## Health Hazards of a High Fruit Diet

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10th day of the 1st month?5849 years after the creation of Adam
The 1st Month in the Fourth year of the third Sabbatical Cycle
The Third Sabbatical Cycle of the 119th Jubilee Cycle
The Sabbatical Cycle of Earthquakes Famines, and Pestilences
March 23, 2013
Shabbat Shalom Family,

## Health Hazards of a High Fruit Diet: Alexi Bracey

Fruits are loaded with healthy antioxidants, vitamins and minerals, which is why eating them in moderation is fine for healthy people. However, many benefit by restricting their fruit intake. Fructose, a simple sugar found in fruit, is preferentially metabolized to fat in your liver, and eating large amounts has been linked to negative metabolic and endocrine effects. So eating very large amounts - or worse, nothing but fruit - can logically increase your risk of a number of health conditions, from insulin and leptin resistance to cancer.

For example, research has shown that pancreatic tumor cells use fructose, specifically, to divide and proliferate, thus speeding up the growth and spread of the cancer.

As a general health rule, I recommend limiting your total fructose consumption to about 25 grams per day on average, and that includes fructose from fruit. However, if you have insulin resistance, heart disease, cancer or high blood pressure, you may want to cut it down to 15 grams or less.

Kutcher Lands in Hospital After Adopting All-Fruit Diet
Actor Ashton Kutcher recently disclosed health issues brought on by following an all-fruit diet, 1 adopted in preparation to play the character of Steve Jobs in the upcoming film "Jobs," due out April 19.

Jobs had adopted an all-fruit diet in his younger days, and even the brand he co-founded Apple - was a nod to his dietary obsession. Kutcher recently told USA Today:2
"First of all, the fruitarian diet can lead to like severe issues. I went to the hospital like two days before we started shooting the movie. I was like doubled over in pain. My pancreas levels were completely out of whack. It was really terrifying ... considering everything."

The "everything" is likely a reference to pancreatic cancer - the disease that killed Steve Jobs on October 5, 2011, at the age of 56. Even though Jobs consumed a fruitarian diet years before he contracted his pancreatic cancer, there could be some relationship.

Why Large Amounts of Fruit May Not Be Healthy
While people are becoming increasingly aware of the connection between excessive fructose consumption and obesity and chronic disease, many forget that fruit is a source of fructose as well. Many tend to believe that as long as fruit is natural and raw they can have unlimited quantities without experiencing any adverse metabolic effects.

Eliminating processed foods and soda - which are loaded with high fructose corn syrup - and replacing it with an all-fruit diet is likely not going to improve your health.

It's important to consider ALL sources of fructose, and to try to limit your total consumption if you want to optimize your health. Granted, fruits contain beneficial dietary fibers, antioxidants, vitamins and minerals, which is why they're an important part of a healthy diet - as long as they're eaten in moderation. I believe most people would benefit by replacing the fruit with 5070 percent of their calories from healthy fat. You also need moderate amounts of high quality protein.

An all-fruit diet is essentially an all-fructose diet, and this is bound to spell disaster for your health, at least long-term. Studies have shown that fructose can induce:

Impaired glucose tolerance, insulin resistance, and diabetes Elevated triglycerides Abdominal obesity
Leptin resistance Inflammation and oxidative stress Endothelial dysfunction
Microvascular disease Hyperuricemia Renal (kidney) damage
Fatty liver disease High blood pressure Metabolic syndrome

## The Fructose Pancreatic Cancer Connection

Pancreatic cancer is one of the faster spreading cancers; only about four percent of patients can expect to survive five years after their diagnosis. Each year, about 44,000 new cases are diagnosed in the U.S., and 37,000 people die of the disease. Cancer of the pancreas has a terrible prognosis-half of all patients with locally advanced pancreatic cancer die within 10 months of the diagnosis; half of those in whom it has metastasized die within six months.

Your pancreas contains two types of glands: exocrine glands that produce enzymes that break down fats and proteins, and endocrine glands that make hormones like insulin that regulate sugar in your blood.

Steve Jobs died of tumors originating in the endocrine glands, which are among the rarer forms of pancreatic cancer. His cancer was detected during an abdominal scan in October 2003, as Fortune magazine reported in a 2008 cover story. 4 He reportedly spent nine months on "alternative therapies," including what Fortune called "a special diet," although there was no
mention of what type of diet this might have been. In 2004, after the cancer had spread, Jobs opted for surgery. Unfortunately, it did not cure him.

Five years later, he underwent an experimental procedure called peptide receptor radionuclide therapy (PRRT), which involves delivering radiation to tumor cells by attaching one of two radioactive isotopes to a drug that mimics somatostatin, the hormone that regulates the entire endocrine system and the secretion of other hormones. This treatment also failed. After having a liver transplant, Jobs succumbed to the cancer in 2011.

Interestingly enough, research published in 20105 suggests fructose may have a particularly significant impact on pancreatic cancer.

Insulin production is one of your pancreas' main functions, used by your body to process blood sugar, and, in the laboratory, insulin promotes the growth of pancreatic cancer cells. However, there's more to it than that. The research in question showed that the way the different sugars are metabolized (using different metabolic pathways) is of MAJOR consequence when it comes to feeding pancreatic cancer cells and making them proliferate. According to the authors:
"Importantly, fructose and glucose metabolism are quite different... These findings show that cancer cells can readily metabolize fructose to increase proliferation."

The study confirms the old adage that sugar feeds cancer - a finding that Dr. Warburg received a Nobel Prize for over 90 years ago. Tumor cells do thrive on glucose and do not possess the metabolic machinery to burn fat. However, the cells used fructose for cell division, speeding up the growth and spread of the cancer. If this difference isn't of major consequence, then I don't know what is. Whether you're simply interested in preventing cancer, or have cancer and want to live longer, you ignore these facts at your own risk.

There's reasonable cause to suspect that if your body maintains high levels of insulin, you increase the pancreatic cancer's ability to survive and grow. In fact, researchers now believe that up to a third of all types of cancers may be caused by diet and lifestyle. So if you want to prevent cancer, or want to treat cancer, it is imperative that you keep your insulin levels as low as possible.

Should You Eliminate Fruit from Your Diet?
Short answer, no, it wouldn't be wise to eliminate fruit entirely. Fruit is definitely a source of fructose, and one that can harm your health if you eat it in vast quantities, but eating small amounts of whole fruits is fine if you are healthy.

In vegetables and fruits, the fructose is mixed in with fiber, vitamins, minerals, enzymes, and beneficial phytonutrients, all of which help moderate the negative metabolic effects. However, if you suffer with any fructose-related health issues, such as insulin resistance, metabolic syndrome, heart disease, obesity or cancer, you would be wise to limit your total fructose consumption to 15 grams of fructose per day. This includes fructose from ALL sources, including whole fruit.

If you are not insulin resistant, you may increase this to 25 grams of total fructose per day on average.

If you received your fructose only from vegetables and fruits (where it originates) as most people did a century ago, you'd consume about 15 grams per day. Today the average is 73 grams per day which is nearly 500 percent higher a dose and our bodies simply can't tolerate that type of biochemical abuse. So please, carefully add your fruits based on the following table to keep your total fructose below 15-25 grams per day, depending on your current health status.

Fruit Serving Size Grams of Fructose
Limes 1 medium 0
Lemons 1 medium 0.6
Cranberries 1 cup 0.7
Passion fruit 1 medium 0.9
Prune 1 medium 1.2
Guava 2 medium 2.2
Date (Deglet Noor style) 1 medium 2.6
Cantaloupe $1 / 8$ of med. melon 2.8
Raspberries 1 cup 3.0
Clementine 1 medium 3.4
Kiwifruit 1 medium 3.4
Blackberries 1 cup 3.5
Star fruit 1 medium 3.6
Cherries, sweet 103.8
Strawberries 1 cup 3.8
Cherries, sour 1 cup 4.0
Pineapple 1 slice ( $3.5^{\prime \prime} \times .75^{\prime \prime}$ ) 4.0
Grapefruit, pink or red $1 / 2$ medium 4.3
Fruit Serving Size Grams of Fructose
Boysenberries 1 cup 4.6
Tangerine/mandarin orange 1 medium 4.8
Nectarine 1 medium 5.4
Peach 1 medium 5.9
Orange (navel) 1 medium 6.1
Papaya $1 / 2$ medium 6.3
Honeydew $1 / 8$ of med. melon 6.7
Banana 1 medium 7.1
Blueberries 1 cup 7.4
Date (Medjool) 1 medium 7.7
Apple (composite) 1 medium 9.5
Persimmon 1 medium 10.6
Watermelon $1 / 16$ med. melon 11.3

Pear 1 medium 11.8
Raisins $1 / 4$ cup 12.3
Grapes, seedless (green or red) 1 cup 12.4
Mango 1/2 medium 16.2
Apricots, dried 1 cup 16.4
Figs, dried 1 cup 23.0
How to Determine Your Individual Susceptibility to Fructose Damage
As already stated, those who need to be careful about their fruit intake are people with high insulin levels. You can measure your fasting insulin level to find out for sure, but if you have any of the following problems it is highly likely you have insulin resistance syndrome:

- Overweight
- High Cholesterol
- High Blood Pressure
- Diabetes
- Yeast Infections

Besides that, you can also use your uric acid levels as a marker for your susceptibility to fructose damage, as some people may be able to process fructose more efficiently than others. The higher your uric acid, the more sensitive you are to the effects of fructose. The safest range of uric acid appears to be between 3 and 5.5 milligrams per deciliter ( $\mathrm{mg} / \mathrm{dl}$ ), and there appears to be a steady relationship between uric acid levels and blood pressure and cardiovascular risk, even down to the range of 3 to $4 \mathrm{mg} / \mathrm{dl}$.

According to Dr. Richard Johnson, the ideal uric acid level is probably around $4 \mathrm{mg} / \mathrm{dl}$ for men and $3.5 \mathrm{mg} / \mathrm{dl}$ for women.

If you are one of those who believes that fruit is healthy no matter how much you eat, I would strongly encourage you to have your uric acid level checked to find out how sensitive you are to fructose. Eat the amount of fruit you feel is right for you for a few weeks and then check your uric acid level and see if your levels are healthy. If they are elevated you might try reducing the fruit to recommended levels and rechecking your uric acid level. Many who are overweight likely have uric acid levels well above 5.5. Some may even be closer to 10 or above. Measuring your uric acid levels is a very practical way to determine just how strict you need to be when it comes to your fructose - and fruit - consumption.

Is there Such a Thing as an Ideal Diet for Everyone?
Nutritional requirements can vary wildly from one person to the next, which is why l've been a longtime proponent of eating in accordance with your nutritional type. For example, if you're a protein type, fruits are generally not beneficial for you with the exception of coconut, which has a higher fat content that is beneficial for protein types. On the other hand, carbohydrate types tend to fare well with fruit and can safely consume moderate amounts. This is an important distinction, and everyone should try to eat primarily the specific fruits that are best for their unique biochemistry.

However, many find nutritional typing to be too complex. So to simplify matters, while still allowing for a fully personalized program, I recently updated and revised my Nutritional Plan. It consists of three levels, from beginners to advanced, and covers the basic requirements of a healthy diet.

Keep in mind that emerging evidence suggests your diet should be at least half healthy fat, and possibly as high as 70 percent. My personal diet is about 60-70 percent healthy fat, and both Paul Jaminet, PhD., author of Perfect Health Diet, and Dr. Ron Rosedale, M.D., an expert on treating diabetes through diet, agree that the ideal diet includes somewhere between 50-70 percent fat. It's important to understand that your body requires saturated fats from animal and vegetable sources (such as meat, dairy, certain oils, and tropical plants like coconut) for optimal functioning.
When you take this into account, it's easy to see that an all-fruit diet could wreak absolute havoc with your health.

Keep in mind that frequent hunger may be a major clue that you're not eating correctly. Not only is it an indication that you're consuming the wrong types of food, but it's also a sign that you're likely consuming them in lopsided ratios for your individual biochemistry. Fat is far more satiating than carbs, so if you have cut down on carbs and feel ravenous, remember this is a sign that you haven't replaced them with sufficient amounts of fat. You do want to make sure you're adding the correct types of fat though, such as:
Olives and Olive oil
Coconuts and coconut oil
Butter made from raw grass-fed organic milk
Raw nuts, such as, almonds or pecans
Organic pastured egg yolks

## Avocados

Palm Oil
Unheated Organic Nut Oils
Grass-fed meats
If You Seek Optimal Health, Pay Careful Attention to Your Insulin Levels
Three lifestyle issues keep popping up on the radar when you look at what's contributing to pancreatic cancer: sugar intake, lack of exercise, and vitamin D deficiency. Obesity and physical inactivity makes your body less sensitive to the glucose-lowering effects of insulin. Diminished sensitivity to insulin leads to higher blood levels of insulin, which in turn can increase your risk of pancreatic cancer.

It's a no-brainer that an all-fruit diet can seriously jeopardize your insulin sensitivity, thereby raising your risk of any number of health problems, including pancreatic problems. It's simply FAR too much fructose for most people. I personally developed diabetes when I tried the "Eat Right for Your Blood Type" diet, which included eating large amounts of fruit for breakfast. So please, be careful of any diet that seems to extreme, and remember the human body NEEDS healthful fats and high quality protein for proper functioning.

Remember to listen to your body over the long term to guide you as to the best food selections. If your energy level deceases, you have a difficult time maintaining your ideal weight or are hungry all the time, there is a good chance that you have yet to find the optimal fuel for your body. As for fruits, use caution if you have any kind of insulin related health issues, as discussed above, and limit your total fructose consumption to 15-25 grams of fructose per day, depending on your health status.

