

Why It's Impossible for Some to 'Just Say No'

November 01, 2007

Drug abuse, crime, and obesity are but a few of the problems our nation faces, but they all have one thing in common — people's failure to control their behavior in the face of temptation. Although the ability to control and restrain our impulses is one of the defining features of the human animal, its failure is one of the central problems of human society. Why do we so often lack this crucial ability?

As human beings, we have limited resources to control ourselves, and all acts of control draw from this same source. Therefore, when using resources in one domain (e.g. keeping to a diet), we are more likely to run out of resources in a different domain, like studying hard. Once these resources are exhausted, our ability to control ourselves is diminished. In this depleted state, the dieter is more likely to eat chocolate, the student to watch TV, and the politician to accept a bribe.

In a recent study, Michael Inzlicht, University of Toronto, Scarborough, and colleague Jennifer N. Gutsell, University of Konstanz, offer an account of what is happening in the brain when our vices get the better of us.

Inzlicht and Gutsell asked participants to suppress their emotions while watching an upsetting movie. The idea was to deplete their resources for self-control. The participants reported their ability to suppress their feelings on a scale from one to nine. Then, they completed a Stroop task, which involves naming the color of printed words (i.e. saying "red" when reading the word "green" in red type), yet another task that requires a significant amount of self-control.

The researchers found that those who successfully suppressed their emotions performed worse on the Stroop task, indicating that they had used up their resources for self-control while holding back their tears during the film.

An electroencephalography (EEG) performed during the Stroop task confirmed these results. Normally, when people deviate from their goals (in this case, wanting to say the word and not the color of the font), increased brain activity occurs in a part of the frontal lobe called the anterior cingulate cortex, which alerts them that they are off-track. The researchers found weaker activity occurring in this brain region during the Stroop task in those who had successfully suppressed their feelings. In other words, after engaging in one act of self-control, this brain system seemed to fail during the next act.

These results, which appear in the November issue of *Psychological Science* (M. Inzlicht & J.N. Gutsell. "Neural Signals for Self-Control Failure"), have significant implications for interventions aiming to help people change their behavior. Most notably, the results suggest that if people do not realize that they have lost control, even temporarily, they will be unable to stop or change their behavior on their own.