MedicalXpress

Why it is impossible for some to 'just say no'

October 10 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. While 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. So, 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 this resource in one domain, for example, keeping to a diet, we are more likely to run out of this resource 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 of the University of Toronto Scarborough and colleague Jennifer N. Gutsell 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 font), yet another task that requires a significant amount of self-control.

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

These results, which appear in the November issue of Psychological Science, a journal of the Association for Psychological Science, have significant implications for future interventions aiming to help people change their behavior. Most notably, it suggests that if people, even temporarily, do not realize that they have lost control, they will be unable to stop or change their behavior on their own.

Source: Association for Psychological Science