

# **Does Sugar Feed Cancer?**

Simple sugar is not health food. However, one devastating result of the exaggeration of the role played by sugar in common diseases has been the promotion of low-carbohydrate diets to prevent and even treat common cancers. Most easily recognizable from the low-carb camp are the Atkins Diet, Wheat Belly, and Grain Brain, which consist of the very foods—meats, dairy products, and vegetable oils—known to cause cancers of the breast, colon, and prostate. These diets go far beyond discouraging table sugar (sucrose) and warn against eating healthy starches, such as corn, rice, potatoes, and wheat. Page 2

# **Featured Recipes**

Announcing a Major Update to the McDougall Mobile Cookbook App for <u>iPhone</u> now with over 1000 recipes.

This month's recipes are from previous newsletters which are included in the updated cookbook app.

- TEX-MEX POTATOES
- ONE POT PASTA
- HERBED TOFU RANCH DIP
- BAKED RICE PUDDING

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Simple sugar is not health food. However, one devastating result of the exaggeration of the role played by sugar in common diseases has been the promotion of low-carbohydrate diets to prevent and even treat common cancers. Most easily recognizable from the low-carb camp are the Atkins Diet, Wheat Belly, and Grain Brain, which consist of the very foods—meats, dairy products, and vegetable oils—known to cause cancers of the breast, colon, and prostate. These diets go far beyond discouraging table sugar (sucrose) and and warn against eating healthy starches such as barley, beans, corn, potatoes, rice, and wheat.



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A thorough review of the science, published in 1982, as a landmark document from the committee on Diet, Nutrition, and Cancer, found "the evidence from both epidemiological and laboratory studies is too sparse to suggest a direct role of carbohydrate (possibly exclusive of fiber) in carcinogenesis." Fiber, which is only found in plant foods, plays a protective role. Most condemning for the trend of low-carb diets for improving cancer outcomes: "The committee concluded that of all the dietary components it studied, the combined epidemiological and experimental evidence is most suggestive for a causal relationship between fat intake and the occurrence of cancer." Clarifying the apparent paradox of "bad food equals good health" are the four recent <u>major scientific reviews</u>, showing that low-carbohydrate diets increase the risk of overall death and death from cardiovascular disease. (One reason I value "older" research and conclusions is that after 1985 the food industries took control of the information. Estimates are as much as 90% of the research is now tainted by the food and drug companies to promote sales.) The faulty thinking that avoiding sugars, from sucrose to potatoes, is good for cancer patients lies in the misinterpretation of:

- 1. Epidemiological studies showing populations that consume high amounts of simple sugar have high rates of common dietary cancers, such as breast, colon, and prostate cancer.
- 2. Consistent research showing calorie restriction (CR) prolongs overall length of life and survival with cancer, especially in animal studies.
- 3. The findings of Otto Warburg on the origin of cancer cells.

## Worldwide, Cancer Incidence Correlates with Consumption of Rich Foods



The article, "<u>Geographical Distribution of Cancer</u>," published in 1969, showed worldwide, populations who consume the richest diets, those high in animal foods, vegetable oils, and refined carbohydrates, have the highest rates of breast, colorectal, and prostate cancers.

Although these diets are also high in refined flours and white sugar, they are, most importantly, uniformly very low in starches, like barley, beans, corn, potatoes, rice, and wheat (also called complex carbohydrates). Any meaningful contribution to cancer risk from simple sugars is indirect. They provide calories, which may contribute to weight gain. Excess body fat increases the risk of some cancers. However, the <u>conversion of sugar to body fat</u> is minimal in humans. Rather, dietary fats from animal foods and vegetable oils are the fundamental cause of our obesity epidemics. "The fat you eat is the fat you wear." This is not just about prevention: lower-fat, lower animal-food, and more plant-based diets have been shown to <u>positively affect survival</u> in patients with cancers of the <u>breast</u>, <u>colon</u>, and <u>prostate</u>.

## Calorie Restriction Slows Cancer, But Low-carb Is Wrong

<u>Calorie restriction</u> (CR) is a dietary regimen that reduces calorie intake without causing malnutrition. (Commonly, "calorie restriction" means eating less food and suffering hunger pains from portion control.) A variety of animal studies show that consuming fewer calories extends the lifespan and delays the onset of multiple age-associated diseases, including cancer. Animal experiments have demonstrated that the benefits of dietary restriction are primarily from <u>reducing intake of fats and proteins</u> rather than simply restricting food and calories. Low-carbohydrate diets can result in calorie restriction. However, the foods served to restrict calories are the same ones that promote cancer by mechanisms such as raising <u>IGF-1 levels</u>, causing <u>in-</u><u>flammation</u>, and creating <u>insulin resistance</u>.

For lifelong calorie restriction (CR), there is an option to being hungry from "eating less" and to the malnutrition caused by eating commonly recommended low-carb diets. The healthiest, tastiest, and easiest way to restrict calories is to replace animal fats and vegetable oils with natural sugars (starches, vegetables, and fruits).

This maneuver exchanges calorie dense foods (fat = 9 calories/gram, cheese = 4 calories/gram, meat = 4 calories/gram, and white sugar = 4 calories/gram) for calorie dilute foods (starches, such as: corn = 0.8 calories/gram, navy beans = 1.2 calories/gram, spaghetti = 1.1 calories/gram, rice = 1.2 calories/gram, sweet potatoes = 1.0 calories/gram, and white potatoes = 0.6 calories/gram). In addition to being filling, starches are very appetite satisfying.

Research published by Dr. Lauren Lissner in 1987 in the <u>American Journal of Clinical Nutrition</u> showed how just lowering the amount of fat in the food, with little change in appearance or palatability, resulted in a spontaneous decrease in food consumption (a method for natural, healthful, and safe calorie restriction). People were encouraged to fully satisfy their appetites, in other words, this was not about eating less food, but rather eating better quality food.



Decreasing fat from 45 to 50% of calories to 15 to 20% of calories resulted in a spontaneous 600 to 800 reduction in daily calories consumed. No suffering from hunger! In the case of the McDougall Diet of starches, vegetables, and fruits this could mean a reduction to 7% of calories from fat, while at the same time changing the components of the diet to those that slow and reverse cancer development.

## Ten Diet-Induced Changes That Slow and Reverse Cancer

- 1. Losing weight: <u>Obesity</u> increases not only the risk of getting cancer, but overweight people die sooner from their cancers.\*
- 2. <u>Cut out meat</u>: This removes substances known to cause cancer progression.
- 3. <u>Stop cow's milk</u>: This removes substances known to cause cancer progression.
- 4. **Reduce intake of** <u>growth stimulants</u>: Animal foods of all kinds increase growth factors (IGF-1, etc.) for cancer progression.
- 5. **Give up <u>vegetable oils</u>**: Isolated corn, safflower, olive, etc. oils will encourage tumors to grow faster (than do animal fats).
- 6. Avoid cancer-promoting chemicals (<u>environmental carcinogens</u> and <u>persistent organic pollu-</u> <u>tants</u>).
- 7. Increase immune system-enhancing plant components called phytonutrients.
- 8. Grow healthy intestinal bacteria to enhance the body's defenses against cancer.
- 9. Increase intake of <u>anti-cancer plant sterols</u>.
- 10. Raise the consumption of cancer-fighting <u>folates</u>: As the root word "foliage" implies, these substances are from plants.

### Otto Warburg's Work Distorted

Nobel prize-winning researcher, Otto Warburg, pioneered biochemistry research in the early 20th century that was fundamental to understanding the <u>origin of cancer cells</u>. Every cell in the body, even cancer cells, requires sugar (glucose) for energy. Most normal cells to make energy from glucose use highly efficient metabolic processes requiring oxygen. Without oxygen in the local environment, or when the respiratory mechanisms of the cell are damaged, then the cell reverts to a less productive means to make energy called fermentation. Dr. Warburg demonstrated that cancer cells are different than normal cells in that they can metabolize glucose, grow, and reproduce in an environment without oxygen (anaerobic glycolysis) by fermentation. (Fermentation is also used to make alcoholic beverages.) Cancer cells cannot revert back to using highly efficient, oxygen-dependent means of metabolism, even if oxygen is plentifully supplied to the cells. They must now rely on fermentation to stay alive. The greater the fermentation rate, the faster cancer cells grow. Therefore, damage to the respiratory systems of the cell, from sources as varied as arsenic poisoning to chronic oxygen deficiency, is the origin of cancer cells.

Adding more sugar to the equation does not make cancers grow faster. In other words, "Sugar does not feed cancer." Diets low in sugars (especially those low in starches) are inherently high in fat (animal fats and vege-table oils). High-fat diets create chronic oxygen deficiency (chronic hypoxia), which can be especially severe at the cellular level. According to Dr. Warburg, prolonged, severe hypoxia results in permanent damage to the respiratory system of cells—an essential requirement for cells to become cancer and rely on fermentation. Typically, people following the Western Diet are consuming three or more fatty meals daily, and suffering from chronic oxygen deficiency at the cellular level throughout their body.

# Fats and Oils Cause Chronic Hypoxia (Consistenent with Warburg's Origin of Cancer Cells)



Blood cells within the blood vessels flow freely and bounce off one another prior to a high-fat meal. Approximately one hour after a fatty meal, the cells begin to stick together upon contact and form clumps. As this clump formation progresses, the flow of blood slows. Six hours after the meal, the clumping becomes so severe that the blood flow actually stops in many small vessels. Several hours later the clumps break up and the blood flow returns to the tissues. As a result of these changes, the oxygen content of the blood decreases by 20 percent. The consequence of this impaired circulation can be angina, impaired brain function, high blood pressure, fatigue, as well as compromise of the function of the lungs. Chronic low-tissue oxygenation (hypoxia), according to Warburg, and accepted by most scientists today, causes permanent damage to cell respiration, a fundamental step for the origin of cancer cells. Please note that the circulation is as severely impaired by vegetable oils as it is with animal fats.

#### **Cancer Prevention and Treatment Means a High-Sugar Diet**

"Sugar Feeds Cancer" is a dogma that can easily lead us to choosing foods that promote death and disability from many chronic conditions, including many forms of cancer. Of course, I use the word sugar to refer to the natural forms found abundantly in starches (and fruits). Choosing beans, corn, potatoes, rice, and wheat causes us to fill up without eating disease-promoting meat, poultry, fish, cheese, milk, and vegetable oils. Additionally we will minimize our consumption of refined flours and simple sugars, which are not health foods. This "all-winning" dietary change removes carcinogenic poisons, adds cancer-preventing phytonutrients, restricts calories painlessly, and improves circulation. Thereby, we can regain our lost health, and even improve the chances of survival for people with cancer, by knowing and following the truth about proper human nutrition.

# **Featured Recipes**

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EATURED					Pres	nite Bea p: 15 Minut ves Serves:	<b>ns Mex</b> i rs Cook: 31 4	i <b>cali</b> 5 Minutes
Zucchini Bread	Herbed Tofu Ranch Dip	Green Enchiladas	Marinar Zucc Nooc	★ Favorite				
🔶 Favorites				INGREDIENTS				
Appetizer				1 small onion, chopped				
				1 carrot, chopped				
Beverages				3/4 cup water				
Breads				1/2 tsp garlic, minced 🥥				
Breakfast				3 15 oz. cans white cannellini beans				
Desserts				1 15 oz. can chopped tomatoes				
Dias & Corre	. da			3/4 cup vege	table b	broth	50	
Dips & Sprea	305			1 tsp chili por	vder			
Dressings				1/2 tsp cumir	0			0
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These recipes are a collection from the monthly McDougall Newsletters in this convenient iPhone app.

What's New:

- A New Look and Feel
- Easier Navigation
- Kitchen Tips
- Featured Recipes Section

#### **Tex-Mex Potatoes**

These baked potato wedges are my idea of the quintessential Mexican meal. Even though the recipe uses some canned ingredients, fresh tomatoes, green onions and cilantro keep it tasting fresh. This is always my choice on Mexican night at the live-in McDougall Program. I love it with a bit of warm enchilada sauce over the top and a squirt or two of Sriracha hot sauce.

Preparation Time: 20 minutes Cooking Time: 40 minutes



#### Servings: 6

6 large red potatoes, cut lengthwise into wedges
2 15 ounce cans pinto beans, drained and rinsed
1 cup purchased fresh salsa
1 4 ounce can diced green chilies
1 small onion, chopped
1-2 cloves garlic, crushed
½ teaspoon chili powder
½ teaspoon ground cumin
¼ cup chopped fresh cilantro
1 tomato, chopped
¼ cup fresh or frozen (thawed) corn kernels
2 green onions, chopped

Preheat oven to 375 degrees. Place the potatoes on a baking sheet and bake until lightly browned, about 40 minutes.

While potatoes cook, combine the beans, salsa, chilies, onion, garlic, chili powder, cumin and half of the cilantro in a saucepan. Cook over low heat, stirring occasionally, for 15 minutes. Combine the tomato, corn kernels, green onions, and the remaining cilantro in a small bowl. Set aside.

To serve, place the baked potato wedges on a serving platter. Spoon the warm bean mixture over the potatoes and top with the fresh tomato mixture.

#### **One Pot Pasta**

This is a very quick meal that you can easily substitute in different vegetables depending on what you and your family likes, and what you have on hand.

Preparation time: 15 minutes Cooking Time: 15 minutes Serves: 4 to 6



 pound pasta, I used farfalle but you can use whole grain or gluten-free pasta2 cups broccoli florets
 cup asparagus, cut into 1-inch pieces
 cups chopped kale
 jar fat-free marinara sauce, or 3 cups homemade marinara sauce

Bring a large pot of water to boil.

Add noodles and boil for 8 minutes. Add broccoli and asparagus and cook for 2 more minutes. Add kale and cook 2 – 4 minutes, depending on how al dente you want your pasta and vegetables. Drain pasta and vegetables. Pour everything back into the pot and add pasta sauce. Stir to combine.

#### Herbed Tofu Ranch Dip

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Volume 15 Issue 9

Preparation time: 10 minutes

Servings: Variable 1 package firm silken tofu 2 tbsp lemon juice 1 clove of garlic 1 tsp granulated onion 1/2 tsp nutritional yeast 2 tsp maple syrup or agave syrup 1/4 tsp salt Fresh ground pepper 1 tbsp parsley, chopped 2 tbsp green/spring onions, sliced (green tops only)



Directions:

1. Place ingredients (except for parsley and green onions) into blender and blend until smooth. Taste test and adjust salt and pepper if desired. Add parsley and green onions and blend on medium high until the pieces are broken up a bit.

2. Refrigerate if desired before serving and serve with veggies or rice crackers.

## **Baked Rice Pudding**

Preparation Time: 5 minutes (cooked rice needed) Cooking Time: 35 minutes Servings: 4-6

3 cups cooked brown rice 1 ½ cups soy or rice milk 1 cup dried fruit 3 teaspoons brown sugar 1 ½ teaspoons vanilla dash cinnamon



Preheat oven to 325 degrees.

Combine all ingredients in an oven-proof pot. Heat to just boiling. Remove from heat, stir and place uncovered in the oven. Bake for 30 minutes. Remove from oven and let rest for 5-10 minutes before serving.

Hints: Serve in individual bowls with extra soy or rice milk to pour over the pudding and/or brown sugar to sprinkle on top. This may also be baked in individual bowls. Baking time will be reduced by about half. Different kinds of fruit may be used such as raisins, currents, dried cranberries, or chopped apricots or dates. This may also be served cold or at room temperature.