

## 'Do your best' not a good enough goal to improve diabetes diet

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(Medical Xpress) -- A specific goal to eat a set number of daily servings of low-glycemic-index foods can improve dietary habits of people with Type 2 diabetes, according to new research.

Study participants were given a goal to eat either six or eight daily servings of foods with a low glycemic index - carbohydrates that are digested slowly and are less likely to spike blood-sugar levels than would carbohydrates with a high glycemic index.

Overall, most participants reached the eightserving goal, partly because researchers discovered that many people were already consuming about six servings of low-alycemicindex foods each day.

The participants also ate about 500 fewer daily calories and added vegetables, fruits and nuts and seeds to their diet - all foods that are on the low end of the glycemic index.

Participants' confidence about being able to meet these dietary recommendations was key to their ability to reach the goal. People who had more confidence about the goal were more committed, and higher commitment levels led to a better likelihood that they would reach the goal.

Goal-setting theories are applied widely in the workplace and in sports management, but little research has examined the effectiveness of setting goals in a clinical setting to improve health - even though goal-setting is a common technique used by health-care providers.

action," said Carla Miller, associate professor of human nutrition at Ohio State University and lead author of the study. "Telling people to 'go out and do your best' is not effective. It's not specific enough, or targeted enough, or timely.

"But in this context it's not just a matter of setting a goal. It's deciding what specifically you are going to modify to help you achieve a more healthful diet."

The study is published in a recent issue of the journal Patient Education and Counseling.

Miller also published related findings last year from the same study that showed that after increasing their intake of low-glycemic-index foods, participants as a group lowered their weight, body mass index, waist circumference and a hemoglobin A1c reading that indicates better control of their blood sugar. These findings were reported in the journal Public Health Nutrition.

Between this trial and other studies, Miller said, "I think we have enough data to say that consuming a low-glycemic-index diet has beneficial outcomes for people with diabetes."

That's a significant statement because no guidelines currently exist for consumption of lowglycemic-index foods, she noted. Some experts think a focus on the glycemic index in foods rather than carbohydrates and sugars is too complicated for patients with diabetes to follow. Miller doesn't think that's the case as long as patients receive adequate nutrition education - which was another finding of hers in a study published in 2009.

The glycemic index is represented by a scale from 1 to 100. Foods that tend to slow the speed of digestion and prevent rapid increases in blood sugar include many vegetables, whole grains, dairy foods, nuts and seeds, beans and fruits. They are considered low-glycemic-index foods if they have "We ask people to set goals because they motivate an index of 55 or fewer points. Foods with a point value of 100 are the equivalent of pure glucose.

> Thirty-five adults age 40 to 65 years with a Type 2 diabetes diagnosis participated in the study. To be eligible, the participants had to have a hemoglobin A1c value of 7 percent or higher; this measure is a



clinical marker for blood sugar control over two to three months.

All participants completed a baseline assessment and participated in a five-week group nutrition intervention before being assigned to one of two groups: those with a goal of eating six low-glycemic-index foods per day and those with a goal to eat eight low-glycemic-index foods per day, all over an eight-week period. About halfway through, participants had a one-on-one meeting with a dietitian to discuss their progress. They also self-monitored their diet and blood glucose for at least four days per week during the course of the study and received feedback on their diet.

Both groups showed a significant average increase in their total daily servings of low-glycemic-index foods and a significant average decrease in caloric intake and overall dietary glycemic index. But not all participants reached the goal, which is why the researchers sought to understand more about how goal-setting influenced participants' behavior.

Miller and colleagues explored the concept of selfefficacy - in essence, how confident participants felt about their ability to engage in this specific behavior that the researchers asked of them.

"What we found is that those who felt more committed to the goal felt the goal was less difficult. And those who had a higher level of self-efficacy felt that the goal was less difficult, which makes sense because that means they felt more confident in their ability to meet that goal," Miller said. "Increasing levels of self-efficacy and increasing goal commitment are critical to achieving goal behavior."

It wasn't until the trial was completed that researchers learned that many participants entered the study already eating about six servings per day of foods with a low glycemic index.

"We learned that we should set the goal for lowglycemic-index foods higher. We also learned that we need to set an individualized goal. We know that people can increase their consumption by almost two servings a day if that specific goal is set," Miller said. Research on goal-setting also emphasizes that people should plan to take action rather than stop doing something. They also can set a substitution goal - perhaps substituting diet soda for regular soda or, in the case of this study, a low-glycemic-index food for a high-glycemic-index food.

"One way to build self-efficacy is by helping people set a specific goal that is moderately difficult, action-oriented, and achievable in small successive steps. Then those people with higher self-efficacy feel the goal is less difficult, they are more committed, and they feel more satisfied in achieving the goal," Miller said. "That satisfaction helps them say, 'Let's set the next higher goal."

Provided by The Ohio State University



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