

# Specialized cognitive therapy improves blood sugar control in depressed diabetes patients

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Although maintaining good blood sugar control is crucial for avoiding complications of diabetes, it has been estimated that only about half of patients are successful in meeting target blood glucose levels. The prevalence of depression among diabetes patients – up to twice as high as in the general population – can interfere with patients' ability to manage their diabetes. Now a group of Massachusetts General Hospital (MGH) investigators report that a program of cognitive behavioral therapy that addresses both mood and diabetes self-care led to improved blood sugar control and produced faster relief of depression in patients with poorly-controlled type 2 diabetes.

"The association between [depression](#) and type 2 [diabetes](#) is well documented, but clinical trials of either medication or psychological treatment for depression have had mixed or negative effects on adherence to treatment programs," says Steven Safren, PhD, ABPP, director of Behavioral Medicine in the MGH Department of Psychiatry and lead author of the report in the March issue of *Diabetes Care*. "In this study we adapted our approach that has improved treatment adherence among HIV/AIDS patients by addressing both depression and treatment self-management skills."

The current study enrolled 87 adults whose [type 2 diabetes](#) was poorly controlled despite treatment with oral medications and who also met criteria for a diagnosis of depression. At the outset of the trial, all participants received an enhanced version of usual diabetes self-care counseling – including meetings with a nurse educator to set goals for

blood sugar monitoring, with a dietitian to set dietary and exercise goals, and with a counselor to set strategies for meeting those goals and other medical recommendations.

A subgroup of 45 randomly selected participants took part in 9 to 12 additional weekly [cognitive behavioral therapy](#) (CBT) sessions where they worked on problem-solving strategies, reviewed how well they met goals of the previous week and tracked their moods. While the sessions included typical aspects of CBT for depression – such as training in adaptive thinking, relaxation and activity scheduling – they also focused on specific elements of diabetes self-care.

Throughout the year-long study period, participants in both groups continued any previously prescribed depression treatment; but if symptoms were found to have worsened at assessment visits, they were referred for additional therapy or adjustments to antidepressant medication. Participants' adherence to their prescribed diabetes medication was tracked by an electronic monitoring system that recorded whenever the pill bottle was opened, and their adherence to glucose monitoring, by data downloaded from the monitor.

At the end of the first four months, participants receiving the integrated CBT treatment were significantly more successful than the usual-treatment group in adhering to their prescribed medications and their glucose monitoring schedule. They also showed an improvement in [blood sugar control](#) similar to what might be seen with the addition of a weak glucose-lowering medication. These differences in diabetes management and glucose control were also seen at the 8- and 12-month assessments.

While the CBT group had more rapid improvement of their depression symptoms, scoring significantly better on two depression scales at the 4-month assessment, [depression symptoms](#) in the usual-treatment group

had improved by the 8- and 12-month assessments, removing any statistically significant differences between the groups at the end of the study period. It is possible, Safren notes, that participants in the usual-treatment group were more likely to be referred for additional depression treatment after the 4-month assessment, since they were less likely to show improvement at that visit.

"We are hopeful that this approach can be helpful in treating any medical illness in which patients also have depression," he says. "We need to study extending this treatment to other conditions, as well as finding the best ways to incorporate it into [diabetes care](#). With today's emphasis on cost containment in health care, it will be important to know if the improved [blood sugar](#) control this treatment appears to confer makes it more cost effective over the long run." Safren is a professor of Psychology in the Harvard Medical School Department of Psychiatry.

Provided by Massachusetts General Hospital

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