SPIRIT of HEALTH

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Partnering with God in Health and Wellness Series

Class Seven

Sugar and Diabetes

I. THE PANCREAS – FUNCTION AND PURPOSE

A. The pancreas is about the size of a banana and serves multiple functions. One of the main functions of the pancreas is to secrete digestive juices and enzymes. This is critical for the breakdown of our food and absorption of nutrients.

B. The pancreas also produces insulin when necessary. Insulin is a hormone secreted for purposes such as amino acid transport into the cells, magnesium storage, cell proliferation and replication, stimulating growth, DNA synthesis and to help the body uptake glucose into the cells when sugar is elevated. Insulin is also an anabolic hormone. Body builders are injecting themselves with insulin because it builds muscle and stores protein. If you have more sugar than you need for immediate use, it will accumulate in your blood. Therefore, more insulin will be released to take that sugar and store it. Your body will convert glucose into glycogen to store in the liver. All the glycogen stored in your liver and muscle wouldn't last you through one active day. Once you fill up your glycogen stores that sugar is stored as saturated fat.

C. The pancreas also secretes enzymes to protect us from disease. Enzyme research and study started in the early 1900's. Dr. John Beard took the pancreatic juices from animals and injected them into cancer patients, often directly into the tumor itself. He saw rapid shrinking of tumor masses and over half of them completely disappeared. He was called a charlatan a received numerous threats at his practice in England. In 1907 he wrote and published "*The enzyme treatment of cancer and its scientific basis*."

D. In the 1930's Dr. Max Wolf found a substance in the blood that was excellent at attacking cancer cells. However, in cancer patients, he found this nutrient was missing in their blood. He discovered they were enzymes, and went on to discover various forms of enzymes produced by the body. Dr. Wolf also learned that enzyme production greatly diminishes after the age of 27. Giving his patient fresh sheep's pancreas would often reverse their diseases.

E. The pancreas serves a critical role in our health. Unfortunately, it is often overlooked and under-appreciated in medicine. The pancreas often gets inflamed (pancreatitis) and pancreatic cancer is also quite prevalent in our society. Pancreatitis is often from infections, lymph congestion, gallstones and/or alcohol consumption.

F. Type I diabetes is an auto-immune condition in which the body seemingly attacks the insulin-secreting cells of the pancreas. Insulin is required in these cases. Type II diabetes (adult onset) is from poor diet which causes insulin resistance. Insulin will not necessarily be required in these cases, but change in diet is key. In both Type I and Type II, diet is a critical factor.

II. DIABETES

A. Diabetes is a potentially deadly metabolic syndrome. Rates of diabetes have increased dramatically just within the last 100 years, and is **only prevalent in industrialized nations**. We have seen cases of diabetes increase over 700% just within the last 50 years.

- According to the Center for Disease Control, there were 1.9 million new diagnoses in 2010

- According to NDIC (National Diabetes Information Clearinghouse) there are **25.8 million diagnosed diabetics in the United States. There are likely millions more undiagnosed and/or pre-diabetic.**

- 10.9 million, or 25%, of all persons aged 65+ have been diagnosed diabetic

- There are now over 215,000 diagnosed cases **under the age of 20**

- Diabetes is the #1 cause of kidney failure, limb amputations and blindness. It is also a key indicator for heart disease and stroke.

- In 2007, Diabetes cost Americans $174 billion dollars. According to the ADA (American Diabetes Association), **the cost per diabetic is $11,744 per year.**

B. Symptoms of diabetes include fatigue, strokes, heart failure due to neuropathy, obesity, atherosclerosis, elevated blood pressure, elevated cholesterol, elevated triglycerides, impotence, retinopathy, renal failure, liver failure, polycystic ovary syndrome, elevated blood sugar, systemic candida, impaired carbohydrate metabolism, poor wound healing, impaired fat metabolism and peripheral neuropathy.

C. So far, the conventional approach to diabetes has included oral pharmaceutical drugs and insulin injections. **Although insulin injections have been critical and life-saving for Type I diabetes, it remains a questionable therapy for Type II diabetes.** Type II diabetes is also known as non-insulin dependent diabetes. There has yet to be a pharmaceutical strategy that involves dietary changes and/or a targeted approach to normalize the cellular uptake of glucose by the cells.

Diabetes drugs and insulin help to normalize blood sugar levels,
but do nothing to stop the disease process

D. We need an approach where we can understand the mechanisms behind the inability of the cells to properly uptake glucose and why cells become insulin resistant. Diabetes is much more than merely a blood sugar disorder. Balancing blood sugars using pharmaceuticals alone will never bring about the restoration of health.

III. THE ROOT CAUSE OF DIABETES

"The doctor of the future will no longer treat the human frame with drugs,
but rather will cure and prevent disease with nutrition." – Thomas Edison

A. Diabetes is the inability of the body to metabolize sugar and carbohydrates properly, either by not having enough insulin, or become resistant to insulin.

* Beta cells (up to 80% of the cells in the islets of the pancreas) are responsible to store and release insulin, starting the process of glycolysis (or the conversion of sugar into ATP or energy). Minerals, such as potassium and other electrolytes are also important for maintaining healthy balance inside and outside of the cells related to the amount of sugar allowed into the cells.

* Excessive sugar and carbohydrate consumption overwhelms the beta cells and the pancreas, leading to imbalances in mineral levels. This leaves the person with excessively high blood sugar levels. The result starts with weight gain, intolerance to sugars and carbohydrates (fatigue with sugar/carbohydrate consumption, hypoglycemia and low blood sugars) and eventually leads to diabetes.

* In the case of Type I diabetes, no insulin is being produced at all, so insulin shots are critical and necessary. Cow's milk had been strongly tied to Type I diabetes in numerous studies. Infections are often implicated in Type I diabetes where an infectious organism disables pancreatic function. In Type II diabetes, insulin is being produced, but the cells are becoming resistant.

B. As mentioned in prior classes, God created a body that was designed to heal and protect itself at all costs. Insulin resistance is no different. As blood sugars remain chronically elevated, cells build a shield or a wall to slow down the bombardment of excessive sugar into its cells. Blood sugar levels therefore increase, and the pancreas continues to secrete more and more insulin to combat the problem.

C. Now we have a crisis. There is no sugar in the cells, and the cells need sugar for energy and for survival. The body perceives this as low blood sugar, and because you have low energy levels, it triggers your brain to tell you to eat. You then get trapped in a cycle of eating, yet never feeling satisfied. **You have sugar in your blood, but not your cells! Therefore, you constantly crave sugar for energy, yet never get satisfied as sugar isn't being metabolized into the cells for proper energy production. Hypolglycemia comes from high sugar consumption and is an early warning sign of a problem. God is always talking to us through our bodies.**

D. Excess sugars in the bloodstream must now be eliminated at any cost. The only mechanisms the body has to eliminate sugar is insulin, exercise, sweating, or through the urine. Before blood tests, patients would urinate on an ant hill to see if ants would be attracted to sugar in the urine. When excess sugar is not used or eliminated, the body is forced to store it as fat. High insulin levels tell the body to store fat and retain fluid (edema). The combination of high insulin levels and high sugar levels in the body cause the rapid degeneration of the nerves, muscles, tissues and cardiovascular system.

E. Diabetes (Type II) is a dietary problem, due to an overwhelmed system and pancreas. Genetics play a minimal role. Genetics makes you a helpless victim, which you are not. Genetics has been found to play a role in approximately 1-2% of cases of disease in general. **If diabetes runs in your family, it is most likely from eating the same foods generation to generation, namely the Standard American Diet (SAD).**

IV. UNDERSTANDING THE ROLE OF FOOD IN PANCREAS HEALTH AND DIABETES

A. Diabetes comes from the overconsumption of two foods, carbohydrates and bad fats. It is critical we distinguish what is considered a carbohydrate (simple vs complex or fiber vs non-fiber) and what is considered a quality vs poor quality fat. This is where we have confusion and this is why many people are not able to overcome their health issues.

B. The body's most stable fuel sources come from proteins and fats. The body will burn these sustainably over time, or convert them into sugars when needed for extra fuel. When simple sugars are consumed, a yo-yo, or unstable effect then occurs. ***If glucose and insulin are always present in the bloodstream, your body will not burn fat!*** Processed sugar is a turbo charger, not a sustainable energy source. Fiber rich carbohydrates can be used for more balanced and sustainable fuels.

C. In an active society (traditional Japanese culture for example), starches such as rice have never been a problem in promoting diabetes. However, in an inactive society (United States for example), excessive carbohydrate consumption causes high blood sugars, high insulin levels and fat storage over time.

D. Processed sugar has been destructive to the human body on many levels, including diabetes. (see separate handout). The combination of highly concentrated sugar and fats with an inactive lifestyle is the recipe for disease over time. Excessive sugar consumption forces the pancreas to produce enzymes and insulin non-stop. Eventually, the pancreas wears out and the cells become resistant to the constant bombardment of poison.

E. Poor quality fats also cause insulin resistance. High triglycerides in the bloodstream inhibit the ability of insulin to dispose of glucose in the peripheral tissues. Combine processed sugar consumption with fatty foods and you have the equation for diabetes. This would include foods like french fries, donuts and all other fried starches. This is a double whammy when it comes to insulin resistance and fat storage.

F. Understanding the rule of satiety (feeling full)

- Satiety comes from high water content, high fiber content, high nutrient density (NOT calorie density)

- Your stomach is full with a 500 calorie plant based meal. Your stomach does not feel full when eating calorie dense foods, sugar or poor quality fats

- When you eat artificial food, you are forced to overeat to feel satisfied. This gives us a hypernormal amount of pleasure as it hijacks our euphoric pleasure centers. This is the same way drugs work (sugar is a drug).

V. HEALING THE PANCREAS AND DIABETES

"Let your food be your medicine, and your medicine be your food." - Hippocrates

A. Good news! Diabetes can be healed. It is being healed all around the country by medical doctors, not just alternative health practitioners as commonly believed. Watch Simply Raw for just one example of how Dr. Gabriel Cousins has been reversing diabetes for years following his 30 day program. You CAN restore your health, often very quickly by understanding some basic principles.

B. Understanding carbohydrates. Anything white and processed is a starchy carbohydrate (i.e. sugar). This includes processed cane sugar, brown sugar and high fructose corn syrup, corn syrup, cane syrup, sucrose, maltose, dextrose, fructose, glucose, carbitol, lactose, evaporated cane juice, concentrated fruit juice, etc. We must also understand that white rice, white russet potatoes and white flour found in bread, pasta, pizza, crackers and everything else processed causes the same problems.

C. Understanding fiber. Without fiber, there is no controlled release of sugars into the bloodstream. God made fruits, vegetables and whole grains a certain way for a reason. Eat them in the whole form in which He created them, no fruit juices off the shelf. You can juice your own, but stick mainly to vegetable juices. If you are diabetic, avoid fruit juices altogether. If you are not diabetic, it is ok to have some fresh fruit juices as part of an active, healthy lifestyle. When eating "high fiber" cereal, remember this is mostly clever marketing and it is still usually processed, containing unbleached flour and sugar. High fiber, WHOLE, foods must be consumed daily and/or fiber supplementation is recommended.

D. Understanding fats. Healthy fats will stabilize blood sugars and provide balanced fuel during the day.

God Created	**Man Processes, Refines and Alters**
Flax	Refined fats and oils (heavily processed and heated)
Olives	Trans Fats
Coconut	Dairy products with pasteurization, homogenization, growth hormones,
All raw nuts	antibiotics and factory farms
All raw seeds	Vegetable Oils (canola, corn, soy, etc.)
Fish	Hydrogenated and Partially Hydrogenated Oils (one molecule from plastic)
Hemp	Margarine
Raw Dairy	I Can't Believe It's Not Butter
Avocado	Deep, fat, fried foods

E. Understanding liquids. Water and herbal teas should be the only liquids we consume. Coffee can be consumed in moderation (1 cup daily maximum and NOT Starbucks). Any other liquids or anything beyond these recommendations may be problematic. Diabetics are told to consume diet soda, which is criminal. Aspartame will destroy the nervous system of an already compromised diabetic. For information on studies, side effects and toxicology of aspartame, read the 1038 medical article by Dr. Roberts called *"Aspartame Disease; an Ignored Epidemic."*

F. What is the easiest solution to diabetes? A whole food, plant based diet, with a few lean meats if desired. For the sake of simplicity, this is the answer. This means no processed foods (includes packaged, boxed, canned), fried foods, bad fats, soda, energy drinks, coffee (dehydrating), processed sugar, baked goods, cookies, candy, ice cream, bread, white flour, cake, pasta, pizza, soy, pretzels, crackers, limited (meat consumption as mentioned above, no dairy (unless very minimal amounts of raw dairy). This allows your body, your pancreas and your cells to get a much needed vacation. A vacation can restore life force. Fasting helps this.

G. This means YES to nuts and seeds (soaked and/or sprouted best), beans and legumes, all the ancient seed grains (millet, amaranth, buckwheat, quinoa), oats (only gluten containing grain I recommend as long as you aren't sensitive), fruits and veggies, (if diabetic, avoid high sugar fruits like dates, figs, bananas, grapes, etc. for at least 3 months until body is well), red or fingerling potatoes, wild rice, brown rice, sweet potatoes, healthy fats (see above), herbs, spices, water and herbal teas

H. Additional recommendations:

- Keep breakfast light or skip it. Lunch should be your largest meal. Keep dinner light. The #1 way to sabotage weight loss and health in general is to eat late at night, especially heavy foods and starches. The goal should be three meals daily for proper metabolism, not 6-7 meals. This is a concept needed because of hypoglycemia and poor sugar metabolism from excessive eating. This is a symptom of a deeper problem.

- Exercise is critical. Burn it, or store it. Walking is fine. It does not need to be complicated.

- Enzymes are the first line of defense for the pancreas and food entering the body. Pancreatic enzymes as well as digestive enzymes are critically important to help break down and metabolize food properly. Systemic enzymes can reduce inflammation and heal/repair fibrosis within the cardiovascular walls.

- Essential fatty acids give you long-term daily sustainable fuel. This includes olive, flax oil, fish oil, avocado, etc. as mentioned in list above.

- Trace minerals are crucial such as magnesium, potassium, sodium, calcium (electrolytes) as well as zinc, chromium and vanadium. Magnesium opens up all detoxification pathways and diabetics are chronically deficient in magnesium. Insulin holds magnesium, but when insulin resistant, the magnesium is lost through the urine. Zinc is a critical mineral for pancreas function and to resist infections. Chromium opens up insulin receptors so sugar can be metabolized properly in the cells. Vanadium actually mimics the action of insulin.

- Vitamin A & D are important to protect the eyes and kidneys. Antioxidants in general, like Astaxanthin, or a quality cod liver oil will work.

How to restore Beta cell function in the body...

(All of these can be found on documented and official PUBMED studies on the internet)

* Stop stressing out digestion and pancreas b changing your diet.

* Black Seed Oil (Nigella Sativa) has been shown to be the most powerful plant to restore Beta Cell function of the pancreas.

* Gymnema Sylvestre (Asclepias geminata) is known as the sugar destroyer, and helps rebuild the pancreas. It also helps with sugar cravings,

* Turmeric or curcumin. All Indian spices such as cinnamon, cardamom, ginger, cumin, cayenne, etc. are all good for healing digestion, and healing the pancreas

* Aloe Vera with Nopal Cactus

* Stevia is a great sugar substitute, naturally high in chromium, but only in its raw, green, original form

* Vitamin D or SUNSHINE

GOOD FOODS LIST

Every day we hear new reports of the harmful effects of certain foods. Many people ask "What's left?"

Here is a basic guide to healthy diet.

PROTEINS

- **MEATS:** 100% grass fed, organic beef. Wild deer, elk, bison or other game.
- Chemical, antibiotic, hormone free, free range, chicken, turkey, Cornish hen
- No pork, lunch meat or cured meats with nitrites or MSG
- **SEAFOOD**: Any fish or shellfish, fresh or frozen, no farm raised
- **OTHER PROTEINS:** Eggs (farm fresh or organic), Beans, Legumes, Greens, Hemp, Chia Seeds, Spirulina, Brown Rice
- **NUTS & SEEDS:** Natural nuts and seeds, almonds, cashews, walnuts, pumpkin seeds, sunflower seeds, etc., raw or dry roasted
- Natural nut butters - avoid commercial brands (containing hydrogenated oils and sugar), best is almond butter.

*Note: Make sure you get **adequate protein** each day. Recommended approx. 20g per meal, 60-100g daily depending on size.

DAIRY: (PROTEIN AND FAT)

- Replace cow's milk with rice, coconut, hemp or almond milk
- Raw goats milk
- Butter (NO MARGARINE!!)
- Cheese (raw and/or organic), Cottage cheese
- Yogurt without added sugar

FATS

- Butter (NO MARGARINE, IT'S HYDROGENATED!)
- Fresh Flaxseed oil, lowers cholesterol
- Olive oil, Extra Virgin, cold pressed
- Coconut Oil
- Avocado
- Fish oils
- Nuts and Seeds

VEGETABLES

- Raw or steamed vegetables, preferably organic and low carbohydrate veggies, 6-10 servings per day
- All homemade soups or frozen soups form the health food store
- MINIMIZE starchy veggies (potatoes, yams, quash) more then 1-2 times per week, or less if you are on a more stringent carbohydrate restriction
- **SALADS:** Raw vegetable salads
- Salad dressing - use any cold pressed oil with Bragg's apple cider vinegar or lemon juice, try homemade or Haines brand, **cold pressed**, mayonnaise), Italian dressings made with fresh (preferably organic) ingredients. (Also see CONDIMENTS)

CONDIMENTS

- Natural herbs and spices
- Spike, Celtic Sea Salt. Himalayan Pink Salt
- Apple cider vinegar, lemon juice, or rice vinegar Mustard, low-sugar ketchup or health food store brand, low-sugar steak sauce

GRAINS (Limited quantities ONLY):

- Organic, sprouted grain bread: "Ezekiel"
- Whole grains - brown rice, wild rice, quinoa, millet, amaranth
- Whole grain cereals, pastas - i.e. oatmeal, quinoa

* Note: **Whole** grain must be listed as the FIRST ingredient, avoid breads containing **hydrogenated oils:** avoid eating more than 1 serving per day

FRUITS:

- Fresh organically grown fruits
- Fresh fruit or vegetable juices, diluted 50% with water
- Note: Only 1-2 servings per day or LESS if advised by your consultant

SWEETENERS: *Not advised at all*. But if you must, limit to limited amounts of the following, in consultation with your consultant

- Stevia (ok to use often)
- Raw Honey
- Pure Maple Syrup
- Fresh Fruit

BEVERAGES

- Organic, herb teas
- Roasted chicory or dandelion, replacement for coffee
- Lemon water without or with stevia
- Avoid tap water, drink filtered water with minerals added

DESSERTS - OCCASIONALLY

- Fresh fruit with yogurt and raw honey
- Brown rice pudding made with raw honey or powdered stevia and rice milk or almond milk
- Sorbet made from fresh fruit, no added sugar/fructose

SNACKS/TREATS FOR KIDS (also see DESSERTS)

- Popsicle's, for children (use natural fruit juices or black cherry concentrate)
- Fresh fruit
- Fresh cut vegetables like carrot sticks/celery

NOTE: IF YOU ARE ON A CARBOHYDRATE RESTRICTED DIET, YOU SHOULD APPROPRIATELY RESTRICT THE AMOUNTS OF FRUITS, GRAINS AND OTHER HIGH CARBOHYDRATE FOODS. KEEPING A WEEKLY FOOD INTAKE DIARY AND REVIEWING THIS WITH YOUR CLINICAL NUTRITIONIST REGULARLY IS THE KEY TO LEARNING HOW TO MANAGE YOUR CARBOHYDRATE CONSUMPTION.

PERSONS ON ALLERGY RESTRICTED DIETS SHOULD ALSO MAKE THE APPROPRIATE MODIFICATIONS TO THE ABOVE RECOMMENDED FOODS.

DIETARY CONSULTATIONS ARE AVAILABLE WITH ONE OF OUR HIGHLY TRAINED STAFF MEMBERS FOR FURTHER EDUCATION AND RECOMMENDATIONS.

Counting the Many Ways Sugar Harms Your Health
by Nancy Appleton, Ph.D. – Author of Lick The Sugar Habit

In addition to throwing off the body's homeostasis, excess sugar may result in a number of other significant consequences. The following is a listing of some of sugar's metabolic consequences from a variety of medical journals and other scientific publications.

1. Sugar can suppress your immune system & impair your defenses against infectious disease.[1, 2]
2. Sugar upsets the mineral relationships in your body: causes chromium and copper deficiencies and interferes with absorption of calcium and magnesium.[3, 4, 5, 6]
3. Sugar can cause can cause a rapid rise of adrenaline, hyperactivity, anxiety, difficulty concentrating, and crankiness in children.[7, 8]
4. Sugar can produce a significant rise in total cholesterol, triglycerides and bad cholesterol and a decrease in good cholesterol.[9, 10, 11, 12]
5. Sugar causes a loss of tissue elasticity and function.[13]
6. Sugar feeds cancer cells and has been connected with the development of cancer of the breast, ovaries, prostate, rectum, pancreas, biliary tract, lung, gallbladder and stomach.[14 - 20]
7. Sugar can increase fasting levels of glucose and can cause reactive hypoglycemia.[21, 22]
8. Sugar can weaken eyesight.[23]
9. Sugar can cause many problems with the gastrointestinal tract including: an acidic digestive tract, indigestion, malabsorption in patients with functional bowel disease, increased risk of Crohn's disease, and ulcerative colitis.[24, 25, 26, 27, 28]
10. Sugar can cause premature aging.[29]
11. Sugar can lead to alcoholism.[30]
12. Sugar can cause your saliva to become acidic, tooth decay, and periodontal disease.[31, 32, 33]
13. Sugar contributes to obesity.[34]
14. Sugar can cause autoimmune diseases such as: arthritis, asthma, multiple sclerosis.[35, 36, 37]
15. Sugar greatly assists the uncontrolled growth of Candida Albicans (yeast infections).[38]
16. Sugar can cause gallstones.[39]
17. Sugar can cause appendicitis.[40]
18. Sugar can cause hemorrhoids.[41]
19. Sugar can cause varicose veins.[42]
20. Sugar can elevate glucose and insulin responses in oral contraceptive users.[43]
21. Sugar can contribute to osteoporosis.[44]
22. Sugar can cause a decrease in your insulin sensitivity thereby causing an abnormally high insulin levels and eventually diabetes.[45, 46, 47]
23. Sugar can lower your Vitamin E levels.[48]
24. Sugar can increase your systolic blood pressure.[49]
25. Sugar can cause drowsiness and decreased activity in children.[50]
26. High sugar intake increases advanced glycation end products (AGEs)(Sugar molecules attaching to and thereby damaging proteins in the body).[51]
27. Sugar can interfere with your absorption of protein.[52]
28. Sugar causes food allergies.[53]
29. Sugar can cause toxemia during pregnancy.[54]
30. Sugar can contribute to eczema in children.[55]
31. Sugar can cause atherosclerosis and cardiovascular disease.[56, 57]
32. Sugar can impair the structure of your DNA.[58]
33. Sugar can change the structure of protein and cause a permanent alteration of the way the proteins act in your body.[59, 60]
34. Sugar can make your skin age by changing the structure of collagen.[61]
35. Sugar can cause cataracts and nearsightedness.[62, 63]
36. Sugar can cause emphysema.[64]

37. High sugar intake can impair the physiological homeostasis of many systems in your body.[65]
38. Sugar lowers the ability of enzymes to function.[66]
39. Sugar intake is higher in people with Parkinson's disease.[67]
40. Sugar can increase the size of your liver by making your liver cells divide and it can increase the amount of liver fat.[68, 69]
41. Sugar can increase kidney size and produce pathological changes in the kidney such as the formation of kidney stones.[70, 71]
42. Sugar can damage your pancreas.[72]
43. Sugar can increase your body's fluid retention.[73]
44. Sugar is enemy #1 of your bowel movement.[74]
45. Sugar can compromise the lining of your capillaries.[75]
46. Sugar can make your tendons more brittle.[76]
47. Sugar can cause headaches, including migraines.[77]
48. Sugar can reduce the learning capacity, adversely affect school children's grades and cause learning disorders.[78, 79]
49. Sugar can cause an increase in delta, alpha, and theta brain waves which can alter your mind's ability to think clearly.[80]
50. Sugar can cause depression.[81]
51. Sugar can increase your risk of gout.[82]
52. Sugar can increase your risk of Alzheimer's disease.[83]
53. Sugar can cause hormonal imbalances such as: increasing estrogen in men, exacerbating PMS, and decreasing growth hormone.[84, 85, 86, 87]
54. Sugar can lead to dizziness.[88]
55. Diets high in sugar will increase free radicals and oxidative stress.[89]
56. High sucrose diets of subjects with peripheral vascular disease significantly increases platelet adhesion.[90]
57. High sugar consumption of pregnant adolescents can lead to substantial decrease in gestation duration and is associated with a twofold increased risk for delivering a small-for-gestational-age (SGA) infant.[91, 92]
58. Sugar is an addictive substance.[93]
59. Sugar can be intoxicating, similar to alcohol.[94]
60. Sugar given to premature babies can affect the amount of carbon dioxide they produce.[95]
61. Decrease in sugar intake can increase emotional stability.[96]
62. Your body changes sugar into 2 to 5 times more fat in the bloodstream than it does starch.[97]
63. The rapid absorption of sugar promotes excessive food intake in obese subjects.[98]
64. Sugar can worsen the symptoms of children with attention deficit hyperactivity disorder.[99]
65. Sugar adversely affects urinary electrolyte composition.[100]
66. Sugar can slow down the ability of your adrenal glands to function.[101]
67. Sugar has the potential of inducing abnormal metabolic processes in a normal healthy individual and to promote chronic degenerative diseases.[102]
68. I.V.s (intravenous feedings) of sugar water can cut off oxygen to your brain.[103]
69. Sugar increases your risk of polio.[104]
70. High sugar intake can cause epileptic seizures.[105]
71. Sugar causes high blood pressure in obese people.[106]
72. In intensive care units: Limiting sugar saves lives.[107]
73. Sugar may induce cell death.[108]
74. In juvenile rehabilitation camps, when children were put on a low sugar diet, there was a 44 percent drop in antisocial behavior.[109]
75. Sugar dehydrates newborns.[110]
76. Sugar can cause gum disease.[111]