

# Diabetes and Exercise

Jeff H. Ye, MD, PhD

A 53-year-old woman with a strong family history of diabetes has been followed in my clinic for 2 years since she moved here from the north. All of her family members have diabetes and have been on treatment. She was once diagnosed with gestational diabetes and borderline diabetes but had never been on any treatment. She recently feels tired very easily, with constant drinking fluids and urination. She had a significant weight gain of over 60 pounds since her last visit 6 months ago. Comprehensive examination showed that she developed severe diabetes with hemoglobin A1C of 10 and average blood sugar of 280. She was treated with three oral anti-diabetic agents and was instructed to eat properly and do exercise. She was put on a weight loss program in my clinic. She is a healthcare professional working in a patient care organization, so she fully understands the health impact of diabetes on a person. She is a very compliant patient and works very hard with her diabetes therapy plan. In 6 months, she lost 60 pounds and is actively involved in an exercise program. Her hemoglobin A1C and blood sugar became completely normal and she is on one oral anti-diabetic agent now. She told me that exercise and weight loss are the most important in controlling her diabetes. The exercise is not only helping her lose weight but also helping her to relax from a much stressful work.

A 75-year-old gentleman with a strong family history of diabetes has been followed in my clinic for 2 years. All of his family members have diabetes and have been on treatment. He has been very active in sports and exercise program. He was very proud of himself that he is the only person in the family who did not develop diabetes. I told him that his active lifestyle helped him in delaying the development of diabetes but that he still needs to take precautions in preventing diabetes associated complications like stroke and heart attack. I asked him to see a cardiologist and take baby aspirin but unfortunately he did not follow the advice. About ten months ago, I was notified by a local nursing home that he was transferred from a big hospital in Nashville after a stroke. I went to see him in the nursing home. He already has been on insulin for his diabetes control and has significant weight gain. I tried to use oral anti-diabetic agents without much success and only insulin can control his blood sugar. He rapidly developed most severe complications of diabetes with kidney and heart damage. He had frequent severe infections including septic shock due to urinary tract infection and pneumonia. He died of severe pneumonia complicated with heart attack 10 month after the stroke. The stroke significantly limited his activity and is the cause of his diabetes and death.

The two cases have shown the importance of exercise in preventing and treating diabetes. The exercise is not only helping to decrease insulin resistance in the largest organ of the body - muscles but also reducing the counter-hormones against insulin by relaxing the nerves. Diabetes management is very complicated involving proper use of medication, lifestyle modification and complication prevention. If you have any questions about diabetes, please contact Dr. Jeff Ye, North Atlanta Medical & Digestive Care at 770-346-0900. We can help!