



# Morgan:

## A Case of Diabetes

by

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### Part I

On Morgan Water's Oklahoma Indian reservation, one fourth of her tribe had diabetes. Of course, she knew that. Everyone had heard that.

Morgan had no family history of diabetes, heart disease, or other serious conditions; she never imagined she was at any risk. However, she overlooked the fact that environmental factors as well as genetic factors play a crucial role in the development of diabetes.

At the age of 27, Morgan was obese and led a sedentary lifestyle. In the past few months, she had been experiencing unusual thirst, dizziness, blurred vision, and an awkward feeling of numbness in her right foot. Following her parents' advice, she finally visited the family doctor. She was worried, but never suspected what she would hear.

"I'm sorry, Morgan, but the tests I've conducted unfortunately reveal that you have Type 2 diabetes. Your symptoms are exactly like those we see in many Native Americans. You have a high blood sugar. In people who aren't diabetic, the food that is digested gets taken into the blood. A lot of it is in the form of sugar. The blood sugar then is taken into their body tissues with the help of a hormone, called insulin, made by the pancreas organ."

"Yes, I have heard about that."

"In your case, you are making enough insulin but your cells don't act like it is there. Your cells don't seem to recognize it. So what happens is that when you eat, the sugar in your food doesn't get inside your cells; it stays in your blood, and so the cells starve. All of that sugar that's in your blood from your meal gets eliminated in your urine. We can measure it easily. Usually this disease doesn't occur until after the age of 45, but both your sedentary lifestyle and Native American background increased your risk. It appears you've been living with diabetes for almost a year now."

Morgan sat back in silence. Her eyes rested on the floor for a moment. Then quietly she said, "No. How can it be? How could it be that I did not know? A year? How could I not tell the symptoms for so long?"

"It comes upon people slowly, Morgan. There are about 16 million Americans that are diabetic, but a third of them don't know they have it."

While the doctor continued to detail Morgan's condition, she was hardly listening. How would her life change? Would she now have to take insulin shots for the rest of her life? So many of her friends, so many of her people, had suffered from this terrible disease. What would happen to her now?

## Activity

Research the general facts of diabetes to better address Morgan's concerns. Your main objectives are the following:

1. Distinguish between Type 1 and Type 2 diabetes by comparing and contrasting their definitions, bodily effects, warning signs, target groups, and current treatments in a table.
2. Look up statistics to share concerning both types of diabetes.
3. Know the function of insulin and its involvement with diabetes.
4. Answer the following question: Recent studies on mice have shown that fat cells produce a hormone called resistin that leads to insulin resistance. Researchers believe the gene that regulates the production of resistin is overactive in those suffering from obesity. How does this discovery correlate with Type 2 diabetes?

## Part II

Morgan continued to sit in the doctor's office, listening but not hearing. Her doctor had explained how diabetes would increase her risk of heart disease and stroke, risks she already had from obesity, as well as kidney disease (diabetic nephropathy) and blindness. How could this happen to her, just now before her marriage?

"Morgan, I understand this news is devastating for you, but I want to clarify that Type 2 diabetes is easily controllable through exercise, good nutrition, and weight loss."

"You mean if I lose weight I'll be OK?"

"Yes. If you are careful, weight loss will help manage your disease, and exercise will help your cells take in blood glucose. I want you to take a day or two to clear your mind for the road ahead, and read this literature. Then schedule an appointment with our nutritionist, Dr. Navarro. Losing weight will be easier for you, in my opinion, with the guidance of a professional. Come back in one month for a checkup, OK? Will you do that for me?"

Morgan went home that afternoon in a state of frustration and denial. She said nothing to her parents, but that was hardly unusual. The next day, she spoke of the bad news to her family and friends and explained how weight loss was supposed to be an effective treatment.

"I know just what you should do," said Morgan's close friend, Savannah. "You know how I've been losing weight? Well, I've been on the Atkins' Diet. I heard about it on TV. It's great! You get to eat steak, chicken wings, and all the good stuff. All you have to do is limit carbohydrate intake. You should definitely give it a try. This diet has been around for years and it has worked for lots of people, including me."

"I don't know," said Morgan's brother, Alan. "There's a lot of argument about the Atkins' Diet. I think the best thing for you to do is exercise and stop eating all of that pizza and candy and food filled with fat. Our people never used to eat that junk. I say eat meals that are nutritionally balanced and high in fiber and low in refined sugars and saturated fats. And run a lot. Stop sitting around the house."

Morgan sat silently, listening to the family debate. Finally, she looked over to the corner of the room where her grandfather had also been sitting quietly. "Grandfather, what do you think? You are health-conscious, you exercise regularly, and you know a lot about nutrition. What do you say?"

He said nothing for a long moment and then, "Morgan, it is true that it is best to live in harmony and balance—to eat a nutritionally balanced diet that includes carbohydrates, proteins, and 'good' fats to meet your body's needs. That is good. But look to your heritage. Our people were never overweight before we started eating 'civilized' food. Look to our native diet. I think you should look to traditional herbal remedies for help. What Alan says is true. Exercise is good. But it is sometimes not enough. Our people have always looked to the natural medicine for cures. They will lift your spirits and energize you. Then you will lose weight and you will be healthy again."

"Do you mean I should take those herbs from the diet shop?"

"Yes. I hear they are safe and good. But you must take them like the medicine label says. It can't hurt to try them."

## Activity

What should Morgan do? Research the pros and cons of the Atkins' Diet, a diet high in fiber and low in saturated fat. Also, research health store supplements containing the herb ephedra (ephedrine). Find out what major healthcare organizations say about these. And learn about the possible effects of exercise to control weight. Be prepared to be split into three groups where each group will role-play and defend the viewpoint of Savannah, Alan, or the grandfather in a debate. You should learn about the pros and cons of each viewpoint in order to understand their strengths and weaknesses.

**Image Credit:** MSCUA, University of Washington Libraries, NA1157, used with permission. The use of this photograph is strictly for aesthetic reasons and it is not implied that the person portrayed in fact suffered from Type 2 diabetes.

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