

The McDougall Newsletter

Volume 5 Issue 9

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Sugar, Coated with Myths

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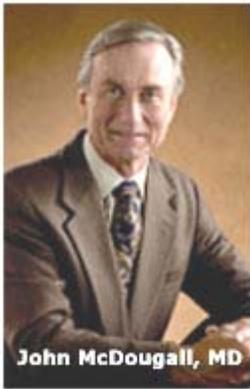
The Angioplasty Debacle

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Some Common Forms of Simple Sugars:

Sucrose (white, table sugar)	Corn syrup
Fructose	Honey
Glucose	Maple syrup
Lactose	Molasses
Maltose	Agave Nectar
High-fructose corn syrup	

All of these sugars contain 2.5 to 4 calories per gram and provide mostly "empty calories."

Sugar conveys the picture of a white crystalline substance in a bowl. This well-liked carbohydrate is used as a sweetener and as a preservative. The main natural source of relatively pure sugar is honey—a mixture of glucose and fructose—made by bees. Less concentrated, but also very sweet-tasting, simple sugars are naturally plentiful in fruits. The primary agriculture sources of sugar are sugar cane and sugar beets, which after refining, yield sucrose—a 50-50 mixture of glucose and fructose .

Carbohydrates, except for milk and honey, are found in significant amounts only in plant-derived foods. Even these two foods (milk and honey) obtain their simple sugars originally from plant sources (grasses, grains, and pollen). In a broader sense, the word sugar can be used to describe all forms of carbohydrates, from the natural complex sugars (starches) found in plant-foods to non-absorbable sugars synthesized in a laboratory, like lactulose, used as a medical treatment for chronic constipation.

Forms of Carbohydrate

Sugars can be divided into several categories:

* **Simple sugars** are usually thought of as unhealthy foods—for example, white sugar (sucrose) or high-fructose corn syrup. But simple sugars are also plentiful in sweet-tasting fruits—an important part of a healthy diet.

* **Complex carbohydrates** are long branching chains of simple sugars connected together—the proper name for this form of carbohydrate is *starch*. These sugars are abundant in common plant foods, like corn, potatoes, rice, whole wheat flours, and beans. Green and yellow vegetables also synthesize and store complex carbohydrates, but in lesser amounts.

* **Dietary Fiber** is another chain form of complex carbohydrate, but its structures are not digested by the human intestine. Although providing no calories, fiber is important for proper bowel and other metabolic functions.

* **Glycogen** is a form of complex sugar made of branching chains of glucose. It is synthesized in the body and then stored in the muscles and liver for future activities.

* **Non-absorbable sugars** (also called sugar alcohols) are sweet-tasting but are not readily absorbed from the intestine into the body. Although many are found in small amounts naturally, they are manufactured for commercial use. Examples are non-caloric sweeteners, like sorbitol and mannitol, used in candies and gums. Because they are poorly absorbed they have a laxative effect—lactulose is prescribed for this purpose.

We Are Hard-Wired to Enjoy Sugar

Humans are anatomically and physiologically designed to seek and consume sugar. The tip of our tongue tastes with pleasure only one calorie-containing substance, sugar (carbohydrate). In our natural environment this stimulus comes from plant foods—such as, potatoes, sweet potatoes, beans, rice, fruits, and vegetables. Food manufacturers take advantage of our nature, adding highly-refined, powerful-tasting sugars to our foods.



Taste Buds of the Human Tongue

Once past the tongue, the remainder of the intestinal tract, as well as all of the internal systems of the body, is geared to

efficiently utilize sugars. Our nervous system uses sugars almost exclusively as a source of energy—and 20% of the calories consumed daily go to operate the brain.

Research indicates that consumption of carbohydrates provides a reward to the person by producing opioid- and dopamine-mediated responses—changes in the brain's chemistry which cause us to feel pleasure.⁴ The sweet taste of sugar produces intense pleasure with effects similar to those derived from the use of narcotics (opium). Therefore, us “pleasure seekers” quickly learn from our tongues and our brains that consuming carbohydrate is the right thing to do—and consuming sugar is intoxicating.

Some tissues of our body, such as red blood cells and kidney cells (glomeruli cells) will only burn carbohydrates. Endurance athletes know well the winning advantage of a diet high in sugars (carbohydrates)—sports drinks used during their races are made of concentrated simple sugars. Considering the importance of sugars to our existence, why are they vilified? Before discussing some of the negative consequences of consuming too much refined sugar, I need to clear up some important misinformation.

The Human Body Does Not Turn Sugar to Fat

The process of synthesizing fat from sugar is known as *de novo lipogenesis*—the new production of fat. This activity is highly efficient in some animals, such as pigs and cows—which is one reason they have become popular people foods—these animals can convert low-energy, inexpensive carbohydrates—grass, say, in the case of cows and grains for pigs—into calorie-dense fats.⁵ However, human beings are very inefficient at this process and as a result *de novo lipogenesis* does not occur under usual living conditions in people. Thus the common belief that sugar turns to fat is scientifically incorrect—and there is no disagreement about this fact among scientists or their scientific research.⁵⁻⁸

Under experimental laboratory conditions, however, where people are **overfed large amounts of simple sugars**, the human body will resort to converting a small amount of sugar into a small amount of fat (triglycerides) in the liver. For example, in one recent study, trim and obese women were overfed with 50% more calories than they usually ate—note, 535 of these extra calories each day came from four and a half ounces (135 grams) of refined sugar. In this forced-fed situation, the women produced less than 4 grams (36 calories) of fat daily from the extra carbohydrate.⁸ Extrapolation from these findings means a person would have to be overfed by this amount of food and table sugar every day for nearly 4 months in order to gain one extra pound of body fat from the conversion of sugar to fat—by *de novo lipogenesis*. Obviously, even overeating substantial quantities of sugar is a relatively unimportant source of body fat. (So where does all that fat come from?—the fat you eat is the fat you wear.)

Sugar Does Not Cause Obesity

A universally accepted mantra among dieters is, “Don't eat starches—starches turn to sugar—sugar makes you fat.” If this were true then obesity would be rampant among rice-eating Japanese—obviously, the opposite is the case. Worldwide, populations with the highest consumption of carbohydrate are the trimmest and fittest.⁹

Studies of people also show that the higher their sugar intake the lower their calorie intake and the fewer people who are overweight.¹⁰ This makes a lot of sense because when you add carbohydrate (even pure sugar) to the diet then fat must be removed—kind of a fat-sugar seesaw—one goes up, then the other must go down. Fat is very concentrated in calories (9 per gram vs. 4 for pure sugar), fat is almost effortlessly stored, and fat provides little appetite satisfaction. Thus, replacing fat in the diet with sugar will cause weight loss. Furthermore, the practice by “low-carbohydrate dieters” of decreasing sugar intake often results in a higher calorie intake, because of all the fat that is added.

Sugar Does Not Cause Diabetes

After eating high-carbohydrate foods you might suspect that all that dietary sugar would cause the sugar in the blood to rise and this might lead to diabetes. That's what many lay people believe. Even a few scientists have theorized that chronically elevated levels of sugar in the blood might wear out the insulin-producing cells of the pancreas and produce diabetes.¹¹ Actually, this common thinking is incorrect—studies comparing sugar intake with risk of developing type-2 diabetes show people on high sugar diets are less likely to get diabetes.¹² There is, however, a strong relationship between red meat consumption and diabetes.¹³

The lowest rates of diabetes in the world are found among populations that consume the most carbohydrate—for this reason type-2 diabetes is almost unknown in rural Asia, Africa, Mexico and Peru.^{14,15} However, when these people change

to a diet rich in fats and low in carbohydrates they commonly become diabetic. Some of the highest rates of this disease (and associated obesity) are found in Hispanics, Native Americans, Polynesians, and Blacks who have recently adopted the American diet.¹⁶

Contrary to popular belief, refined sugars actually make the body's insulin work more efficiently.¹⁷ When the refined sugar content of an experimental diet of people with mild diabetes was doubled from 45% sugar to 85% sugar, every measurement of their diabetic condition improved—fasting blood sugar, fasting insulin levels, and the oral glucose tolerance test all showed their diabetes was better.¹⁸ The researchers concluded, "These data suggest that the high carbohydrate diet increased the sensitivity of peripheral tissues to insulin." The increase in insulin's sensitivity (efficiency) exceeds any blood sugar-raising effect from consuming more carbohydrate.¹⁷ Because sugar does not cause type-2 diabetes, the American Diabetic Association has recommended "55% to 65% of a diabetic's diet come from carbohydrate," and sugary foods are allowed.¹⁹

The carbohydrates found in whole foods (starches, vegetables, and fruits) are much healthier to consume than refined sugars for a person wanting to prevent or cure type-2 diabetes for a variety of reasons—especially because of the adverse effects on weight gain and blood cholesterol and triglycerides of sugars compared to starches (more in next month's newsletter). A high carbohydrate, vegan diet, has recently been shown to help diabetics stop medications and improve their overall health.²⁰ (See my August 2006 newsletter)

Acceptable Sugar Use

The main reason sugar has a bad reputation is because of the company it keeps. People living in Western societies eat loads of rich foods that make them fat and sick. Along with their high intake of meat, dairy, and refined grains, they also eat a lot of simple sugars. In this caldron of malnutrition, sugar's exact contribution becomes indistinct. But, in most people's minds, sugar is the villain—the scapegoat, taking focus off the animal-foods and free fats (vegetable oils), which are much more of a burden to one's health than simple sugar is. This misplaced emphasis results in a lost opportunity to regain lost health and appearance.

Sugar tastes great and can hugely enhance the enjoyment of eating. One practical point is that the addition of sugar will boost the acceptance of a low-fat diet, like the McDougall diet—increasing long-term compliance. However, to reap the greatest pleasure with the least harm, simple sugar should be put on the surface of the food where the tongue makes direct contact. This means sugars should not be added to the food during preparation—mixed up in the ingredients where the sweet flavors are hidden from the tongue's taste buds. Using a small amount of sugar on the surface of the food is my recommendation for trim, healthy people.

However, there can be some real drawbacks and health hazards caused by consuming simple sugars, especially for those in poor health. I will discuss these in next month's newsletter. In the meantime, if you have concerns about your weight loss or have artery (heart) disease, then you should strictly limit your intake of all simple sugars, including fruits and their juices.

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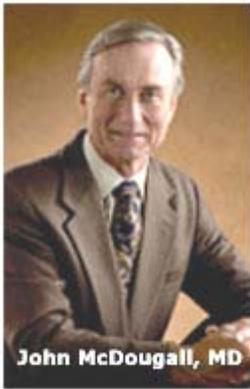
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The Angioplasty Debacle

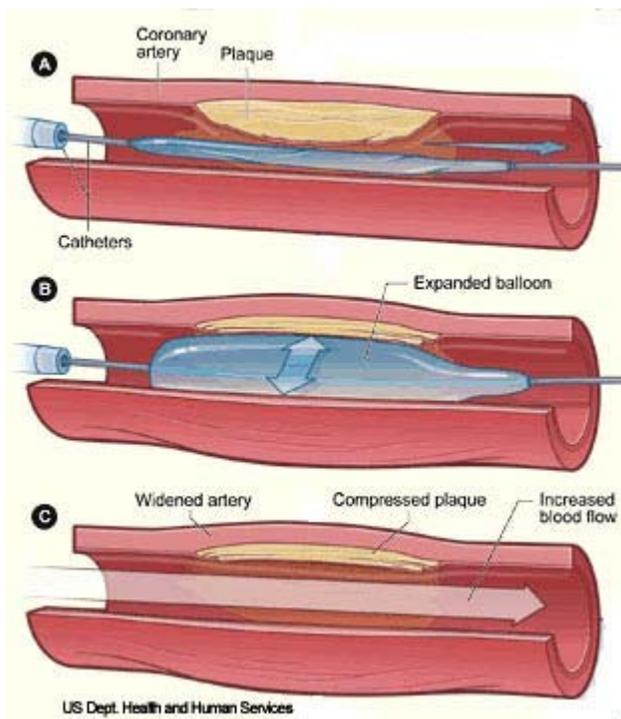
With heart disease you face the biggest of all the medical businesses. In 2001, in the United States, more than one million coronary angioplasty procedures were performed at a cost of more than \$30 billion, and more than 500,000 coronary bypass operations were performed at a cost of another \$30 billion.¹ Assume that your local general hospital derives 80% of its income from heart disease. The average total healthcare cost after three years is \$63,896 for angioplasty (compared to \$84,364 for bypass surgery).² You had best be prepared for some high pressure sales when you become involved with heart surgery—and take all the necessary time to be sure you are making a wise purchase. My experience has been most patients are misinformed by their doctors about the real benefits and harms of the treatments offered—and all that money plays a big part in the dishonesty.

The Angioplasty Procedure

Angioplasty is a surgical procedure used to open blockages caused by atherosclerosis in the arteries, most commonly in the heart arteries. The most descriptive name used for this treatment is: **Percutaneous** (through the skin) **transluminal** (inside the blood vessel) **coronary** (relating to the heart) **angioplasty** (blood vessel repair). When a stent is also used the procedure is called a **Percutaneous Coronary Intervention (PCI)**. The stent is a tiny wire mesh tube used to help keep the treated artery open after the initial angioplasty. About 90 percent of angioplasty procedures these days include the use of a stent.

Terms Used for Angioplasty:

Balloon angioplasty
 Coronary angioplasty
 Coronary artery angioplasty
 Cardiac angioplasty
 Percutaneous transluminal coronary angioplasty
 PTCA
 Heart artery dilatation



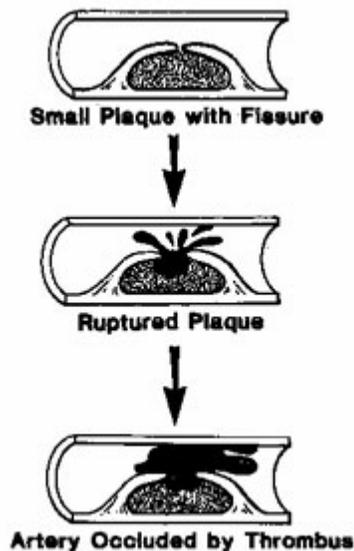
During the procedure a catheter with a guidewire is placed in the femoral artery of the leg, near the groin, or a main artery in the arm. Using x-rays, the catheter is fed up into the heart (coronary) arteries. Dye is then injected in order to visualize shadows of the inner artery lumen. When a narrowed segment is identified a balloon-tipped catheter is passed into this area and inflated. The balloon compresses the plaque that is causing the narrowed area, squashing it outwardly against the arterial walls.

A stent is next placed over a catheter and inserted into the area that has been compressed during the angioplasty procedure. When the balloon is inflated again, the stent expands and stays permanently in place.

Angioplasty Does Not Save Lives

Although angioplasty has been performed for nearly 3 decades and over one million procedures are done annually, you should be astonished to learn this fact: Angioplasty has never been shown to save the lives of patients who are treated for chronic heart blockages.^{3,4} I know this statement defies logic. After all, the skilled surgeon has just dilated a stricture in your heart artery.

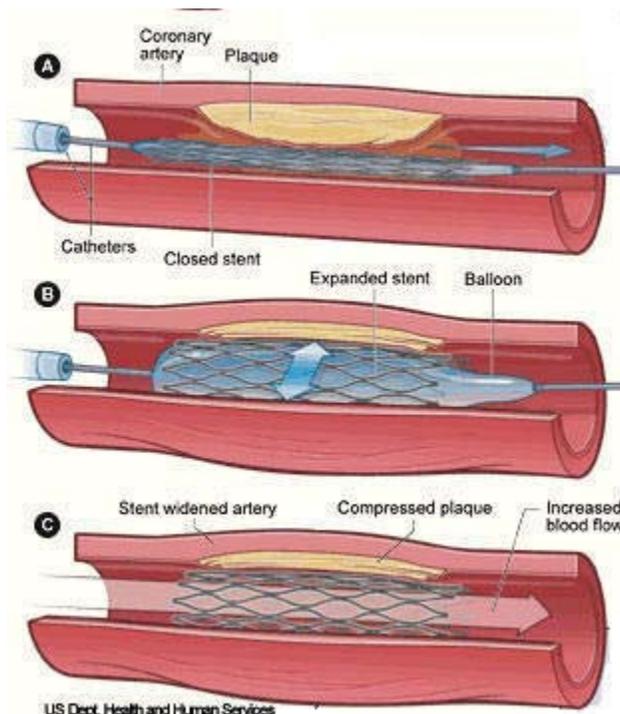
To understand why this procedure does not save lives, you need to learn how a heart attack occurs. All doctors know, and all patients need to realize, that a heart attack occurs when a small volatile plaque, better pictured as a tiny festering sore, located on the inside of an artery ruptures and causes the blood to suddenly form a clot (thrombus).^{5,6} The clotting occurs as a result of the release of “products of injury” when the sore ruptures—similar to the clot that forms when you cut your hand—except this clot often fills the blood vessel. The event of blood clot formation in the heart artery is known as a *coronary artery thrombosis*, or heart attack. The reason lives are not saved by angioplasty is this treatment completely ignores the dangerous part of the artery disease, the volatile plaques (sores). Instead the doctor’s efforts are directed toward dilating a narrowing caused by a large, stable, fibrous, plaque—this latent stage of artery disease almost never ruptures and therefore does not lead to a heart attack when left alone. However, when the plaque is ruptured by angioplasty surgery, heart attacks occur in 3 to 5% of patients.⁷



Half the Arteries Operated on Close down within Five Months⁷

A potentially devastating result from the injury caused to the artery wall by angioplasty is blood clot formation and closure of the treated artery. This should not be surprising. When the plaque is ruptured by the expanding balloon, “products of injury” are released—as expected, these substances cause the blood to clot within the artery. Within five months of the surgery up to 50% of arteries treated by angioplasty are completely closed down.⁷ This is common knowledge among doctors, therefore many efforts have been made to reduce this complication, including the use of blood thinning agents, such as aspirin, Plavix, fish oil and heparin before and after surgery. The benefits from these medications have been limited. The next effort to stop postsurgery artery closure has been the use of mechanical devices, called stents, which prop the artery open.

Stents, a Temporary Solution



Since the mid 1990s wire mesh stents have become a standard part of the angioplasty procedure. Unfortunately, these wire cylinders (stents) irritate the smooth muscle cells of the artery walls causing these cells to grow aggressively (to proliferate). This growth is an effort by the body to cover up the foreign metal that has just been introduced into the artery by the surgeon. This should not be surprising. Whenever an irritating alien material is placed in the body, cells grow around it in order to isolate the unfamiliar substance, which the body perceives as potentially harmful. The growth of the muscle cells (and blood clots) eventually closes 20% to 41% of the arteries containing these metal mesh stents.⁸ Furthermore, the use of stents results in no better survival than angioplasty alone^{7,9}—and remember angioplasty does not improve the chances of living longer.^{3,4} If only treatments could be developed to stop these cells from growing. Scientists had to look no further than cancer therapy to find tools to stop cells from proliferating.

Brachytherapy, Stop Proliferation with Radiation

Radiation kills cells and stops them from proliferating—a treatment used for decades to stop cancer cells from growing. Brachytherapy is the use of radioactive seeds placed after angioplasty through the catheter to the site of balloon treatment. The seeds stay in place for about 20 to 45 minutes, and then the catheter is removed. Brachytherapy is effective in preventing in-stent closure (restenosis) by stopping the proliferation of blood vessel smooth muscle cells, and associated scar tissue. Unfortunately, the early benefits of this therapy were not sustained, and the injury to the arteries caused by the radiation encourages the formation of blood clots that occlude the arteries and cause death.

The long term follow up of patients treated with this procedure has shown an unacceptable high rate of major adverse cardiac events despite prolonged administration of combined therapy with blood thinning (antiplatelet) drugs.¹⁰ The adverse events are mainly due to blood clot formation and artery closure. This closure usually occurs during the first year after brachytherapy. In one recently reported study 38% of people suffered life-threatening episodes and 53% had to be reoperated on within 5 years.¹¹ As a result, the two companies that made brachytherapy devices removed their machines from the market.

Drug Eluting Stents, Stop Proliferation with Chemotherapy

Placing a coating of cancer drugs onto the stents is now the most popular method used to inhibit the proliferation of smooth muscle cells after angioplasty. Two kinds of stents are available: the sirolimus-eluting (Cypher) and the paclitaxel-eluting (Taxus). Around 6 million people so far have drug eluting stents in their heart arteries. The restenosis rate was zero at six months after placement of the drug eluting stent compared to 26% after the bare metal stent.¹² But at one year there was no difference in deaths or heart attacks between the drug-eluting stents and the bare metal ones.^{13,14} However, four years later the results are disturbing. Two recent studies showed the risk of death and heart attacks are higher with the drug-eluting stents compared to the bare metal, uncoated stents.¹⁵

Mandatory Blood Thinners Post-Op for Life

Because of the high risk of artery closure (restenosis) from blood clotting after an angioplasty with or without a stent, blood thinners have been routinely prescribed. A baby aspirin daily has been the time honored treatment to prevent the formation of clots in the arteries—this drug is relatively safe and effective. To aspirin has been added another class of blood thinner drugs

called thienopyridine—these include Plavix (clopidogrel) and Ticlid (ticlopidine). When combined with aspirin, there is a high risk of bleeding from this class of drugs.¹⁶

The risk of blood clot formation after a bare metal stent decreases after 2 to 4 weeks as the smooth muscles cells cover the bare metal.¹⁷ Because the drug-eluting stents delay coverage of the stent by proliferating cells, the risk of blood clotting is prolonged. Until recently, recommendations were to use a drug like Plavix for a minimum of 3 to 6 months after surgery in addition to lifelong aspirin therapy.¹⁷ Recent reports of sudden death months and years after the placement of drug-eluting stents has caused doctors to rethink the time someone should be taking these medications.¹⁷ The truth is they really don't know what to do—so, doctors, running scared from fear of law suits, are now recommending that patients who have these kinds of stents should be on aspirin and a Plavix-like drug for life.

What Would I Do?

I have studied heart disease for the past 35 years, and everything I know about angioplasties and bypass surgery makes me want to stay clear of these businesses unless there is absolutely no other alternative. The real alternative that too few people take advantage of is prevention: A low-fat, plant-food based diet, exercise, and clean habits will prevent this disease. Once the disease has started it can be stopped and in most cases reversed with this lifestyle medicine.¹⁸

The only indication for angioplasty is to relieve incapacitating chest pain—since this surgery has not been shown to save lives.^{3,4,7,9,13,14} To use the promise of prolonging lives as the sales pitch is dishonest.

If I had incapacitating chest pain I would have an angioplasty. The key word here is *incapacitating*. If I got chest pains while climbing to the top of a mountain, I would not have surgery—I would just give up climbing because I do not care for this kind of activity. However, if I had chest pains so severe that they kept me from riding my windsurfer across the bay, I would have surgery—because, for me, this limitation would be incapacitating. Of course, before agreeing to surgery I would change my diet; this change alone has been shown to reduce chest pain episodes by 90% in 3 weeks¹⁹ and I would consider medications known to relieve chest pains—medications like nitrates (nitroglycerin) and beta blockers. I would also use enough cholesterol-lowering medication to lower my levels to below 150 mg/dl. (See the June 2003 McDougall Newsletter article: Cleaning Out Your Arteries.)

My first surgical attempt to reduce the blockage that is causing my heart to hurt would be with a standard angioplasty, no stent. If that procedure failed then my next effort would be the use of a bare metal (uncoated) stent. After surgery, I would take aspirin and Plavix for one month, and then stop the Plavix, but continue one baby aspirin a day for life.

I am sure situations exist that would cause me to elect bypass surgery if the angioplasty failed, fortunately, I cannot think of any right now. The indications for bypass surgery are:

- 1) Incapacitating chest pain
- 2) Damage to the left ventricle (heart chamber) causing 50% or less of the blood to be ejected from the heart with each beat (ejection fraction). For these patients there is an 18% survival advantage with surgery over 10 years.²⁰ For me, this small benefit would not cause me to rush into the operating room.

Hopefully, you will never become involved in the heart disease businesses—you can't win here. If you do, then you must make every effort to become a well-informed consumer and a very "squeaky wheel" by asking questions and getting complete scientifically backed answers, until you are fully satisfied that this is your best choice. My educated guess is that over 95% of angioplasty and bypass surgeries could be avoided if proper medical indications were adhered to, patients were fully informed of the limitations and hazards, and every patient took full advantage of the powerful healing which can be effected by a change to a low-fat, plant-food based diet and by commitment to exercise.

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Featured Recipes

The first 2 recipes in this month's newsletter are from a website by Marla Erickson called Marla's Marvelous Meals. All of the recipes are McDougall style, they are very creative, most are easy to prepare, and there is a wide variety to choose from. Visit this website at <http://www.vegsource.com/marla/>. Marla adds new recipes all the time, so visit often.

Sweet Corn Tomalito

By Marla Erickson, Sacramento, CA

Mary made this for her family last week to rave reviews!

A sweet corn pudding that tastes just like the one they serve at Chevy's Mexican restaurants, but without the fat and dairy.

Preparation Time: 10 minutes

Cooking Time: 60 minutes

Servings: 6

6 cups frozen corn kernels, thawed, divided in half

1 ¼ cup soymilk

½ cup masa flour

⅔ cup sugar

¾ cup cornmeal

¾ teaspoon baking powder

¾ teaspoon salt

Blend 3 cups corn kernels with the soymilk until smooth. In a large bowl, combine dry ingredients. Add pureed corn and remaining 3 cups whole corn kernels and mix well. Pour into a rectangular loaf pan, cover tightly with plastic wrap, and place in steamer for 1 hour. Serve warm, scooping portions with a large spoon or ice cream scoop.

Vegetable Udon Soup

By Marla Erickson, Sacramento, CA

Preparation Time: 30 minutes

Cooking time: 15 minutes

Servings: 6

½ ounce dried shiitake mushrooms

2 cups boiling water

6 cups vegetable stock

¼ cup soy sauce

1 garlic clove, chopped

1 teaspoon minced fresh ginger

2 cups sliced button mushrooms

1 bunch scallions, sliced into 1" pieces

2 cups shredded bok choy leaves

1 cup snow peas, trimmed

1 small daikon (carrot-sized)

½ red pepper, julienned

1 package lite extra firm tofu, cubed

10 ounce package dry udon noodles

In a small bowl, pour boiling water over dried mushrooms and let soak for 15 minutes. Drain and chop, reserving liquid.

Place the garlic and ginger in a nonstick pot and sauté, using a little water, until garlic is golden. Add mushroom soaking liquid, broth, and soy sauce. Bring to a boil. Add chopped shiitake and sliced button mushrooms, scallions, bok choy, snow peas, daikon, and red pepper. Cook for 5 minutes. Add tofu and cook for another 3 minutes.

Meanwhile, cook udon noodles according to package directions. Drain.

Into each individual serving bowl, place a portion of cooked noodles and ladle broth over the top.

Note: Keep leftover noodles and broth in separate containers and mix together just before reheating to avoid noodles soaking up all the broth.

Barbecued Bean Sauce

This is delicious over baked potatoes, on top of brown rice, stuffed into pita bread or just in a bowl by itself.

Preparation Time: 10 minutes

Cooking Time: 20 minutes

Servings: 6

1 onion, chopped
1 teaspoon minced fresh garlic
1/3 cup water
1 15 ounce can fire roasted chopped tomatoes with green chilies
1 teaspoon chili powder
1/4 teaspoon chipotle chili powder
1/4 teaspoon ground cumin
1 15 ounce can black beans, drained and rinsed
1 15 ounce can pinto beans, drained and rinsed
1 15 ounce can white beans, drained and rinsed
1 10 ounce package frozen mixed vegetables, thawed
1/2 cup vegetable broth
1/4 cup barbecue sauce
dash or two of hot sauce (optional)

Place the onion, garlic and water in a large pot. Cook, stirring occasionally for 5 minutes. Add tomatoes and seasonings. Mix well, then add the remaining ingredients. Cook, stirring occasionally for 15 minutes.

Curried Yam Stew

This one pot meal contains many of my favorite foods; garbanzos, spinach and yams. It is easy to prepare, cooks quickly and tastes delicious.

Preparation Time: 15 minutes

Cooking time: 20 minutes

Servings: 4

4 cups peeled and diced garnet yams
1 15 ounce can diced tomatoes
1 15 ounce can garbanzo beans, drained and rinsed
1/4 cup vegetable broth
2 teaspoons curry powder
1/2 teaspoon ground cumin
1/4 teaspoon ground coriander
1/4 teaspoon cinnamon
4 green onions, chopped
1/4 cup chopped fresh cilantro
4 cups packed fresh baby spinach leaves

Place the yams, tomatoes, garbanzo beans and broth in a large pot. Bring to a boil, reduce heat, cover and cook, stirring occasionally for 15 minutes, until yams are just tender. Add the remaining ingredients, except for the spinach leaves and mix well. Place the spinach leaves on top of the stew, cover and steam for 1 minute or so, then stir the leaves into the stew. Continue to cook, stirring frequently for 4 minutes longer. Serve at once.

Baked Mexican Pasta

This recipe first appeared in the newsletter 2 years ago. Mary has been working with brown rice pasta lately and adapted the recipe to use with Tinkyada, a delicious, healthy alternative to wheat pasta. Tinkyada brown rice pasta tastes wonderful and can be substituted for wheat pasta in almost all recipes. If you are going to use brown rice pasta in lasagna, it will need to be cooked before using in the recipe. It takes most varieties of Tinkyada brown rice pasta about 13-15 minutes to cook to al dente.

Preparation Time: 15 minutes

Cooking Time: 45 minutes

Servings: 6

8 ounces Tinkyada brown rice penne pasta
¼ cup water
1 onion, chopped
1 ½ teaspoons minced fresh garlic
1 4 ounce can chopped green chilies
½ teaspoon chipotle chile powder
1 14.5 ounce can fire roasted chopped tomatoes
1 15 ounce can pinto beans, drained and rinsed
1 ¼ cups enchilada sauce
1/3 cup shredded soy cheese (optional)
¼ cup chopped fresh cilantro
½ cup tofu sour cream

Place a large pot of water on to boil and cook pasta according to package directions, just until barely tender. Drain and set aside.

Preheat oven to 350 degrees.

Place the water in a large non-stick pan. Add the onions and garlic. Cook, stirring occasionally until softened, about 5 minutes. Add the green chilies, mix well, then stir in the chipotle powder. Add the tomatoes, beans and enchilada sauce. Mix well and cook, stirring occasionally, for 10 minutes. Add the cooked pasta and mix well. Ladle mixture into a covered casserole dish. Sprinkle with the soy cheese, if desired. Bake covered for 30 minutes.

Paella

Preparation Time: 30 minutes

Cooking Time: 40 minutes

Servings: 8

1 cup uncooked brown rice
2 cups boiling water
2 ⅓ cups vegetable broth
1 onion, chopped
2 cloves garlic, minced
¾ cup julienned green bell pepper
¾ cup julienned red bell pepper
1 10 ounce package frozen baby lima beans, thawed
2 small tomatoes, chopped
1 teaspoon ground oregano
¼ teaspoon sea salt

1/8 teaspoon crushed red pepper flakes
pinch of saffron threads
1 15 ounce can water packed artichoke hearts, drained, sliced in half
1 cup frozen peas, thawed

Place the rice and boiling water in a bowl. Cover and let stand for 20 minutes, while preparing the remaining ingredients. Drain off water and set aside.

Heat the vegetable broth to boiling. Place 1/3 cup of the vegetable broth in a large slope-sided sauté pan (or use a wok). Add onion and garlic. Cook and stir over medium heat for about 2 minutes until onion softens slightly. Add peppers, lima beans and tomatoes. Cook and stir for another 3 minutes. Add the remaining hot vegetable broth and the drained rice. Stir in the oregano, salt, red pepper flakes and saffron threads. Bring to a boil, reduce heat, cover and cook for 30 minutes. Add artichokes and peas. Mix well, remove from heat, cover and let rest for 5 minutes before serving.