

# Self-Hypnosis Based Stress Management Can Help Control Glucose In Type 2 Diabetes

DURHAM, N.C. -- Patients with type 2 diabetes who incorporate self-hypnosis, stress management techniques into their routine care can significantly reduce their average blood glucose levels, according to a new study by researchers at Duke University Medical Center.

This is the first large study to show that a simple, cost-effective treatment can have a meaningful therapeutic effect on the control of blood sugar, said the researchers.

Such stress management techniques include instructions on how to identify everyday life stressors and how to respond to them with self-hypnosis, involving techniques such as progressive muscle relaxation and breathing exercises.

Stress can increase glucose levels in people with diabetes, making them more susceptible to long-term physical complications such as eye, kidney or nerve disorders.

**Results of the study are published in the January 2002 issue of the journal Diabetes Care.**

*"The stress management techniques, when added to standard care, helped reduce glucose levels,"* said Richard Surwit, lead author of the study and a medical psychologist at Duke. *"The change is nearly as large as you would expect to see from some diabetes-control drugs."*

Patients in the stress management group showed, on average, a 0.5 percent reduction on the hemoglobin A1c (HbA1c) test – a standard laboratory test used to determine average blood glucose levels in people with diabetes. However, 32 percent of the patients in that group showed an even greater improvement by lowering their glucose level by 1 percent or more.

According to Surwit, that amount of glucose level reduction is what the Food and Drug Administration (FDA) considers sufficient when reviewing drugs seeking approval for diabetes control.

A total of 108 patients with type 2, also known as adult-onset, diabetes participated in five 30-minute educational sessions about diabetes. The basic program focused on general facts (such as signs or symptoms of the disease), complications (such as foot, eye and dental issues), healthy eating and treatment information. There were no discussions of specific recommendations or glycemic goals.

The patients were randomly enrolled in the educational sessions either with or without self-hypnosis stress management training. Stress-management techniques were taught by nurses or graduate students specifically trained for the study by a highly qualified, professional hypnotherapist. The self-hypnosis training included: breathing techniques, progressive muscle relaxation, mental imagery, and instructions on how to modify one's physiologic, cognitive and behavioral responses to stress.

At the beginning of the study, and at subsequent times throughout the year-long tracking period, patients were tested using the HbA1c test to evaluate their blood sugar control and with various questionnaires to assess their trait anxiety. Such trait anxiety included perceived levels of stress, anxiety and psychological health. All participants were at least 30 years old and currently managing their diabetes with diet, exercise and/or non-insulin medications.

*"Patients with type 2 diabetes might be at increased health risk from the effects of stress," Surwit said. "Experiencing stress is associated with the release of hormones that lead to energy mobilization – known as the 'fight or flight' response. Key to this energy mobilization is the transport of glucose into the bloodstream, resulting in elevated glucose levels, which is a health threat for people with diabetes."*

Stress also can disrupt diabetes control indirectly through its effects on diet and exercise, he said.

After six months, the control group began to show deterioration in their glucose levels, while the stress management group continued to improve. By the end of one year, 32 percent of the patients randomized to stress management had HbA1c levels that were lower by 1 percent or more. In contrast, only 12 percent of the control subjects had levels that were this much lower. According to Surwit, the effect cannot be explained by changes in body mass index, diet or exercise because the two groups did not differ on these variables during the year they were followed.

The HbA1c test has been shown to be effective in predicting coronary disease and other risks to people with diabetes, including the development of microvascular complications in the kidneys or eyes, noted Surwit.

*"Managing stress can significantly improve a patient's control of their diabetes," said Surwit. "These techniques are simple, quick to learn, and have been shown to work for multiple conditions, including coronary syndromes."*

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