chemistry panels. A complete blood panel can pick up early signs of cardiac metabolic syndrome. Because this condition is so common it is often ignored by conventional medicine until the damage has been done. So we look at the blood test results using narrower, or functional, normal values and looking for patterns.
- **THE CARBOHYDRATE CHALLENGE TEST**: The old test is the glucose tolerance test. This uses a large dose of sugar on an empty stomach. It can be somewhere between uncomfortable and dangerous sending patients into high or low blood sugar. The carbohydrate challenge uses a standard meal high in carbohydrates and then measures blood glucose over the next four hours. This can be done with a home glucose meter.

TREATMENT: Besides diet, exercise and stress management, other factors can play into this syndrome, many of which are not typically considered in conventional medicine: toxic load, especially heavy metals; allergies particularly wheat and dairy; chronic often low level infections; specific nutrient deficiencies and genetic differences in nutrient needs.
Natural supplements can significantly help in the recovery process. Recovery takes a comprehensive approach, looking at all aspects of the individual patient, to turn this destructive process around.

REAL ANTI-AGING: Solving cardiac metabolic syndrome will make you look better and feel better: better circulation, better skin, better hormone balance, and real hope for slowing the aging process.

THERE IS HOPE AND THERE IS HELP: For more information on how you can take charge of your health, call my office or visit my website: **www.drmanlove.com**

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