Fuel for Thought

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Day after day an overbearing colleague grates on your nerves. It’s a battle to keep your irritation under wraps. Suddenly, during a particularly long encounter, you snap—you lose your temper and give your shocked co-worker a piece of your mind.

Most of us blame our-selves for such lapses in willpower, but new research suggests that willpower may not be available in an unlimited supply. Scientists have discovered that a single, brief act of self-control expends some of the body’s fuel, which undermines the brain’s ability to exert further self-discipline.

Researchers at Florida State University asked volunteers to perform tasks such as ignoring a distracting stimulus while watching a video clip or suppressing racial stereotypes during a five-minute social interaction. These seemingly trivial efforts depleted glucose in the bloodstream and hindered volunteers’ ability to maintain mental discipline during subsequent tasks. When the study participants were given a sugar drink to boost their blood glucose levels, their performance returned to normal. Volunteers who drank an artificially sweetened drink remained impaired.

“These findings show us that willpower is more than a metaphor,” notes Matthew Gailliot, a graduate student in psychology who led the research. “It’s metabolically expensive to maintain self-control.”

“These are remarkably provocative results,” says Kathleen Vohs, a psychologist at the University of Minnesota. Her research suggests that those who exercise self-control are more likely to make impulse purchases—a finding that fits with the glucose depletion model. Vohs observes that one tantalizing implication of the results is that self-control may be toughest for people whose bodies do not utilize blood glucose properly, such as those with type 2 diabetes. Unfortunately, such people cannot benefit from the news that a sugar drink restores mental reserves. Nor should anyone take the findings as license to go on frequent sugar benders in the name of willpower. Although glucose’s precise role in self-regulation is not yet clear, Vohs says, “We can be assured that it’s going to be more nuanced than that.” —Siri Carpenter