Preparing the Immune System for Fall and Winter

Chris D. Meletis, ND (with permission from cpmedical.net, access pin: 587556)

Anyone who suffers from carbohydrate and sugar cravings knows that it can seem like torture to try to resist them. Yet, doing so can be an important step in achieving optimal health and weight and can improve overall energy levels.

The desire to consume breads, pastries, cakes, and pizza can at times seem overpowering, and indeed, some studies have compared sugar cravings with the need to consume addictive drugs. In one study, animals with repeated, intermittent access to a sugar solution developed behaviors and brain changes similar to the effects of some drugs of abuse. This study served as the first animal model of food addiction.1

Another study showed that in animals, sugar is more addictive than cocaine. When rodents were allowed to choose mutually exclusively between sugar water and intravenous cocaine, 94 percent of the animals chose sugar. The same results were seen when the rats were allowed to choose between water sweetened with saccharin—an intense calorie-free sweetener—and cocaine. Even cocaine-addicted rats switched their preference to sugar, once the sweetener was available as a choice. The rats were also more willing to work for sugar than for cocaine.2

The study also found that animals with a long history of sugar consumption actually became desensitized to the analgesic effects of morphine.2

The researchers speculate that the addictive potential of intense sweetness has to do with sweet receptors located on the tongue. In both rats and humans, these receptors evolved in ancestral times when the diet was very low in sugar and have not adapted to the high-sugar consumption that occurs in modern times. Therefore, today’s sugar-rich diets result in abnormally high stimulation of these receptors, which triggers excessive reward signals in the brain that can override normal self-control mechanisms, leading to the intense desire for sugar.2

The reward signals that sugar consumption triggers are controlled by the dopamine system, which is involved in several aspects of the body’s responses to rewarding substances. The dopamine system is implicated in conditions such as drug addiction and eating disorders.3

What Causes Sugar and Carb Cravings?

A number of factors can cause sugar and carbohydrate cravings. Imbalances in blood sugar due to going many hours without food can lower our resistance to desserts and carbs. In my clinical practice, I advise my patients to eat many small, protein and vegetable-rich meals throughout the day, which can help reduce hunger-induced cravings. However, it may be important to check with your doctor if you have intense recurring hunger cravings.

Stress and adrenal imbalances can also trigger cravings. Psychological stress can significantly impact the propensity to gain and maintain weight over the long-term and can cause some people to overeat and indulge in “comfort foods” in order to help relieve their stress. The glucocorticoids (GCs), including cortisol, the most important glucocorticoid, play an important role in appetite regulation and metabolism.4 In fact, research has shown that when a person experiences stress early in life it can cause
them to have weight concerns over the long term. Even low-calorie-dieting itself can increase psychological stress and cortisol production, creating a Catch-22 situation where the dieter is actually craving more food due to the increased cortisol production that in turn triggers food cravings.

In one study illustrating cortisol’s effects on cravings and food choices, researchers exposed 59 healthy premenopausal women to both a stress session and a control session on different days. The women who had high cortisol levels after being exposed to stress consumed more calories on the stress day compared to those whose cortisol levels were lower. On the control day, the women with high cortisol ate similar amounts to those who had low cortisol levels. Stress and high cortisol levels also appeared to affect the type of food consumed as well. The women with the highest cortisol levels after being exposed to stress ate significantly more sweet food across days. Furthermore, increases in negative mood in response to the stressors were also significantly related to greater food consumption.

According to the researchers, “These results suggest that psychophysiological response to stress may influence subsequent eating behavior. Over time, these alterations could impact both weight and health.”

**Sleep and Appetite**

Lack of sleep is another factor that influences cravings and appetite. Occasional sleep loss results in increases in ghrelin and decreases in leptin levels, which causes an increase of appetite and hunger. Reduced leptin and increased ghrelin levels that occur after less sleep are associated with increases in subjective hunger compared to when people are well-rested. Studies have established a close link between sleep loss and imbalances in glucose metabolism and insulin efficiency. This may be the result of an impact on the efficacy of the negative-feedback regulation of the hypothalamic-pituitary-adrenal axis that occurs after sleep loss.

**Menstrual-Related Cravings**

A third factor affecting cravings in women is the menstrual cycle. Research has shown that women in the luteal phase of their cycles experience increased food cravings, particularly for carbohydrates and chocolate, and that they eat more during this time of the month.

Another study showed that women were less likely to experience food cravings and were less likely to give in to their cravings when they were ovulatory.

**Strategies to Reduce Cravings**

I find in my patients that there are a number of effective ways to reduce carbohydrate and sugar cravings. First, as mentioned above, I recommend that people eat many small, protein-rich meals throughout the day rather than several large ones. Consuming goat’s rue, cinnamon, bitter melon, N-acetyl cysteine and vandyl sulfate (as found in GluControl™) and chromium picolinate is also an effective way to help control cravings.

Components of bitter melon (Momordica charantia) extract have supported healthy blood glucose and lipid levels in animals, supported the health of beta cells, enhanced insulin efficiency and reduced oxidative stress. N-acetyl cysteine is especially important to reduce oxidative stress during...
imbalanced blood sugar metabolism. This is important because there is a strong link between reducing free radicals and healthy insulin efficiency. Goat’s rue (Galega officinalis) is important for supporting healthy blood sugar metabolism and it causes an increase in carbohydrate tolerance. Goat’s rue extract also has supported healthy blood sugar levels in humans. Cinnamon is another botanical important for promoting blood sugar balance. In humans, cinnamon supports insulin efficiency. The improvements were lost after the subjects stopped taking the cinnamon supplements. Vandium (vanadyl sulfate) is an important blood-sugar supporting mineral, while quercetin has been shown to maintain healthy levels of insulin in rats.

One of my other favorite supplements for controlling cravings is chromium picolinate, which I call “will power in a bottle,” because for some people it has a really positive effect. Researchers assessed the effect of chromium picolinate in modulating food intake in healthy, overweight, adult women who reported craving carbohydrates. In the double-blind, placebo-controlled study, 42 overweight adult women with carbohydrate cravings were randomly assigned to receive 1,000 mcg of chromium picolinate or a placebo for 8 weeks. Researchers then measured the subjects’ food intake at breakfast, lunch and dinner at baseline and weeks 1 and 8. The results showed that compared to placebo, chromium reduced food intake, hunger levels, and fat cravings and tended to decrease body weight.

In order to determine whether there is an adrenal component to cravings, I like to assess a person’s adrenal function using the salivary Adrenal Function Panel. If their cortisol levels are imbalanced, I will implement a regimen that includes AdaptaPhase® I and Cortisol Control. Alternatively, if they suffer from adrenal burnout, then CortiTrophin® is a good choice.

Taking steps to get restorative sleep is also important and can help keep the hormones that control appetite in balance. Finally, for menstrual-related cravings, women can eat a small amount of antioxidant-rich dark chocolate, especially chocolate with a low sugar content.

**Conclusion**

For many people, the urge to consume sugar and carbohydrates can at times seem overpowering. Yet, by using select nutritional supplements, supporting the health of the adrenal glands, and implementing lifestyle changes such as getting more sleep and eating small meals throughout the day, it is possible to control cravings, thereby improving overall energy and health.

**References:**