

## Can Stress Cause Weight Gain?

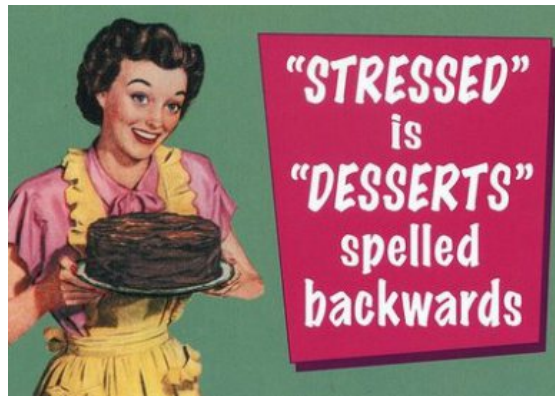
WedMD online

By: Colette Bouchez

Your job is hanging by a thread, and the credit-card bills are mounting. Your teenager wants to quit school and become a professional snowboarder. Or maybe it's the increasing tensions in the world, brought to you 24 hours a day on your TV screen, getting you down.

Regardless of the reason, stress is a way of life in the 21st century. And for some people, the effects go beyond feelings of anxiety and discomfort. For these people, **stress can mean facing each day ravenously hungry -- and adding weight gain to their list of worries.**

"While the immediate . . . response to acute stress can be a temporary loss of appetite, more and more we are coming to recognize that for some people, **chronic stress can be tied to an increase in appetite -- and stress-induced weight gain,**" says Elissa Epel, PhD, an assistant professor in the department of psychiatry at the University of California at San Francisco.



**The problem, she says, lies within our neuroendocrine system** -- a brain-to-body connection that harkens back to evolutionary times and which helped our distant ancestors to survive. Though today the source of the stress is more likely to be an unpaid bill than a saber-toothed tiger, this system still activates a series of hormones whenever we feel threatened.

"These hormones give us the biochemical strength we need to fight or flee our stressors," Epel tells WebMD.

The hormones released when we're stressed include adrenalin -- which gives us instant energy -- along with corticotrophin releasing hormone (CRH) and cortisol. While high levels of adrenalin and CRH decrease appetite at first, the effects usually don't last long.

**And cortisol works on a different timetable. Its job is to help us replenish our body after the stress has passed, and it hangs around a lot longer. "It can remain elevated, increasing your appetite and ultimately driving you to eat more," says Epel.**

### **'Fight or flee' -- or chow down**

While this system works fine when our stress comes in the form of physical danger -- when we really need to "fight or flee", and then replenish -- it doesn't serve the same purpose for today's garden-variety stressors.

"Often, our response to stress today is to sit and stew in our frustration and anger, without expending any of the calories or food stores that we would if we were physically fighting our way out of stress or danger," says Shawn Talbott, PhD, an associate professor in the Department of Nutrition at the University of Utah and author of *The Cortisol Connection*.

**"Often, eating becomes the activity that relieves the stress."**

**In other words, since your neuro-endocrine system doesn't know you didn't fight or flee, it still responds to stress with the hormonal signal to replenish nutritional stores -- which may make you feel hungry.**

### **'Fight or flee' -- or chow down continued...**

**Following those stress signals can lead not only to weight gain, but also the tendency to store what is called "visceral fat" around the midsection. These fat cells that lie deep within the abdomen have been linked to an increase in both diabetes and heart disease.**

**To further complicate matters, the "fuel" our muscles need during "fight or flight" is sugar -- one reason we crave carbohydrates when we are stressed, says endocrinologist Riccardo Perfetti, MD, PhD.**

"To move the sugar from our blood to our muscles requires insulin, the hormone that opens the gates to the cells and lets the sugar in," says Perfetti, who directs the outpatient diabetes program at Cedars Sinai Medical Center in Los Angeles. And high levels of sugar and insulin set the stage for the body to store fat.

"So people who are under stress, metabolically speaking, will gain weight for that very reason," Perfetti tells WebMD.

### **Mind Over Matter**

As much as we would like to blame all our weight gain on stress, **experts say that eating in response to stress can also be a learned habit -- one that's merely encouraged by brain chemistry.**

"Under stress, there's an impulse to do something, to move, and often, eating becomes the activity that relieves the stress. It's easy to do and it's comforting," says David Ginsberg, MD, a psychiatrist and director of the Behavioral Health Program at New York University Medical Center.

In fact, it may be our bodies' initial response to rising levels of cortisol that teaches us there is comfort in sugary or starchy foods.

"During the first couple of days following a stressful event, cortisol is giving you a clue to eat high-carbohydrate foods," Perfetti tells WebMD. "Once you comply, you quickly learn a behavioral response that you can feel almost destined to repeat anytime you feel stressed."

**Now for the good news: Whether your urge to eat is driven by hormones or habits or a combination of both, research shows there are ways to interrupt the cycle, break the stress and stop the weight gain.**

*Lorie Eber is a trained Wellness Coach, NASM Certified Personal Trainer, Gerontologist and author. Lorie Eber Wellness Coaching provides one-on-one guidance and support to clients who are ready to make permanent lifestyle changes and lead a happier, healthier life.*