

Rice and Beans to Brown Rice and Peas

Diabetes is a major health challenge among certain racial and ethnic groups. Vulnerable and high-risk populations consist mostly of Hispanics/Latinos. Do the beliefs and customs of the Hispanic/Latinos lead Type 1 Diabetics within these cultures to complications? Is there "Culturally Conditioned Cuisine" detrimental to a Type 1 Diabetics Survival? What do Hispanics need to move from a rice and beans culture to a brown rice and pea's culture?" Let's explore this.

Diabetic Experience:

It began one day as I was walking home from school with Marisol, my childhood best friend. Sweat began to drip down my face. She's was taking short strides; I wanted her to walk faster. I couldn't take the pain; I needed to use the bathroom. I knew I just went before I left school, but this feeling was so strong. I felt as if I was going to pee on myself. I looked at Mari and told her I had to go, I'll see her later. I started sprinting home. I was only two blocks away. I grabbed my keys the closer I got to my building the faster I ran. I got to the door and opened it. Only one more, now I really had to go; I was so close. I put the key into the lock. Then I felt a warm drizzle on the side of my leg. I looked down and started to cry. Why is this happening to me, I thought. Something has to be wrong.

I waited for my mom to get home and I told her what happened. She said "tu tienes La Azucar". I asked what is that, Ma? What's "The Sugar"? I don't understand. I spoke to her

during dinner and she told me my grandmother has a sickness called Diabetes. She drinks pills for it. She's not able to eat sweets or anything with sugar. I went to my room, got on my knees and prayed to God please don't let me have that. No Hershey Kisses, No Lemonheads, No candy. Noooooo! Please God do not do this to me. I cried myself to sleep only knowing it was all going to be true.

What is Type 1 Diabetes?



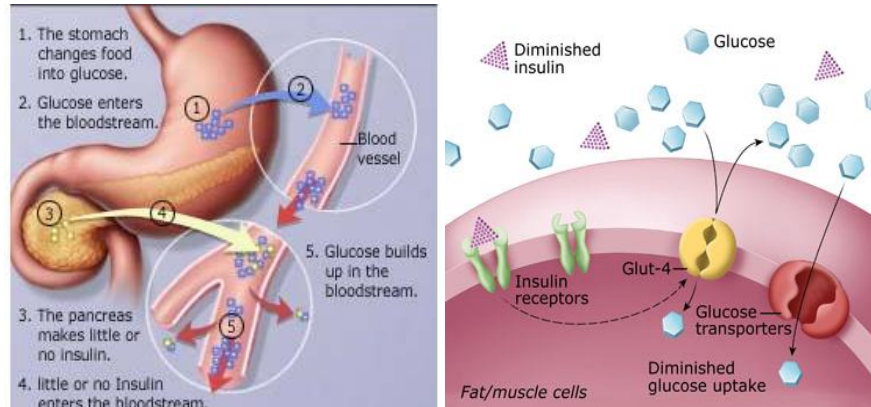
Type 1 is a form of Diabetes that is most common in young people. Our bodies need fuel to function. Glucose, another name for sugar, is the fuel that our cells use to produce energy. In order to process the sugar we eat in foods, our bodies produce insulin. Insulin is a hormone made by beta cells, clusters of cells in the pancreas. In type 1 diabetes, the beta cells in the pancreas are unable to make insulin because of autoimmune disease, meaning the body's immune system makes auto antibodies that attack and destroy the pancreatic beta cells. So, regular insulin supply is needed from an outside source to help regulate blood sugar levels. (*american diabetes association, 1998*) Type 1 Diabetes is a chronic disease. Once you have it, you will have it forever.

Some of the most common signs and symptoms are excessive thirst, frequent urination, fatigue, and increased appetite. Frequent urination and excessive thirst can be accounted to the fact that people with Diabetes often have kidneys that work double time in response to a high blood sugar level. Since you lose more fluids in urinating frequently and in large amounts, you crave for more liquid to maintain an ideal water level in the body. (*Wikipedia contributors*).

Diabetes mellitus type 1, 2009) They also experience fatigue and the feeling of tiredness even when they do nothing at all. Nowadays it is a lot easier to manage diabetes than it was then. In the past the only way you could have managed Diabetes was through starvation. There are a lot more medical treatments available to make it possible for diabetics to have a better quality of life. Insulin is the main medicine used to control the disease.

Understanding Insulin:

The hormone insulin is secreted by the pancreas in small amounts. When you eat a meal, food stimulates an increase in the amounts of insulin released from the pancreas. The amount that is released is proportional to the amount that is required by the size of the meal. Insulin's main role in the body is to help move certain nutrients especially glucose into the cells of the body's tissues. Cells use sugars and other nutrients from meals as a source of energy to run a variety of important processes for the body, when glucose is moved into cells, the amount of sugar in the blood decreases. Normally that signals the beta cells in the pancreas to stop secreting insulin so that low blood sugar levels (hypoglycemia) do not develop. However, the destruction of the beta cells that occurs with type 1 diabetes throws the entire process into disarray. In people with type 1 diabetes, glucose is not moved into the cells because insulin is not available. When glucose builds up in the blood, instead of going into cells, the body's cells starve for nutrients and other systems in the body must provide energy for many important bodily (Furdell, 2009) functions. As a result, high blood glucose develops and can cause dehydration, weight loss, and diabetic ketoacidosis (DKA) which is caused by the body's need to break down fats for energy, instead of using the sugar. Diabetes must be controlled to prevent these complications.



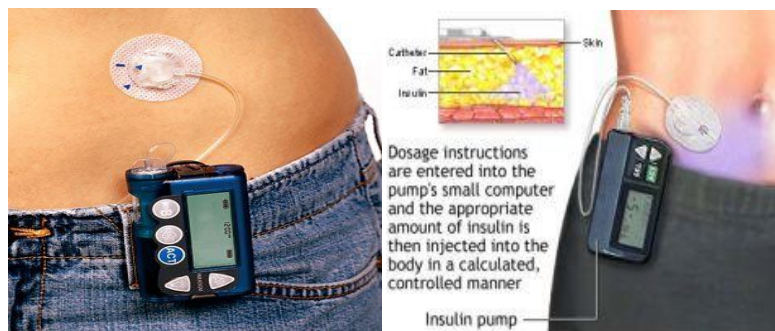
How to Control Diabetes:

To get tight control, Diabetics must pay more attention to diet and exercise. It is important to make healthy food choices and choose a diet that emphasizes vegetables, fruits and whole grains and to be consistent, because your body responds to excess calories and fat by creating an undesirable rise in blood sugar. Regular exercise can help a Diabetic's body respond to insulin and is known to be effective in managing blood glucose.

Insulin is also a big factor in controlling diabetes; when taking insulin, Diabetics must change how much they use to fit their schedules. In intensive therapy, one provides themselves with a low level of insulin at all times and takes extra insulin when they eat. This mimics the release of insulin from the normal pancreas. There are two ways to get a more natural level of insulin: multiple daily injection therapy and an insulin pump. (diacare, 2004) Both are good methods. It all depends on which best fits your lifestyle.

At twenty-seven years old. I decided it was time to have a child. I planned my pregnancy six months in advance. I had to make sure my blood sugars were at 80-100mg/dl

everyday for six months before I conceived. I sat with my Endocrinologist and she introduced me to the Insulin pump. She told me this would be the best way to control my blood sugar levels. In multiple daily injection therapy, you take three or more insulin shots per day. Usually, you take a shot of short-acting or Regular insulin before each meal and a shot of long-acting insulin at bedtime. With an insulin pump, you wear a tiny machine that releases insulin into your body through a plastic tube. It gives you a constant small dose of Regular insulin. The pump is a more convenient and discreet way of taking insulin.



With either method, one must test their blood glucose levels several times a day. As a Type 1 Diabetic I was told I needed to use a blood sugar monitoring device called a glucometer at least 3-4 times a day. That was something I struggled often with. The needle used to test blood is tiny about 2 inches long. It wasn't the size of the needle that was the problem, it was the amount of times I needed to use it. After the first week of using the glucometer my finger tips were swollen. So swollen I had to start using my toes to test my blood. As time passed my body became accustomed to the constant pricking, and there was a lot less swelling.



It is very important to test before each shot or extra dose of insulin to know how many units to take and how long before eating to take it. Also, it is suggested to test 2 hours after eating to make sure enough insulin was taken. The balance of exercise, diet, insulin and continuous blood testing is a sure way to keep a Type 1 diabetic on the right track to a healthy life and also the best way to prevent further complications that are connected to diabetes.

Complications linked to Type 1 Diabetes:

Diabetes is associated with an increased risk for a number of serious, sometimes life-threatening complications and certain ethnic groups experience an even greater threat. While insulin allows a person with type 1 diabetes to stay alive, it does not cure the disease, nor does it prevent the development of these complications. High blood sugar levels eventually damage blood vessels, nerves, and organ systems in the body. The potential complications of type 1 diabetes are:

High Blood Pressure

About 73% of adults with diabetes have blood pressure greater than or equal to 130/80 millimeters of mercury (mm Hg) or use prescription medications for hypertension.

Blindness

- Diabetic retinopathy causes 12,000 to 24,000 new cases of blindness each year making diabetes the leading cause of new cases of blindness in adults 20-74 years of age.
- In people with type 1 diabetes, therapy that keeps blood sugar levels as close to normal as possible reduces damage to the eyes by 76% (*New England Journal of Medicine*, September 30, 1993). Experts believe that these results can also be applied to those with type 2 diabetes.

Kidney Disease

- Diabetes is the leading cause of kidney failure, accounting for 44% of new cases in 2005.
- In 2005, 46,739 people with diabetes began treatment for end-stage renal disease (ESRD).
- In 2002, a total of 178,689 people with ESRD due to diabetes were living on chronic dialysis or with a kidney transplant.
- In people with type 1 diabetes, therapy that keeps blood sugar levels as close to normal as possible reduces damage to the kidneys by 35% to 56% (*New England Journal of Medicine*, September 30, 1993). Experts believe that these results can also be applied to those with type 2 diabetes.

Nervous system disease

- About 60% to 70% of people with diabetes have mild to severe forms of nervous system damage. The results of such damage include impaired sensation or pain in the feet or hands, slowed digestion of food in the stomach, carpal tunnel syndrome, and other nerve problems.
- Almost 30% of people with diabetes aged 40 years or older have impaired sensation in the feet (i.e., at least one area that lacks feeling).
- Severe forms of diabetic nerve disease are a major contributing cause of lower-extremity amputations.

Amputations

- More than 60% of nontraumatic lower-limb amputations occur in people with diabetes.
- In 2004, about 71,000 nontraumatic lower-limb amputations were performed in people with diabetes.
- The rate of amputation for people with diabetes is 10 times higher than for people without diabetes.

Dental disease

- Periodontal (gum) disease is more common in people with diabetes. Among young adults, those with diabetes have about twice the risk of those without diabetes.
- Almost one-third of people with diabetes have severe periodontal disease with loss of attachment of the gums to the teeth measuring 5 millimeters or more.
- Persons with poorly controlled diabetes (A1c > 9%) were nearly 3 times more likely to have severe periodontitis than those without diabetes.

Complications of pregnancy

- Poorly controlled diabetes before conception and during the first trimester of pregnancy can cause major birth defects in 5% to 10% of pregnancies and spontaneous abortions in 15% to 20% of pregnancies.
- Poorly controlled diabetes during the second and third trimesters of pregnancy can result in excessively large babies, posing a risk to both mother and child.

Complications of diabetes in the united states - american diabetes association Retrieved 8/2/2009, 2009, from <http://www.diabetes.org/diabetes-statistics/complications.jsp>

As you can see from these complications, Diabetes is a debilitating disease. It slowly breaks down the body piece by piece. It can make a Diabetic feel as if the sickness is some sort of a monster, like Dracula slowly sucking them dry from the best things in life. If Diabetes could speak it would say:

I am Diabetes; I am that silent killer that sneaks into your life. I am here to destroy the cells in your pancreas to stop you from producing that hormone you crave. That small excretion of insulin that gives you the ability to walk free, to be that energetic and youthful person you thought you would be. You might think, you're a thirty year old woman in her prime, living it up in New York City, but I'm your wakeup call I am here to take it all away.

I am the stress that leads to your rapidly thinning hair, the glop of curls in your hair brush and drain. I will constrict your blood from circulating; slowing down your body from healing and re-growing that strand of hair you wait so patiently for; day to day hoping that it will grow just one more inch.

I am here to damage the small blood vessels in your eyes changing the blood flow and weakening the walls, causing you blurred vision and floating spot, leading you to using those metal framed glasses perched on your nose allowing you to see what I have taken away, giving you the sight you wish you still had. The ability to look across the train platform and know you're going in the right direction. The annoyance you feel when you have to constantly wipe droplets off your lenses on a rainy day, the dent left on the bridge of your nose that seems to never go away. I am that eyesore you detest.

I am the thirst in your mouth you cannot quench. I will overwhelm your kidney's ability to reabsorb sugar, forcing your body to send signals to the brain to dilute your blood. Leading you to excessively urinate, constantly waking up throughout the night and having to sit at the seat closest to an exit so that you can go to the restroom.

I am that daily nuisance, the one who compels you to test your blood sugar before and after your meals, your daily workout or a romp in the bedroom. You will always be forced to prick your precious little fingers before any activity in your life. I will make your finger tips swollen, bruised and bloody. I am the slight crookedness in your fingers. I will damage the nerves in your hands stopping all the impulses that make your muscles move. You will never be able to take that famous photo in remembrance of your wedding-the two well manicured hands gracefully lying next to each other, with matching wedding bands shining bright. Your fingers will be too crooked and decrepit all because of me.

I am the dark brown spots resting on your hips. The scars left behind from the only device good enough to control me. The insulin

pump is key to improving your health and the quality of your life, but you will only be left with the uncomfortable and unwieldy burden of wearing the machine, the embarrassment of wearing a sexy shirt and having a big bulge sticking out the side or the disappointment of experiencing kisses on the contours of your body that send shivers through your core and as the heat pulsates through your skin you will have to stop and disconnect your pump. I will be that frustration.

I am the one who takes over during procreation. I will hinder you from one of life's greatest pleasures. A healthy child is something you will have to work hard for. It won't be as easy for you as it is for others. I will be the one who forces you to eat well and exercise, no chocolate, no late night snacks. I am that inconvenience. If you choose to your baby will suffer. .

I am the one who takes the moisture away from your vagina, restricting the blood flow causing the dryness that interferes with your arousal. I am the tightening of your vaginal walls that gives you that constant pain as he enters your body. I will take the pleasure away from your sex life.

I am the clots and plaque blocking the arteries in your legs, the numbness and the burning. That pain from calf to thigh that seems deep and diffused at the same time. You will no longer be able to party all night at the Copa-Cabana; I will not allow your legs to move so swiftly. I am the poor circulation in your feet. I will reduce the amount of oxygen and nutrition supplied to your tissue. I will be that ulcer on the ball of your foot, the sores and cuts in between your toes. I am the upcoming gangrene and amputation of your limbs. I can and will be the end of you

Culture & Diabetes:

Growing up in a Hispanic household made my diabetic journey even harder. My parents are from the Dominican Republic and in our culture we use food as a way to show love. The more the person loved you the more they fed you. A normal breakfast in a Dominican home is 2 large spoons full of Mangu (mashed plantains with red onions), 2 fried eggs, 3 pieces of fried salami, and two pieces of fried cheese. Match that to the Diabetic food Pyramid and it's enough to cover 7 servings, which is enough for breakfast and lunch. This habitual and cultural approach to eating is detrimental to a Diabetic's health.

Diabetic Food Pyramid



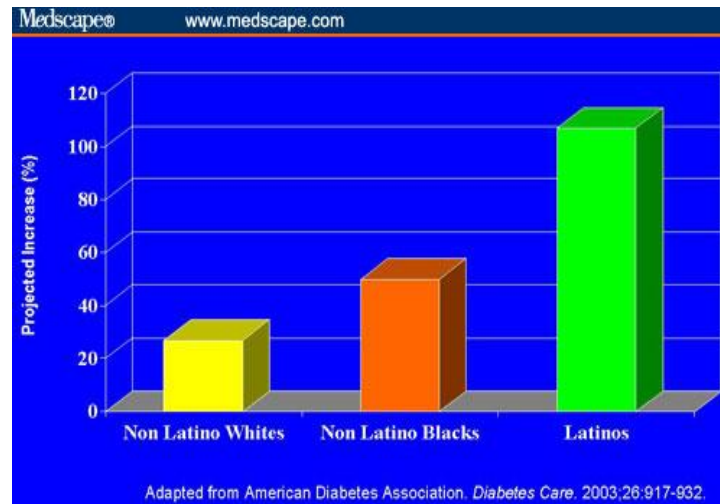
A Type 1 Diabetic should make wiser food choices using the Diabetic Food Pyramid can help reach these goals. The Pyramid divides food into six groups. These groups or sections on the pyramid vary in size. The largest group – grains, beans, and starchy vegetables – is on the bottom. This means that you should eat more servings of grains, beans, and starchy vegetables than of any of the other foods. The smallest group – fats, sweets, and alcohol – is at the top of the pyramid. This tells you to eat very few servings from these food groups. The Diabetic Food Pyramid is a little different than the USDA Food Guide Pyramid because it groups foods based on their carbohydrate and protein content instead of their classification as a food. (*Diabetes food pyramid, 2009*) Carbohydrates have the biggest affect on Diabetics. This is the main problem associated with Hispanic/Latino Diabetics today.

“That’s the trouble with the way people around here have always done things”

(Silko, 1977, p.76).

As a New Yorker, I see so many ads for quick fix meals like Hamburger Helper and Hot Pockets and convenience foods like premade refined flour tortillas instead of those hard pressed traditionally prepared corn tortillas. The nutrients and all the physical work that comes with just one corn tortilla has been taken away completely. This has drawn many Hispanic/Latino Diabetics to these habits of fast food eating and fatty food choices that will just raise their sugar and allow the Dracula of Diabetes to enter their lives. They live the life of overeating and binging, with less and less physical activity. With the convenience of ordering groceries online, many don’t even walk to the store any more.

Now, I'm not saying that all Latino Diabetics are lazy and just sit around and eat all day, but Diabetes is one of the most serious health challenges facing Hispanics/Latinos in the United States today. There has to be a reason for it.



Projected increases in the US population with diagnosed diabetes by 2020 by ethnicity.

Cultural differences in diabetes Retrieved 7/25/2009, 2009, from <http://cme.medscape.com/viewarticle/540922>

Hispanic/Latino foods have always had healthy ingredients such as fresh herbs like cilantro and parsley, and fruits like papaya and mangos. These are far better choices. The problem with our foods is what we choose to do with them. Some Hispanic/Latino foods are usually dipped in batter and deep fried, like *empanadas*, which is ground meat stuffed inside a doughy shell that is deep fried and drained. The meat is not the problem but everything else is. Protein in foods such as meats, poultry, fish, eggs, soy and other beans, take about 3 to 4 hours after a meal to show up as blood glucose. Carbohydrates, on the other hand, take only about half an hour to an hour after a meal to be turned into blood glucose. Foods high in carbohydrates include starches such as rice,

pasta, breads, cereals, and similar foods. These carbohydrates are the foods Hispanics/Latinos use the most like *arroz y habichuelas* (rice and beans), *purin de pan* (bread pudding) or *bistec ampañado* (breaded steak). It is all bread and starches. The goal of a diabetes nutrition plan is to provide a mixture of fats, carbohydrates, and proteins at each meal at an appropriate level to both provide essential nutrients as well as create an even release of glucose into the blood from meal to meal.

"... once the faintest stirring of hope became possible, the dominion of the plague was ended."

(Camus, 1948, p. 272)

In order to gain better control of the disease, Hispanic/Latino Diabetics should choose to join a Diabetic Training Camp geared towards their culture and food preferences. A program that is not only convenient and accommodating, but also set specifically to match the camper's lifestyle. It is located in New York just one hour away from the city and will convene on the last 2 weekends of every month. The program is especially designed for Type 1 Diabetics. There are lectures from physicians such as Endocrinologists and Nutritionists who specialize in Diabetic care. There are also trainers who are fellow Diabetics who have experienced and achieved set goals within the program. The staff includes well trained bilingual and bicultural professionals. There are also nutrition and recovery workshops, which consist of culturally oriented Diabetes education. Campers will learn the dos and don'ts of the disease.

Some workshops, like the nutritional workshop that is set in a fully stocked professional kitchen, will help prepare campers on this new healthier lifestyle, by teaching them new recipes and food substitutions, such as brown rice and peas instead of white rice and beans. Brown rice is better than white rice. The variety of rice may be identical, but milling removes the husk from the grain and turns

the brown rice to white. The white rice that most of us eat is comprised mostly of carbohydrates, with the nutrients stripped off in the milling process. Brown rice has 349 percent more fiber, 203 percent more Vitamin E, 185 percent more B6, and 219 percent more magnesium. With 19 percent more protein, brown is more balanced. It is noteworthy that brown rice has a low glycemic index of 55, (*glycemic index (GI) ranks carbohydrate-rich foods according to their glycemic response. Foods that raise your blood glucose level quickly have a higher GI rating than foods that raise your blood glucose level more slowly. In general, the lower the rating, the better the quality of carbohydrate.*) compared to white rice's 70. (Tohme, 2007)

The Training Camp will also have vigorous training sessions like cycling, running, boot camp, yoga, pilates, and cultural dance classes like salsa and samba to burn off any carbohydrate intake, and prepare campers for increased physical activity in the future. There are many benefits to these training sessions, such as:

- ✚ Increased strength
- ✚ Bone Density improvements
- ✚ Reduced overall weight
- ✚ Balanced body composition
- ✚ Reduced Blood Pressure, Cholesterol, and overall Cardiovascular Disease Risk
- ✚ Improved Balance and Stability
- ✚ Increased Flexibility
- ✚ Heightened Metabolism
- ✚ Controlled symptoms of stress, anxiety and depression
- ✚ Reduced A1C
- ✚ Blood Glucose Management
- ✚ Decreased amount of diabetes medications
- ✚ Improved Cardiovascular profile
- ✚ Decreased Insulin Resistance
- ✚ Increased Insulin Sensitivity
- ✚ Improved Circulation

These benefits will all tie into the daily agenda, which would look like this:

6:30 – 8:15 AM
Morning Training Sessions
Cycling, Running, Swimming, Others

7:00 AM – 9:00 AM
Breakfast

9:00 AM - 10:00 AM
Small Group Sessions

10:30 – 11:45 AM
One on One Consults
Morning Fitness
Boot Camp, Yoga, Pilates

12:00 – 12:50 PM
Lunch

1:00 – 2:45 PM
Fitness: Designing Your Training
Training: Salsa 101

3:15 – 5:45 PM
Afternoon Training Sessions
Cycling, Running, Swimming, Others

3:15 – 4:30 PM : Afternoon Fitness
Guns & Buns, Arms and Abs, Yoga

3:15 PM - 5:30 PM
One on One Consults

6:00 – 7:00 PM
Dinner

7:00- 9:00 PM

Training: Samba
Nutrition Workshops, Training/ Medical Lectures,
Nutrition: Energy Balance and the Macronutrients
Goal Setting

As you can see, there are also one-on-one counseling sessions with specialists. Campers will surround themselves with teams of people that can help get them down a path to greater health. The support of trainers, physicians, and staff, the culturally oriented features and the great fitness programs will help them achieve the goals needed to control and manage Type 1 Diabetes.

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