

## **Sugar: Friend or Foe?**

*By Raelene Tang*

Throughout the years, the rate of obesity, diseases such as diabetes, hypertension and other cardiovascular problems has been rising and it is doing so at a very alarming rate. Why is this so? Should we blame this on fatty foods? Should we blame this on the advanced technology which is making us lazier by the minute? We put the blame on these factors but what we do not know is that the one causing all these problems is just right under our noses.

Recently, there has been a buzz about how sugar is harmful to us, thanks to Robert H. Lustig, a pediatric endocrinologist who graduated from the University of California, San Francisco (UCSF) where he is a professor of Clinical Pediatrics. Lustig is telling the public that the sugar we all have so much of in our every meal, fructose, is in fact, not the empty calories we have come to think they are. In Lustig's talk, *Sugar: The Bitter Truth*, he showed statistical proofs that sugar is indeed the culprit for higher obesity rates in America, and since a lot of countries all over the world, including the Philippines, are greatly 'westernized' and have adapted even America's eating habits, the rates of obesity in children and in adults, in men and in women, all over the world, are sky-rocketing. Lustig called sugar 'poison' and he was trying to convince people that sugar is, indeed, poison. I believe him and it is not because of his ability to sound very convincing, I believe him because everything he said was backed up by cold hard facts.

You might be wondering why sugar is harmful and said to cause obesity when we think it is the fault of dietary fat. Well, research shows that when people were told by the American Heart Association (AHA) in the past to decrease their dietary fat consumption from approximately forty percent to thirty percent because they said that dietary fat equated to cardiovascular problems, the rate of obesity rose. Why did their program backfire? It is because they thought that since cardiovascular problems are caused by low density lipoprotein (LDL), a type of cholesterol which we have been told is bad, and dietary fat is the main source of LDL, then by decreasing dietary fat from our diets, we are decreasing our risk of heart disease. Sounds plausible, right? But that is not the case. There are actually two kinds of LDL, one is buoyant, very light and not harmful, coming from healthy oils, while the other is dense, coming from

animals, which is what we should avoid. But it is too difficult to test a person's LDL separately, making use of Triglycerides and HDL, so they are often thought to be one. A person may have a lot of LDL in his blood while having very low chances of contracting heart disease because the LDL he has is buoyant. This just goes to show that LDL, at least not all of it, causes cardiovascular problems. And by decreasing the dietary fat in our diets, we increase our intake of sugar because we are taught that sugar is better than fat, and so we allow ourselves to consume more of it. But sugar is not good; in fact, it is bad, very, very bad. It is responsible for many health problems that are plaguing nations today because the very food we eat is packed with sugar, and every time we eat, we are putting our health at risk.

Before, it has been laid out to the public that high fructose corn syrup (HFCS) is harmful but what we do not know and what the authorities do not want us to know is that sugar is no better than HFCS. HFCS was introduced to the market in 1969 with hopes that it will solve the problem regarding high food expenses. And it did solve that problem, but it backfired on the health of the people. HFCS is any type of corn syrup that has undergone enzymatic processing to convert some of its glucose into sucrose. Therefore, it is sweeter than sucrose, a type of sugar, and cheaper than any refined sweeteners found in the market. That is why almost all food manufacturers put them into the food we eat even if they pose a lot of health threats.

Peoples' bodies have a hormone called leptin. Leptin is like a messenger. It tells the brain that the person is full to stop him from eating once he has consumed enough already so that he can start burning the food. But with HFCS, the leptins do not reach the brain, in fact, they are not sent; unlike glucose, HFCS can neither stimulate insulin, a carbohydrate regulating hormone, nor leptin, so the brain thinks that the person is hungry when he should have already stopped eating. And thus, leading to insulin resistance and overeating, which if left long enough, will eventually lead to type two diabetes and obesity.

Here is where sugar comes in. When word got around that HFCS was bad for you, we were told by dieticians that sugar is better, that sugar is alright for you because they are more natural. But there are things natural which are harmful to us, like tobacco and alcohol. We know they are harmful to us that's why we regulate our intake of them, but we don't regulate our intake of sugar because we think it is good for us, if not, we think that it is only 'empty calories'. There

are different forms of sugar, simple sugars, monosaccharides, which include glucose, fructose and galactose, and table or granulated sugar, disaccharides, which include sucrose, maltose and lactose. What is usually found in foods in the supermarket is refined sugar. Refined sugar consists of fifty percent glucose and fifty percent fructose. Sugar, as we all know is a form of carbohydrate, and so we get energy from them. For us to get energy from them, these glucose and fructose must be metabolized. Glucose can be metabolized by every cell in the body while fructose is mainly metabolized by the liver. This means, glucose is the energy carbohydrate while fructose is the not needed carbohydrate that gives our liver more work to do, and not just that, since fructose can't be used by other cells in our body, it is converted into fat, and that fat is what's making people obese. The worst part is that people can't stop eating it because almost all the food in the market has it, because fructose, the harmful sugar, unlike glucose, the good sugar, is sweet and food manufacturers include them in the food we eat because they make our otherwise tasteless food, which are mostly processed nowadays, palatable.

Now, that isn't so bad right? Just fat gain from fructose, no big deal, why call it poison? Well, that's because people are being deceived by the government, by the food manufacturers and by the marketing industry. Think of ethanol and take note that ethanol is a carbohydrate. We all know that ethanol, found in liquor is harmful; therefore we consume liquor in moderation. Ethanol is also an example of acute toxin because it has adverse effects that result either from single exposure or multiple exposures. The government knows this and so it discourages alcohol consumption, thus the high value for them. The same thing goes for tobacco. It is also an acute toxin and it is widely known that it is harmful because the authorities allow us to know so. But what about sugar? Do you know, ethanol is extracted from sugar? With that said, let me tell you next that sugar has the same harmful effects towards a person's health as much as ethanol. It is hard to believe because sugar is not an acute toxin and its effects only surface after multiple exposure but yes, sugar is toxin, a chronic toxin. It is alcohol without the 'kick' the brain and so we consume much more of it. And the reason why it is not being admitted by the authorities that fructose is bad is because if they do, they will be admitting that all the food being marketed and making them rich is 'the big problem'.

Other problems caused by fructose include hypertension and gout. Since fructose can't be metabolized by other cells of the body and even if thirty percent of it is turned into fat, there are still some left for disposal, thus elevating levels of uric acid, leading to gout and hypertension.

Now let us look at the food we eat and let us check their labels. How many of them do not have sugar? Probably none. Let us look around us, how many people are overweight? How many people are obese? All of them are victims, you are a victim, I am a victim. We try to live healthy while we don't know the truth and that is the reason we fail, in our health and in our lives. But can we do something about it? Of course. There are foods which we should eat which we aren't eating very much of, like fruits, vegetables, legumes, basically anything off the ground that is actually good for us. Why these foods aren't being sold everywhere instead of the processed garbage we find in packaging is because these foods are harder to cook, they rot faster and they can't be frozen and shipped off or stored like their processed counterparts which, if not for the harmful additives, HFCS and sugars, actually aren't very palatable. Natural foods like fruits and vegetables are packed with fiber and nutrients and even if fruits have fructose, the fructose they have is not absorbed fully and turned into fat by our bodies with the aid of fiber, which is abundant in both fruits and vegetables. Fiber also allows food to move faster through our body, stimulating leptin and suppressing insulin so that we become full more quickly and we can start burning fat. Other than eating right, we should also keep in mind that it is very important to exercise, not because it burns calories, but because it lowers insulin levels, reducing stress, thus weakening our appetites and detoxifying the sugars in our bodies before they even get the chance to turn into fat. With these we can kiss the fad diets in the market, which are not really low fat but are actually high fat, goodbye.

Are the above explanations conclusive enough, plausible enough, that more people will fight against fructose? I hope they are because people deserve to be in 'the know', because, well, they simply deserve it. No one deserves to be fed all the rubbish being marketed worldwide now unknowingly. People should know what they are eating because like what Robert Lustig said, "You are not what you eat. You are what you do with what you eat."

Resources:

<http://www.youtube.com/watch?v=dBnniua6-oM>

by Robert Lustig

University of California, San Francisco's Osher Center for Integrative Medicine

Mini Medical School for Public

Current Controversies in Nutrition:

Letting Science Be the Guide

SUGAR: The Butter Truth(May 26, 2009)

[http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?\\_r=1&pagewanted=all](http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?_r=1&pagewanted=all)

Is Sugar Toxic? (April 13, 2011)

By Gary Taubes