Why your diet makes you angry

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(PhysOrg.com) -- Did you just decide to eat an apple instead of a candy bar? You should be feeling happy because you're doing what's good for you, right? Well, according to researchers at UC San Diego and Northwestern University, you're actually more likely to be angry.

Wendy Liu, from UCSD's Rady School of Management, and David Gal, from Northwestern's Kellogg School of Management, conducted a series of experiments on undergraduate students and concluded that exerting self-control leads to feelings of anger. The finding didn't surprise the researchers. "We were surprised that a lot of people don't see it," Liu said.

Other studies have linked self-control to aggressive behavior, she pointed out. She and Gal decided to focus most of their experiments on dieting

because it's one form of self-control we're most likely to use every day. Medical studies have found that people on diets tend to be irritable and aggressive, the researchers write. They also looked at spending habits. Their findings are detailed in a paper titled "Grapes of Wrath: The Angry Effects of Self Control," recently published in the *Journal of Consumer Research*.

The prevailing theory is that using self-control once wears you down and makes you less likely to do so again, making it more difficult to control aggressive behavior. But Liu and Gal designed their experiments to disprove that theory. They wanted to see if people would show a preference for anger without having to exert self-control for a second time.

"This is not about ability," Liu said. "You can still exert self-control, but you still get angry."

So, they first asked their subjects to pick between an apple or a candy bar, ostensibly as a reward for taking part in an experiment. Another group of subjects chose between a grocery gift card and spa gift certificate. The subjects, in this case, undergraduate students, then were asked to pick between anger-themed movies and other movies; angry faces and fearful faces; and public policy messages designed to elicit anger or sadness. Some were asked to evaluate how irritating they found a message urging them to exercise.

Liu and Gal also created control groups who were asked to choose their reward—apple or candy bar; grocery card or the spa gift certificate—only after they performed these same tasks.

Researchers then compared subjects who chose the apple before their task to those who chose the apple after. The first group was more likely to pick an angry movie, angry face or public policy message with an

angry theme. That group also was more likely to find the message urging them to exercise more annoying.

For example, 64 percent of those who first chose the apple then chose an anger-themed movie. But 55 percent of those who chose the apple after chosing a movie picked angry-themed flicks.

By contrast, no such differences emerged between those who chose the chocolate bar before the task and those who chose it after. The same held true for the experiment where subjects chose between a grocery card and a spa gift card.

So, if using self-control makes us angry, is there anything we can do about it? One trick is not to put yourself in a position where you have to use self-control to make a healthy choice, Liu said. Avoid stocking up your fridge with unhealthy foods that you may be tempted to eat later. At the grocery store, avoid the junk food aisle altogether.

“You can’t rely on will power alone,” Liu said.

You can also try to think differently about some foods. “The reason we think chocolate is satisfying is because we associate it with immediate gratification,” Liu said. That cognitive switch might be harder for adults, but could work for children, she added. Try to get children to associate French fries with grease and fat, not with a reward, she advised.

Liu and Gal’s work also has wider public policy implications. Policy-makers trying to steer the public toward healthier behaviors might want to be mindful of how they word their message, the researchers write. For example, many public health messages, and laws, label foods as good or bad. As a result, individuals might feel guilty when eating “bad” foods and angry after using self-control to eat “good” foods, the researchers write.

Gal and Liu are both business researchers and they point out that their findings have an impact in the marketplace as well. “Companies might do well in advertising anger-themed movies and video games (e.g., ‘Angry Birds’) next to the ‘healthy food’ aisles,” the researchers write.

Most of us need to exert self-control throughout the day, every day, and that suggests anger-related behavior might be more prevalent than is widely assumed, the researchers write.

So, companies might do well to produce more ad campaigns designed to elicit anger, they write. Anger-themed campaigns have recently become more prevalent, including ads by Miller Brewing, Kodak, Harley Davidson and Jet Blue, among others, they point out.

Finally, this study suggests that anger and aggression are not studied enough when applied to consumers, Liu said. She and Gal plan to look into it further.

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