

Stress and Weight Gain: Are you a victim?

April 18, 2018 Kristin Cardillo

What is stress?

If you ask a psychologist, their response may correlate with your possible response. Stress is an uneasy feeling. It can often be defined as being in one place or doing one thing, but wanting to be elsewhere or do something else. It takes a toll on our bodies physiologically and psychologically.

If you ask a doctor or anyone in the medical field what physiological stress is, their response would sound more like Merriam – Webster’s dictionary. Perhaps, they would site the true definition which is “Stress is the body’s method of reacting to a condition such as a challenge or physical and psychological barrier.”

Do you see the correlation? Physiologic stress is a response to a stressor. Our stressors can be anything from having uneasy feelings of being in one place, but wanting to be in another. Or from what many people stress over, and that is anxiety about upcoming events or events of our past. Our stressors can also be our response to an environmental condition resulting in the body thinking it is under attack (‘fight or flight’).

What happens to our body and why do we gain weight?

When we experience stress, this is what happens – a complex mix of hormones and chemicals- such as adrenaline, cortisol and norepinephrine are released to prepare the body for physical action. This causes several reactions.

REACTION #1 – How it causes us to eat more:

Cortisol first mobilizes carbohydrate and fat for quick energy when a person is under stress (the “fight or flight” response). Once the stress has passed, cortisol causes an increase in appetite to replace the carbohydrate and fat that was burned while fighting or “fighting.” However, most people are not fighting or fleeing from danger today. This is because most individuals live sedentary or minimally active lives, they consume more calories than they burn when cortisol levels increase.

Since we aren’t fighting the same stress as our ancestors we are facing high levels of cortisol then following those high levels with a sedentary lifestyle. The way we SOLVE our stress is very different causing us to eat more calories than needed simply because our body is TELLING us to. Hint – we only have so much control over this response. Therefore, being aware of it can help you fall out of this STRESS TRAP.

Let’s put this into context – For example: Back in the day, if a family was faced with a bear invading their home and food supply, the fight or flight response switched on, cortisol was produced and after the stress the family would actively go and fix the problem. In today’s world especially as a New Yorker, you can become stressed from a missed train, upcoming deadline or a ruthless coworker. Our cortisol levels increase. however, to SOLVE our stress it often involves sedentary work. Meaning we sit at our desk eating because our cortisol levels now made us hungry. If we are kept in a state of stress for long periods, it can be detrimental to our

health. The results of having elevated cortisol levels can be an increase in sugar and blood pressure levels, and a decrease in libido.

REACTION #2 – How it affects glucose digestion:

As if that isn't enough for us to gain weight, cortisol will also stimulate glucose production- which if not used for fuel, is converted and stored as fat. Some studies also show that there is a link between this response and cravings for specific food groups, namely sugary sweets and simple carbohydrates (bread, crackers, sweet coffee & more).

In a study on healthy female postgraduate students, researchers correlated less dietary restraint and an increase in caloric intake from carbohydrates, saturated fat and sugar. This was in association with an increase in cortisol levels around final examination time. (Roberts et al. 2014). Another study in Japan showed that when stress was present in the workplace workers are more likely to be insulin resistant. When we become insulin resistant (which is more common than uncommon) we become hungrier which leads to excess caloric consumption (Yan et al., 2016).

Take away note:

Temporary stress is not the true cause of weight gain; however, it is chronic stress. Chronic stress that lasts for a month or more can lead to weight gain which can also lead to the amount of cortisol released by a healthy individual under temporary stress is likely not enough to lead to weight gain. However, chronic stress that lasts for several months or years may lead to weight gain in addition to metabolic diseases.