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Our brains can (unconsciously) save us from temptation

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Inhibitory self control – not picking up a cigarette, not having a second drink, not spending when we should be saving – can operate without our awareness or intention.

That was the finding by scientists at the University of Pennsylvania's Annenberg School for Communication and the University of Illinois at Urbana-Champaign. They demonstrated through neuroscience research that inaction-related words in our environment can unconsciously influence our self-control. Although we may mindlessly eat cookies at a party, stopping ourselves from over-indulging may seem impossible without a deliberate, conscious effort. However, it turns out that overhearing someone – even in a completely unrelated conversation – say something as simple as "calm down" might trigger us to stop our cookie eating frenzy without realizing it.

The findings were reported in the journal *Cognition* by Justin Hepler, M.A., University of Illinois; and Dolores Albarracín, Ph.D., the Martin Fishbein Chair of Communication and a Professor of Psychology at Penn.

Volunteers completed a study where they were given instructions to press a computer key when they saw the letter "X" on the computer screen, or not press a key when they saw the letter "Y." Their actions were affected by subliminal messages flashing rapidly on the screen. Action messages ("run," "go," "move," "hit," and "start") alternated with inaction messages ("still," "sit," "rest," "calm," and "stop") and nonsense

words ("rnu," or "tsi"). The participants were equipped with electroencephalogram recording equipment to measure brain activity.

The unique aspect of this test is that the action or inaction messages had nothing to do with the actions or inactions volunteers were doing, yet Hepler and Albarracín found that the action/inaction words had a definite effect on the volunteers' brain activity. Unconscious exposure to inaction messages increased the activity of the brain's self-control processes, whereas unconscious exposure to action messages decreased this same activity.

"Many important behaviors such as weight loss, giving up smoking, and saving money involve a lot of self-control," the researchers noted. "While many psychological theories state that actions can be initiated automatically with little or no conscious effort, these same theories view inhibition as an effortful, consciously controlled process. Although reaching for that cookie doesn't require much thought, putting it back on the plate seems to require a deliberate, conscious intervention. Our research challenges the long-held assumption that inhibition processes require conscious control to operate."

More information: The full article, "Complete unconscious control: Using (in)action primes to demonstrate completely unconscious activation of inhibitory control mechanisms," will be available in the September issue of the journal.

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