Gargle with Sugar Water To Boost Self-Control

(medical news today)

To boost self-control, gargle sugar water. According to a study co-authored by University of Georgia professor of psychology Leonard Martin published in *Psychological Science*, a mouth rinse with glucose improves self-control.

His study looked at 51 students who performed two tasks to test self-control. The first task, which has shown to deplete self-control, was the meticulous crossing out of Es on a page from a statistics book. Then, participants performed what is known as the Stroop task where they were asked to identify the color of various words flashed on a screen, which spell out the names of other colors. The Stroop task's goal is to turn off the student's tendency to read the words and instead see the colors.

Half of the students rinsed their mouths with lemonade sweetened with sugar while performing the Stroop test, the other half with Splenda-sweetened lemonade. Students who rinsed with sugar, rather than artificial sweetener, were significantly faster at responding to the color rather than the word.

"Researchers used to think you had to drink the glucose and get it into your body to give you the energy to (have) self-control," Martin said. "After this trial, it seems that glucose stimulates the simple carbohydrate sensors on the tongue. This, in turn, signals the motivational centers of the brain where our self-related goals are represented. These signals tell your body to pay attention."

It took subjects about 3-5 minutes to perform the Stroop test. Martin said results show a measure of self-control, but a glucose mouthwash might not be enough to solve some of the biggest self-control obstacles like losing weight or smoking.

"The research is not clear yet on the effects of swishing with glucose on long-term self-control," he said. "So, if you are trying to quit smoking, a swish of lemonade may not be the total cure, but it certainly could help you in the short run."

Martin, in collaboration with co-author Matthew Sanders, a doctoral candidate also in the UGA Franklin College of Arts and Sciences, believes the motivation comes in the form of self-values, or emotive investment.

"It is the self-investment," Martin said. "It doesn't just crank up your energy, but it cranks up your personal investment in what you are doing. Clicking into the things that are important to you makes those self-related goals salient."

They theorized that the glucose causes emotive enhancement, leading the person to pay attention to their goals and perform better at evoking the non-dominant response.

"The glucose seems to be good at getting you to stop an automatic response such as reading the words in the Stroop task and to substitute the second harder one in its place such as saying the color the word is printed in," he said. "It can enhance emotive investment and self-relevant goals."

Previous self-control studies showed a marked decrease in performance for the second task.

"Previous studies suggest the first task requires so much energy, you just don't have the energy left for the second task that you need," Martin said. "We are saying when people engage in self-control, they ignore important aspects of their goals and feelings. If you have to stay late at work, for example, but you really want to be going home, you have to ignore your desire to go home. Doing so will help you stay late at work, but it may also put you out of touch with what you personally want and feel on later tasks. Swishing glucose can focus you back on those goals and feelings and this, in turn, can help you perform better on the second task. In short, we believe self-control goes away because people send away, not because they don't have energy. People turn it off on purpose."

Martin's research focused on what the affects of swishing glucose psychologically rather than physiologically. "We think it makes your self-related goals come to mind," he said.

Martin's lab is continuing to study how subjects evoke and interpret emotive responses.