

Got sugar? Glucose affects our ability to resist temptation

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New research from a lab at Florida State University reveals that self-control takes fuel — literally. When we exercise it, resisting temptations to misbehave, our fuel tank is depleted, making subsequent efforts at self-control more difficult.

Florida State psychologist Roy F. Baumeister and his colleagues Kathleen D. Vohs, University of Minnesota, and Dianne M. Tice, Florida State, showed this with an experiment using the Stroop task, a famous way of testing strength of self-control.

Participants in this task are shown color words that are printed in different-colored ink (like the word red printed in blue font), and are told to name the color of the ink, not the word. Baumeister found that when participants perform multiple self-control tasks like the Stroop test in a row, they do worse over time. Thus, the ability to control ourselves wanes as it is exercised.

Moreover, Baumeister and colleagues found that the fuel that powers this ability turns out to be one of the same things that fuels our muscles: sugar, in the form of glucose.

The researchers measured the blood glucose levels of participants before either engaging in another self-control task or a task that did not involve self-control. They found that the group performing the self-control task suffered depletion in glucose afterward. Furthermore, in another experiment, two groups performed the Stroop task two times each,

drinking one of two sweetened beverages in between. The control group drank lemonade with Splenda, a sugar-free sweetener; the test group got lemonade sweetened with real sugar. The sugar group performed better than the Splenda group on their second Stroop test, presumably because their blood sugar had been replenished.

The results as reported in the December issue of *Current Directions in Psychological Science*, a journal of the Association for Psychological Science, suggest the possibility of psychological interventions for helping people achieve greater self-control. For one thing, like muscles, self-control may be able to be strengthened through exercise.

Results so far are inconsistent, Baumeister says, and some regimens work better than others, but he envisions that greater understanding of the biological and psychological underpinnings of our ability to control ourselves will have important real-world application for people in the self-control business, such as coaches, therapists, teachers, and parents.

Source: Association for Psychological Science

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