

TIME FOR A HEART TO HEART WITH YOUR FOOD



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Mention cardiovascular disease and most Canadians can recite little tidbits of information we hear on the news, from our doctor or that we read in various sources; we are inundated with information about heart health, we are told, you should eat this and not that, the risk factors are drilled into us, to the point that many of us could recite them in our sleep. We may be tired of hearing about it but, it is for good reason, when all ages are grouped together for both men and women, heart disease and stroke are the second and third leading causes of death in Canadians respectively. ⁽¹⁾ Information on cardiovascular disease is not new, the first writings were published in by a Dutch physician in 1916, however, it wasn't until the 1950s when research again turned to focus on cardiovascular disease (CVD). ⁽²⁾ Since this time, a wealth of data has been accumulated and only recently in the last decade or so has been made widely available to the general public. It is the goal of this article to sort through some of this information with regards to your food and your cardiovascular health to simplify it and yes, reiterate things you may already know, but hopefully also make sense of and explain points you may have had questions about. Whether you have cardiovascular disease, are at risk of heart disease or stroke, or if you are simply health minded and want to learn more about how to prevent CVD, you can benefit from the information provided here.

Let us begin with some stats to help drive home the importance of cardiovascular health. First, some good news, heart disease and stroke have been on the decline over the past 2 decades according to the Canadian Heart and Stroke Foundation, it is down 25% in the last 10 years and down 70% between 1956 and 2002. ⁽³⁾ The bad news however, is that cardiovascular disease still accounts for 29% of all deaths in Canada according to the most recent 2008 statistical data! ⁽³⁾ It is estimated that the cost to Canadians is over \$20.9 billion every year in combined doctor and hospital associated costs, as well as, lost wages and workplace productivity. ⁽³⁾ CVD and stroke account for 16.9% of all hospitalizations in Canada, making it the number one leading cause of hospitalization in our country. ⁽³⁾ If we look at heart attacks alone, it is estimated that there are 70,000 events per year in Canada, which is a staggering heart attack every 7 minutes! ⁽³⁾ Clearly there is still much work to be done!

So, where do you start? First let us evaluate the known risk factors; this will put the lifestyle modifications into context.

Cardiovascular Risk Factors : ^(2, 4, 5, 6, 7, 8)

- Smoking
- Hypertension (High blood pressure)
- High blood cholesterol (LDL cholesterol in particular)
- Obesity
- Diabetes
- Physical inactivity
- Excessive alcohol intake
- Age
- Stress

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- Low antioxidant status
- Low essential fatty acid status
- Low levels of magnesium and potassium
- Increase in factors that promote clot formation
- Increased blood homocysteine

Making lifestyle changes can have huge impact on your cardiovascular health, as well as, overall health and well being. I will begin by outlining each of these and will focus the remainder of the article on dietary recommendations and explanations.

Lifestyle Changes important for Cardiovascular Health ^(2, 5, 6, 7, 8, 9)

1) **Quit Smoking!**

Smoking is a completely preventable cause of cardiovascular damage and disease and it is the number one, most important thing you can do for CVD according to both the American Surgeon General and the Canadian Heart and Stroke Foundation. ^(5, 10) Cigarette smoke directly damages the lining of blood vessels leading to inflammation and dysfunction which are implicated in CVD. ^(11, 12) Quitting smoking alone can lower your risk of death from a cardiovascular event by 30%. ⁽²⁾

2) **Maintain a healthy body weight**

Obesity and diabetes are major risk factors for cardiovascular disease. Those who are obese are often also more sedentary, another risk factor; furthermore, fat stores put additional strain on the heart ⁽⁴⁾. In diabetes the increased sugars in the blood are damaging to blood vessels and when blood glucose levels are very high the blood becomes more viscous again putting increased pressure on the heart. The ideal BMI (body mass index) is between 18.5 and 24.9 Kg/m². ⁽⁶⁾

3) **Exercise Daily**

30-60 minutes of moderate to vigorous exercise most days of the week (ideally daily) is recommended by the Canadian Cardiovascular society ^(5, 6). Always remember to consult your physician (MD, ND or DO) before beginning any exercise program.

4) **Manage Your Stress**

Stress has a direct effect on cardiovascular health and finding effective stress management tools that work for you are very important to your cardiovascular health. ^(8, 13)

5) **Eat a Healthy Diet**

There is plenty of data suggesting that various diets are better for cardiovascular disease for example, the Mediterranean diet, the Japanese Diet, the Vegetarian diet, the Dietary Approaches to Stop Hypertension (DASH) diet, the TLC diet. ^(2, 14, 15) If you are curious about these different diets Health Link BC has created a comparison of many of these diets, which you can find at:

http://www.healthlinkbc.ca/kb/media/pdf/hw/form_uf10215.pdf When you look more closely at these diets however, there are many similarities, whole grains, reduced red meat, healthy fats and plenty of vegetables, this also compares with the Cardiac Foundation of Canada food guidelines. Finally, the Harvard Medical Schools recently came out with their "Healthy Eating Plate" guidelines, ⁽¹⁶⁾ which matches quite well with what naturopathic doctors have been recommending as a healthy diet for some time now, a diet consisting primarily of vegetables with healthy portions of fruits, whole grains and

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healthy proteins, as well as, an emphasis on healthy oils and plenty of water. It is with all of this in mind that I present the following list for healthy eating. The remainder of the article will focus on this list in more detail. This diet does not account for individual health concerns, if you have a pre existing condition(s), it is always best to consult your doctor (MD, ND or DO) for individualized advice.

Guidelines for Healthy Eating:

- Eat plenty of vegetables and fruit; choose a variety of different colors with particular emphasis on leafy green vegetables. Vegetables should comprise the largest portion of each meal.
- Place an emphasis on plant based proteins; choose more white meat and safer fish choices. Limit your intake of red meats and keep your dairy intake to 0-2 servings per day.
- Rethink your fats. Avoid trans fats, reduce your intake of saturated fats and increase your unsaturated fats especially the polyunsaturated omega 3 fatty acids.
- Choose whole grains.
- Drink a minimum of 2L of water per day; other beverages to consider include herbal teas and moderate amounts of alcohol (1-2 servings/day). Avoid sugary drinks.
- Avoid refined, processed and sugar laden foods and reduce your salt intake.
- Choose organic when you can.

Sounds simple enough right? If this is all seems foreign to you, be gentle with yourself, making this change will not happen overnight. I have included a list of tips, as well as, some resources at the end of this article to help you on this journey, but first let us examine each of the above items in more detail.

Eat your Fruits and Veggies!

Getting enough vegetables in a day is a struggle for most people but it is very important! Fruits and vegetables are loaded with vitamins, minerals, fiber and antioxidants. Let us first focus on antioxidants. One of the many theories as to why we develop disease including CVD is the oxidative stress theory. Formation and accumulation reactive oxygen species (ROS) in our body is an everyday occurrence, they come about in response to exercise, metabolism, infection, inflammation of any kind, smoking or pollution, among others things. Our body is equipped to manage these ROS through antioxidant systems. Some of these antioxidant system molecules are made by the body, others we need to gather from our diet. When these reactive species overwhelm our body's defenses, damage may occur. Free ROS can circulate through the body causing unhealthy damage or modifications to fats, proteins and nucleic acids (the building blocks for DNA). Imagine the Tasmanian devil from Loony Toones spinning through your blood vessels wreaking havoc each time he bumped into the side of one of your blood vessels. Fruits and vegetables contain many of the antioxidants we need to calm these little beasts. Vitamin C, a well known vitamin and antioxidant, is found in many fruits such as strawberries, lemons, limes, bell peppers and papaya and vegetables such as, broccoli, cauliflower, Brussels sprouts and kale.^(4,17) Vitamin C has been shown to protect against CVD in some studies, other studies were not able to show this same effect however, it was thought that this could be due to the presence of a healthy diet and that additional supplemented vitamin C did not show added benefit; so bring

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on the veggies! ⁽¹⁸⁾ It has also been shown that vitamin C is of even greater importance in smokers as it appears to mitigate some of the damage done to the blood vessels by smoking. ⁽¹⁹⁾ Vitamin E found in leafy green vegetables and whole grains is another antioxidant which will be discussed in the whole grains section. “Polyphenol” is likely another word you’ve heard in association with antioxidants. For those who like chemistry polyphenols refers to any molecule that consists of a benzene ring with two or more hydroxyl groups; for the rest of you it is simply a large class of molecules that includes a number of different antioxidants such as flavonoids, phenolic acids, phenolic alcohols, stilbenes and lignans. ⁽¹⁸⁾ The problem with studying these individual compounds is that they are in different amounts and different combinations in different fruits and vegetables; they are however, ubiquitous in a healthy diet rich in a variety of colorful fruits and vegetables. ⁽²⁰⁾ Flavonoids and lignans in particular offer positive benefit to cardiovascular health. ^(18,20,21) Some mechanisms by which these antioxidants are thought to work include inhibition of lipid peroxidation, meaning they prevent oxidative damage to fats, and enhancing endothelial function through nitric oxide pathways. ^(18,20,21) They also show promise in their ability to inhibit effects at all levels of atherosclerosis (through vasodilation, anti-inflammatory processes, antithrombotic and growth suppressing properties). ^(18,20,21) Soy isoflavones are a part of the antioxidant group as well, they have gotten a lot of media attention in the past decades and have shown some promise in the area of cardiovascular health in animal studies. ⁽¹⁵⁾ Human studies of soy protein have shown an ability to decrease LDL cholesterol. ⁽²²⁾ I would like to suggest that people focus their attention of fermented soy products such as tempeh and miso.

Fruits and vegetables are also high in various minerals important to cardiovascular health. In particular calcium, magnesium and potassium are most often considered for reducing blood pressure. ^(4, 23, 24) Fruits and veggies high in calcium include: kelp, dulse, spinach, collard greens, turnip greens, Swiss chard, kale, dandelion greens and figs. ^(4, 17) Magnesium can be found higher amounts in Swiss chard, spinach, green beans and kelp. ^(4, 17) Finally, potassium can be found in sources such as Swiss chard, crimini mushrooms, spinach, papaya, avocado, beets, potato, tomato, banana, broccoli, winter squash, collard greens, cantaloupe and Brussels sprouts. ^(4,17) Once again this points to a diet rich in a variety of fruits and vegetables being the healthy choice. I recommend you incorporate some type of non-starch vegetable every time you eat and that you try to make your vegetable choices the largest portion of your meal. Fruit, especially dark colored berries such as blueberries, raspberries, cranberries and blackberries are very high in antioxidants and should be eaten with some regularity. Here in Canada many of these berries grow very well. Get outside and spend some time at your local u pick or consider planting a berry patch in your back yard or on your balcony. Fruit such as apples are also high in the soluble fiber pectin which will also be discussed shortly. Remember variety is best, try experimenting with different fruits, you may just find something new you enjoy. Fruit is high in sugar; therefore, vegetables should be more of the focus in your diet. Due to the sugar content fruit does make a perfect substitution for sugary desserts; try a bowl of assorted berries in blended coconut milk and assorted chopped nuts and mint for garnish. Finally a note on juices, generally I recommend that people stay away from most juices, many commercial vegetable juices are high in salt and fruit juices are high in sugar. Occasional indulgence in unsweetened fruit juices is ok especially when they are mixed with water, and one recent small study of 53 people has shown some benefit to long term used of citrus juice ⁽²⁵⁾ however, eating the whole fruit gives the benefit of the fiber and nutrients lost in the processing of the juice, the fiber in particular helps to slow the absorption of the sugars in fruits, making the whole fruit the better choice. Always avoid those beverages labeled fruit “drink” these products rarely contain a significant amount, if any, real fruit juice. The exception to this is fresh juice; if you have a juicer and make your own vegetable juice this is a healthy option, I would encourage you to keep the pulp and use it in soups, stew or baking.

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Healthy Protein

A vegetarian diet (a diet free of meat, poultry, dairy and eggs) has been shown to reduce atherosclerosis and coronary heart disease risk particularly in combination with stress reduction and regular exercise.^(26,27,28) While I neither advocate nor condemn vegetarianism, I do encourage you to incorporate some vegetarian meals into your week in order to decrease your consumption of red meats in particular, but, also to increase your intake of vegetarian protein sources which come with added health benefits. Nuts and seeds can provide a complete protein, as well as, healthy fats, the effects of which will be discussed shortly. In fact regular consumption of nuts alone has been shown to decrease your risk of congestive heart failure.^(29, 30) Lentils and other legumes, as well as, beans are very high in fiber and can help to keep you regular and decrease cholesterol levels⁽³¹⁾. As mentioned previously minerals are important in cardiovascular health and can again be found in meat free protein sources. Magnesium for example, is high in sunflower seeds, sesame seeds, quinoa, buckwheat, black beans, wheat bran, almonds, cashews, buckwheat, Brazil nuts, walnuts, pecans and hazelnuts.^(4, 17) Calcium can be found in sesame seeds, almonds, buckwheat and Brazil nuts.^(4, 17) Finally, lima beans are a source of potassium.^(4,17) Of these, the fatty plant foods such as nuts, seeds and legumes are also rich in phytosterols which are chemically very similar to cholesterol and have been shown to reduce LDL cholesterol levels.⁽³²⁾

The Story about Fats

For far too long we have given fats a bad name. Consider, however, that in addition to the thermogenic, protective and energy storing functions it performs, that the membranes which make up all of the cells in our body are made up of fats, our nervous system is to a large extent fat and our hormones and various important signaling molecules are made from fats!^(33, 34, 35, 36, 37, 38) The problem is not fat; it is the type of fats in our diet. Saturated fats (SFA) are important, however, the average North American consumes far too much of this type of fat, found in our diet, primarily in the form of animal products; for example, meat and dairy. It is suggested that SFAs should comprise approximately 10% of our fat intake, however on average it is closer to 50%.⁽³⁹⁾ It has been known for some time that trans fats present disease risks, and should therefore be avoided.^(40,41) Trans fats are found in many processed food stuffs and hydrogenated oils products, by avoiding these you can cut out most trans fats. Trans fats are a fat of a particular configuration that is not naturally occurring, however, they mimic fats our body does use, and as such they are inappropriately incorporated into our cells which could lead to dysfunction.⁽³⁹⁾

So what about the healthy fats? As mentioned previously, fats are vitally important as structural components of our cells, nervous system, hormones and various signaling molecules.^(33,34,35,36,37,38) Several studies have shown a positive effect on heart health when supplementing fish oils, especially those high in docosahexaenoic acid (DHA) (a type of omega 3 fatty acid).^(42,43,44,45) The effects of omega 3 fatty acids is wide ranging and include positive effects on blood pressure, heart function, arterial and endothelial health, clot formation and general inflammation.^(15, 46) Other studies have not shown this however, regardless of this result, the authors of these studies do not recommend people discontinue their fish or fish oil intake.^(46, 47, 48) Diets rich in fish have been associated with decreased cardiovascular risk.^(2,39,46) Unfortunately, due to pollution many fish are contaminated with heavy metals, polychlorinated biphenyls (PCBs), dioxins and related compounds; this is the main reason that it is generally recommended people are aware of the fish you are consuming and its source. Some of the worst fish offenders include: swordfish, shark, king mackerel and tilefish, the leaders up include, tuna, orange roughy, marlin and red snapper.^(17, 46, 49) For more information on fish and contamination see the environmental working group's website (www.erg.org) or the FDAs website (<http://www.fda.gov/food/foodsafety/product->

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specific information/seafood). As previously mentioned healthy fats and minerals can be found in nuts and seeds and these should be incorporated into the diet whenever possible. Trail mixes devoid of candy bits make a great snack or addition to any salad. Finally, we come to oils. First let me explain a little about fat structure. Fats have long carbon chains; in a saturated fat this chain will contain no double bonds. When there is one double bond they are called monounsaturated fats and finally when there are multiple double bonds they are called polyunsaturated fats. The double bonds in these unsaturated fats create bends or kinks in the carbon chain which inhibits them from packing tightly together forcing them to assume a liquid form. When we consider this, it explains why butter (a saturated fat) is solid at room temperature while flax oil (a polyunsaturated fat) is not. If you take this one step further, inside the body it is these polyunsaturated fats that help maintain healthy fluidity to our cell membranes. The polyunsaturated fats are those most healthy for us especially in regards to cardiovascular health and those most lacking in our diet.^(2, 5, 39, 15) It is thought that consumption of these fats can help to mitigate the damage done by oxidized fats. It should be noted that polyunsaturated oils are fragile, they can easily become damaged by heat, light and oxygen; they should always be kept in dark bottles in the fridge and never be heated. When cooking with fats it is always best to use either butter or monounsaturated fats such as coconut oil or olive oil and cook at low temperatures, never allow your fats to smoke. Flax has gotten a lot of attention in the media of late and for good reason. Flax seed has been shown to reduce the levels of total cholesterol, LDL cholesterol and triglycerides to the same extent as statins (a class of cholesterol lowering drugs) in people with hyperlipidemia.⁽⁵⁰⁾ Furthermore, the oil, lignans and whole seed were found to have a number of other positive effects on the cardiovascular system.⁽⁵¹⁾ To take advantage of the full benefits of flax, grind your portions fresh daily.

Whole Grains

Let me begin with what a whole grain is: a whole grain is the grain in its entirety including the outer layers called the bran and the germ. These layers contain much of the grains nutrients including vitamins, minerals, fiber, phytonutrients, healthy fats and other nutrients. Many of the grains we see in the grocery stores have been processed stripping away the bran and germ leaving only the endosperm, which is the starch rich center of the grain. Consuming grains in their whole form allows you to benefit from these other important nutrients and has been shown in a number of studies to have positive health benefits. In terms of cardiovascular health, a number of studies have shown that regular consumption of whole grains can decrease your risk of developing cardiovascular disease, as well as risk factors involved with the disease including hypertension and type two diabetes.⁽³¹⁾ One meta-analysis showed a 26% reduction in cardiovascular disease risk in those who regularly consumed whole grains.⁽⁵²⁾ This seems like a substantial reduction considering the change is as simple as avoiding “white” foods and moving to whole grains. Take this opportunity to explore other grains, for example, try kasha instead of white rice or potatoes for dinner tonight. The fiber that is in whole grains provides a number of different health benefits including maintaining bowel health by feeding intestinal flora and providing the bulk needed for regular bowel movements, as well as, slowing the absorption of sugars from our meal; an important effect in preventing metabolic diseases such as diabetes. Finally, some fibers have been shown to help control cholesterol levels specifically, the soluble fibers found in oats, psyllium seeds, fruit pectin and guar gum found in beans.^(31, 53) The insoluble fiber found in whole grains and vegetables seems to have less of an effect on serum cholesterol; however, do seem to have a protective effect against heart disease.^(54, 55)

Some vitamins known to be high in whole grain include the vitamin E and the B vitamins. Vitamin E is a fat soluble vitamin primarily found in the germ layer of whole grains, it has well known antioxidant effects. This vitamin used in supplement form has been shown to have beneficial effects on the oxidation of serum LDL and total cholesterol,

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as well as, decreasing overall risk of nonfatal heart attacks. ^(15,18) Not all studies have shown positive results however, ⁽¹⁸⁾ consuming your vitamin E in its natural food form presents the vitamin to the body for absorption allowing the body to take what it needs instead of pushing the vitamin in a much higher supplement dose. I am by no mean condemning the use of supplements, however, as with many things too much of a “good thing” can produce unwanted side effects. Any antioxidant also has the opportunity to also be oxidative; antioxidants are meant to act as a team which is another benefit to eating whole foods as they present a compliment of many antioxidants. Finally, whole grains are high in B vitamins which are important for a healthy metabolism. Also, vitamin B₆, vitamin B₁₂ and folic acid (also a B vitamin) are required for the conversion of the amino acid methionine to homocysteine and subsequently to cysteine. Homocysteine is known to cause direct damage to the lining of blood vessels and is a recognized independent risk factor for heart disease; its reduction is very important to cardiovascular health. ^(4, 5, 15)

Fluids

We all know the importance of drinking enough water; it is beyond the scope of this article to flush this out for you yet again. It is recommended the average adult drink a minimum of 2 liters of water daily, and that this amount increase if your are consuming diuretics such as coffee or black tea or engaging in any activities that cause you to sweat during the day. Avoiding sugary drinks should also be self explanatory, the sugar in these beverages cause rapid increases in blood sugar which the drink alone will not sustain leading to a sharp decline in blood sugars shortly thereafter, these large fluctuations in blood sugar are hard on the body and predispose to metabolic disease, a know risk factor for CVD.

Alcohol consumption, in moderation, has been shown to be protective against CVD; red wine is thought to be a good choice in particular due to its high polyphenol content, although the alcohol itself has been shown to have protective effects. ^(56, 57, 58) The key here is moderation; excessive alcohol is a known contributor to CVD development. ⁽¹⁵⁾

Green tea is another drink that is high in a group of polyphenols called catechins and may be worth adding to you daily routine. Green tea has shown some promise primarily in animal studies in its ability to reduce oxidative stress on both DNA and lipids (fats) and improve vascular function. ^(59, 60, 61, 62) Black tea, oolong tea and green tea are all made from the leaves of the same plant *Camellia sinensis*, black tea and oolong teas are made from fermented leaves, green tea is made of the dried unfermented leaves and has a higher content of the beneficial antioxidant polyphenols, however, black tea has also been shown to reduce cardiovascular risk as well. ⁽²¹⁾

Making Healthier Choices at the Grocery Store

One of the most important changes you can make to your diet is to avoid processed and heavily refined foods. These foods tend to be high in salt, sugar, trans fats, preservatives and other chemical additives. We have discussed trans fats, now the salt story. The salt connection with high blood pressure has been known for some time. Salt in the blood, pulls fluids from the tissues into the blood, a dilution effect to maintain physiological osmotic balance; more fluid means greater volume which adds up to greater pressure, until the kidneys can eliminate the excess salt. The idea of salt reduction for cardiovascular health was one of the main ideas behind the DASH diet that was popularized some time ago. Salt restriction to under 1500mg per day is recommended by the

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Canadian Hypertension Education Program to help reduce high blood pressure.⁽⁶⁾ We are all familiar with the effects of sugar, it's wreaks havoc on our blood sugars, predisposes us to metabolic syndrome and diabetes, inhibits our immune system, increases oxidative damage in the body, predisposes to weight gain and obesity and the list continues; the importance of avoiding excess sugar is well known.^(2,4,5,6,7,8,9, 63,64) Preservatives and other chemical additives add further burden to your body as they need to be cleared by our bodies detox mechanisms. If you have cardiovascular issues, this energy could be much better spent addressing these issues and preventing further disease. Avoiding processed foods may mean a slightly longer prep time for meals however, eating this way will help you feel better giving more than enough stamina to spend a few extra minutes in the kitchen.

We have all heard the tip that we should focus your attention along the perimeter of the grocery store when we shop, I contest this. Along with the fruits and vegetables which should be a focus, the perimeter of the store is also home to the processed meats, sweet treats and refined goods of the bakery, the dairy products high in saturated fats and the fruit juices; it misses all the vegetarian proteins, the healthy oils and most whole grains. So instead I recommend you go to the grocery store armed with a list and a full stomach; this way you will be less tempted by your hunger and can use the list as a guide to stick to your plan. Let me back up a minute, for one more note on dairy, two epidemiological studies have shown a positive correlation between dairy consumption and mortality from heart related events in 43 countries and 19 regions of Europe, however low fat dairy was included in the DASH diet which was successful in decreasing blood pressure.⁽¹⁵⁾ It could be time to look at vegetarian sources of calcium.

Finally, choosing organic when you can to help lower the amount of unwanted pesticides, exogenous hormones, drugs and other contaminants you consume. Organics are usually more expensive and not always affordable; if possible try to focus your organic dollars on organic animal products, for example, meat or dairy. Animals store toxins in their fat, therefore when buying items containing the fats of another animal you want to be sure the product is clean. If you have further interest in organics refer to the environmental working groups "dirty dozen list", this regularly updated list outlines the 12 most heavily spraying fruit and vegetable crops; you may want to put these items on your organic list as well (www.ewg.org).

Some More Food for Thought

Don't forget about your spice cupboard! Many culinary herbs have medicinal properties and many of them are specific to the heart. Generally, to have a true medicinal effect they would have to be taken in doses much higher than used in the kitchen; however they can liven up any meal allowing you to experience new flavors, giving you the opportunity to decrease the amount of salt you use in your recipes. Specifically ginger, turmeric and garlic have been shown to be anti-inflammatory and inhibitory to clot formation.⁽²³⁾ Garlic and onions are the backbone to many meals, not only are they very tasty, they also contain a molecule called allicin/alliin which is both anti-inflammatory, antioxidant and able to inhibit clot formation and has shown to be beneficial in hypertension, high cholesterol and atherosclerosis.^(23, 65)

Cocoa is also high in polyphenols that have been shown to enhance endothelial relaxation and may decrease atherosclerotic plaques.⁽¹⁸⁾ Chocolate is also high in magnesium as previously mentioned a mineral important in cardiovascular health. Chocolate is however, generally quite high in sugar and may also contains trans fats and saturated fats. Again, moderation is key here, I would also encourage you to find a nice bar of high percentage cocoa dark chocolate and enjoy a square or two for dessert.

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Tips for sticking to the diet

- 1) Don't think of what you are giving up, instead focus on all of the new foods and flavor combinations you get to experiment with. Explore new recipes, make it fun! Try to incorporate one new recipe a week.
- 2) Make the transition gradually, you will need to find new recipes that you like to incorporate into your everyday, this will take time and research! Trying to make the switch all at once will be frustrating and all too often leads to people giving up altogether.
- 3) Don't do this alone. Ask friends for ideas, new recipes and suggestions also consider visiting your local library to check out their collection of cook books.
- 4) Explore the world of spices! You do not need to sacrifice taste when you eat healthy, boosting up the flavor of your meal creations with culinary herbs instead of salt is a great way help make the switch.
- 5) Moderation is key!
- 6) Plan ahead! Plan your meals and make a grocery list based on your plan, this will keep you on track with you eating and less likely to order take out, it will also help you save you money as you will buy only what you need and will be less likely to throw away spoiled unused food.
- 7) Prepare and have readily available healthy snacks on hand for between meal munchies.
- 8) Always grocery shop with a full stomach.
- 9) Learn to read food labels in order to avoid foods high in sugar, salt, saturated fats and trans fats.
- 10) This diet can be summed up as follows: only eat real food! If your great grandmother would not recognize it, you probably shouldn't eat it!

Resources:

Harvard "Healthy Eating Plate"

<http://www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/>

Cardiac Health Foundation of Canada

<http://cardiachealth.ca/>

Canadian Hypertension Education Program

<http://www.hypertension.ca/chep-recommendations>

The American Heart Association

http://www.heart.org/HEARTORG/GettingHealthy/GettingHealthy_UCM_001078_SubHomePage.jsp

The Environmental Working Group

<http://www.ewg.org/>

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