

A Fresh Look at Heart Disease

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## Abstract

According to the Centers for Disease Control and Prevention, “Heart disease is the leading cause of death in the United States and is a major cause of disability” (CDC, 2013). Research on heart disease has been ongoing for more than 50 years. Until recently, “the lipid hypothesis of heart disease has dominated medical thinking” (Fallon, Sally, & Enig, Mary, 2009). Cholesterol was found to be a major component of the plaque that causes blockage in coronary arteries, and it was proposed that eating foods high in saturated fat and cholesterol caused plaque buildup. “The search for a substance that could safely lower cholesterol levels began in the 1950s,” states Dr. Chopra in his book, *Dr. Chopra Says* (p.120). Since then, the government introduced diet guidelines, and food companies jumped on the bandwagon with low-fat foods. Drug companies came up with cholesterol-lowering drugs (statins), and anyone who was concerned about their heart health incorporated these guidelines into their lives. Today, however, “More than 600,000 people die of heart disease in the U.S. each year. That is 1 in every 4 of all U.S. deaths” (CDC, 2013). Clearly the current prevention and treatment methods are not working. Either people are not following the guidelines effectively, or the guidelines themselves are not effective. An emerging theory proposes that inflammation is the real cause of heart disease, and that diet and drug guidelines that are currently the norm actually exacerbate the disease. This explains why the incident of heart disease continues to rise. This paper presents a fresh look at heart disease.

## A Fresh Look at Heart Disease

### **Definition and Impact of Heart Disease**

Heart disease is a broad term for a complex of cardiovascular conditions. The most common type in the United States is coronary artery disease (CDC, 2009). Heart attack, or myocardial infarction, and atherosclerosis are other conditions in this complex (American Heart Association, 2012). These are the three conditions that will be considered in this paper.

Coronary Artery Disease is caused by the process known as atherosclerosis.

Atherosclerosis is the build-up of plaque in the arteries that supply blood to the heart. When plaque, which is primarily cholesterol, clogs the coronary arteries, they harden and narrow. This reduces the blood supply to the heart muscle, and causes pain and weakness. If the blood supply is entirely blocked, myocardial infarction (death of heart muscle) results (CDC, 2009).

“Although you may have warning signs prior to a heart attack, the heart attack itself may be your first symptom of an underlying problem. About 785,000 Americans have an initial heart attack and another 470,000 have a recurrent heart attack each year” (AHA, 2012). In 2010, cardiovascular diseases cost an estimated \$444.2 billion for health care services, medication, and lost productivity (AHA, 2012). Considering that these numbers represent actual people and their families, and adding the ripple effect of each event, it seems that nearly everyone in the United States is touched in some way.

### **Traditional vs. Emerging Risk Factors**

Traditionally, several heart-disease risk factors have been identified. Those that can be controlled are elevated, “bad”/low, “good” cholesterol, high blood pressure, diabetes, smoking,

physical inactivity, obesity, and stress. The CDC adds poor diet and excessive alcohol use to this list (CDC, 2009). In his book, *Heart Smart* (2006), Dr. DeVane states that “just about nine out of ten people diagnosed with coronary heart disease have one or more of the traditional cardiac risk factors” (p. 48). This may be true, but with more research, a better understanding of risk factors has emerged. Dr. DeVane concedes that the ratio of triglycerides to high-density cholesterol (HDL) in the blood, along with insulin resistance, is a better indication of risk than the measure of low-density cholesterol (LDL) alone (2006). Newer research indicates that cholesterol levels in the blood actually have little to do with the development of heart disease. That explains why heart disease continues to be America’s number one killer. In his book, *Syndrome X*, (2000), Gerald Reaven, M.D., states that Syndrome X, or insulin-resistance syndrome, is “the number-one predictor of heart disease” (p. 18). Another new view is that heart disease is an inflammatory process (Winslow, R. 1999). Dr. Steven Lustig goes even further in his video lecture, “Sugar: The Bitter Truth” (2009). He makes a compelling case for the real cause of obesity, insulin resistance, and inflammation (all risk factors for heart disease). His lecture explains in detail how the consumption of high-fructose corn syrup causes these factors. Add to that the traditional diet guidelines for heart patients and you have a recipe for heart disease. The traditional heart diet was misguided. It was based on the assumption that high LDL was the major reason for heart disease, and designed to lower LDL. This low-fat, high-carbohydrate diet actually contributes to syndrome X, exacerbating the risk for the 60-75 million Americans who have it (Reaven, 2000).

### **Traditional Prevention Treatment and Outcomes**

By now the traditional prevention and treatment for heart disease is well-known. Quit smoking, lose weight, control diabetes, exercise, reduce stress, lower triglycerides and LDL, and go on a low-fat diet with lots of whole grains. If your cholesterol remains high on the new regimen, there are a number of statin drugs that doctors routinely prescribe, as well as drugs for high blood pressure. When a myocardial infarction is the first symptom, traditional medicine

excels at emergency care. Everything from placing a stent in the blocked artery to open-heart surgery is routine. Aftercare includes the diet and drugs mentioned above, and possibly “blood thinners” to prevent further clots. Yet, “More than a third (35 percent) of women and 18 percent of men who survive a first heart attack experience a second one within six years after the first” (Baptist Health Louisville, 2013). There is much room for improvement.

### **A Fresh Look at Prevention and Treatment**

Heart disease is serious, and it is critical to be under the care of a knowledgeable cardiologist if you are at risk. The suggestions in this article are for information only. It may be well worth the effort to find a doctor who knows the latest research and is open to the possibility of using integrated methods along with traditional treatments for heart disease.

Diet is possibly the number one way to reduce risk factors for heart disease. In *The Green Pharmacy Guide to Healing Foods* (2008), James Duke says it well. “Your goal is to short-circuit that process through a diet filled with foods and herbs that reduce inflammation and oxidation and provide other benefits that support heart health” (p. 219). Yet the low-fat, lean-meat diet, and cholesterol-lowering drugs reduce vitamin A and D consumption and availability. These vitamins play a vital role in protecting against inflammation, and support endocrine function (Fallon & Enig, 2009). It makes sense to have animal fats in the diet. Fresh, organic milk and butter, and organic grass-fed beef contain fats and vitamins that are essential to health; they help the body store and use omega-3 fatty acids (Fallon & Enig, 2009). Omega 3 fatty acids “significantly reduce blood triglyceride levels” and “reduced the risk of another heart attack, stroke or death” (Bauer, 2010). Another source of omega-3s is organic eggs from chickens fed a non-soy feed. Eating a diet full of fresh, organic fruits and vegetables with sensible amounts of milk, eggs, and meat rather than one full of processed foods and carbohydrates is the real way to lessen risk of heart disease. Supplementing that diet with herbs that support the body’s natural ability to heal itself can lessen the risk even further. An advantage of using herbs is that, because

they are taken directly from plants, they contain numerous compounds that work together to address many body systems. Many herbs can be taken in conjunction with prescription drugs. Some anti-inflammation and antioxidant herbs are bilberry, ginkgo, and turmeric (Mindell, 2000 and Castleman, 2009).

Bilberries are rich in antioxidant compounds called anthocyanosides. Besides antioxidant properties, these compounds strengthen blood vessels and counteract inflammation. Bilberries are unique in that they have a particular affinity for the eyes. People with eye problems who also need antioxidants could use bilberry. Studies suggest that bilberry helps lower blood-sugar levels. As with any herbal supplement, inform your doctor that you are using it; watch for possible allergic reactions, and discontinue use if you are nursing or pregnant. “In studies that showed the herb’s benefit, participants took one or two 80-160 milligram capsules of standardized bilberry extract three times a day” (Castleman, 2009, p. 94).

Ginkgo is a well-known herb, usually used to boost mental function. Earl Mindell includes it in his “hot hundred” of the most beneficial herbs (200). It is rich in flavonoids, which are antioxidants. It also contains biologically active terpenoids, including gingolides and bilobalide. “Ginkgo exerts a positive effect on the vascular system... [and] helps regulate nitric oxide” (2000, p. 88). It could be used by those who want to affect their risk of heart disease and improve their mental function. Mindell suggests taking a 60mg capsule two or three times a day, and states that “Long-term use is believed to be safe” (2000, p. 90). However, *The PDR for Herbal Medicines* disagrees, citing major risk factors for those taking blood thinners and NSAIDs (Gruenwald, Brendler, and Jaenicke, 2007). Please talk to your doctor before using ginkgo.

Turmeric is generally thought of as a spice, but it is also a healing herb. It contains curcumin, which is a powerful antioxidant. “It also sensitizes the body’s cortisol receptor sites and thus is an excellent anti-inflammatory agent” (Mars, 2007, p. 299). It is often

included in formulas designed to treat arthritis. “Indian healers used turmeric to treat obesity. Studies show that this herb is useful for preventing blood clots and can reduce high cholesterol levels” (Mindell, 2000, p. 155). Turmeric has it all—counteracting three major causes of heart disease. Besides the standard precautions, turmeric should not be used by people with gallstones, bile-duct obstructions, or stomach ulcers (Gruenwald, Brendler, and Jaenicke 2007). There is a moderate risk of drug interaction for those taking blood thinners (Gruenwald, Brendler, and Jaenicke 2007). Although some cultures do derive benefit from eating large amounts of turmeric daily, “the bioavailability of curcumin is so small that after ingestion most is found intact in the stool” (Kane, 2009, p. 191). The micronized form is more bioavailable. Follow the directions on the product.

Syndrome X, or insulin resistance, is a major factor involved in the risk of heart disease. In fact, it is the cause of inflammation (Reaven, 2000). What causes Syndrome X? Dr. Reaven is clear—“the Syndrome X culprit isn’t red meat or butter, it’s carbohydrates” (p.18). Remember, the traditional “heart-healthy” diet is high in whole-grain products. Grains are carbohydrates, “And that’s why the low-fat, high-carbohydrate diet so highly recommended by most physicians and health organizations is so dangerous for those with the disorder” (p. 19). What can you do if you have Syndrome X? Since it is a complicated disorder, no one strategy works for everyone. However, lifestyle changes that work for heart disease probably work because they also reduce Syndrome X. Those are: stop smoking, lose weight, exercise, reduce stress, and change your diet. The diet change for Syndrome X is the new diet for heart disease. Restrict consumption of carbohydrates from grains, eat a balance of fats, proteins, and the carbohydrates found in fresh fruits and vegetables, and eliminate processed foods. A fresh diet is a fresh look at heart disease.

Along with diet, herbs play an important role in reducing risk. The number one herb for insulin resistance is gymnema. Hawthorn and astragalus are heart tonics. The common herbs garlic and ginger are good for circulation.

According to WebMD (WebMD staff, 2009), “Gymnema contains substances that decrease the absorption of sugar from the intestine.” Those substances include gymnemic acid, tartaric acid, and calcium oxalate. In *The Desktop Guide to Herbal Medicine*, Brigitte Mars goes on to say “Gymnema also helps stabilize blood sugar levels, enhances insulin production, promotes the regeneration of beta cells that release insulin into the pancreas, and inhibits adrenaline from stimulating the liver to produce glucose” (p. 158). Gymnemic acid fills the receptor sites on the tongue that taste sugar, thus preventing the ability to taste it. This blocks the desire to eat sweet substances. These are valuable qualities for someone who is dieting or has insulin resistance. It is important to note that diabetics must ask their doctor before taking gymnema, and closely monitor their blood sugar. For others, dosing should be discussed with a medical professional.

Hawthorn is a well-respected heart tonic. In her book, *Flower Power*, Anne McIntyre calls it “the best remedy for the heart and circulation” (p.95). Hawthorn contains many substances that support the heart in many ways. Some of these include: vitamin C, B vitamins, flavonoids, and tannins. Vitamin C and flavonoids are antioxidant and anti-inflammatory. The B vitamins support nerve function, and tannins are diuretic. Thus, hawthorn helps increase circulation, reduce heart weakness and high blood pressure, and stabilize heart rhythm. There is evidence that it also helps reduce cholesterol levels (Castleman, 2009). Hawthorn is regarded as a mild tonic that must be taken over several weeks in order to obtain the benefits. It comes in capsules, tinctures, and teas. Follow the directions on the package. Be sure to consult your doctor if you are already on heart medication or if you have been diagnosed with heart disease.

Astragalus is lesser known in America, but has been used for thousands of years in the East. It is primarily used as an immune system tonic; however, it also has a gentle cardiovascular effect (Kane, 2009). The medicinal ingredients in astragalus include the saponin astragaloside and isoflavonoids. The herb reduces immune-mediated inflammation (Kane, 2009), strengthens



all body systems, and is prescribed in Chinese medicine for diabetes, heart disease, and high blood pressure (Castleman, 2009). Clearly it has a place in prevention and treatment of heart disease and insulin resistance, especially in the elderly who also need immune and circulatory support. Chinese herbalists do not recommend using astragalus routinely. It is used for short periods of time to strengthen the body after an illness. Kane recommends making a cold infusion tea or standard decoction and drinking 4-6 ounces two or three times a day. Slices of astragalus can be added to soups as they are stewing (p. 56). Please follow standard precautions.

Almost everyone is familiar with garlic. “It is one of the world’s oldest medicines and is still among the best” (Castleman, 2009, p. 229). It is rich in organosulfur compounds. These cause its characteristic odor and taste, and provide the medicinal value (Kane, 2009). Among its many benefits are the prevention and reduction of high blood pressure. “No medication simultaneously reduces cholesterol, blood pressure, and the risk of internal blood clot formation. Garlic does all three” (Castleman, 2009, p. 233.) Garlic is of significant medical value to anyone who has a tendency toward heart disease in their family. It is available in many forms and is easy to use. Fresh is best. The cloves must be crushed to release the healing compounds; juice one or two cloves with other vegetable juice and drink once or twice a day. Next best is crushed and lightly sautéed. It also comes in capsules. Be cautious with garlic if you are on prescription blood thinners (Kane, 2009).

Ginger is another common herb that has many uses. Best known for its anti-nausea properties, it is also effective against high cholesterol, hypertension, and poor circulation (Mars, 2007). Gingerol is the principal medicinal compound, found in the root. “Although a fairly new application for the plant, it is surmised that preparations serve as cardiovascular antiinflammatories [sic] regulating AA (arachidonic acid) metabolites” (Kane, 2009, p. 107). It prevents platelet aggregation (clotting). Acting on the liver, it inhibits excessive production of cholesterol. Since ginger aids digestion and is effective against the inflammation of arthritis, it is

another multi-purpose herb that can benefit the older population when used for heart disease. “Both fresh and dry preparations will be effective. For the broadest range of Ginger’s therapeutics whole plant forms should be used-teas, tinctures, or powdered root” (Kane, 2009 p. 108). Ginger tea is made using 1-2 teaspoons of fresh root, steeped in 2-4 ounces of hot water and drunk two or three times daily. This tea has benefits even though it is not a completely correct way to prepare roots. Ginger may react with prescription blood thinners, and pregnant women should not take more than 1 gram daily for morning sickness (Mars, 2007).

Given that decades of eating a low-fat, high-carbohydrate diet and using cholesterol-lowering drugs have not decreased the incidence of heart disease in America, I propose that it is time to take a fresh look. The information here is given as food for thought about making a change. Unfortunately, studies that might prove this idea are almost non-existent. But we do know that past studies which supposedly proved the traditional approach were flawed. I believe that a growing number of Americans are willing to use a different approach, and when the medical system sees that approach working, it will become standard treatment.

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