

Balancing Act!

Does Stress Increase Weight Gain?

Elevated stress is a risk factor for cancer, high blood pressure and cardiovascular disease. How stress influences eating behaviors and leads to obesity is a key topic of interest to researchers and exercise professionals.

Stress

Stress can be defined as the **nonspecific response of the body to any stimulus that overcomes, or threatens to overcome, the body's ability to maintain homeostasis** (the equilibrium of internal biological mechanisms). A stress response may be caused by social stressors (e.g., life events, personal conflicts); physiological stressors (e.g., pain, vigorous exercise, intense heat or cold); psychological or emotional stressors (e.g., sorrow, fear, anxiety); and/or chemical stressors (e.g., blood acid-base imbalance, low oxygen supply).

Stress-Induced Eating

Stress-induced eating may be defined as making oneself feel better by eating or drinking in response to a stressful situation. In a 1994 *Psychological Bulletin*, two models of stress-induced eating were proposed. The first model, referred to as the **general-effects model**, predicts that stress will induce some type of psychological change that results in eating. The second, more commonly accepted model is referred to as the **individual-differences model**. This model suggests that owing to background learning, personal attitudes and biological differences, some people will change their eating habits under stressful conditions while others will not.

In response to chronic stress and personal strains (e.g., interpersonal relationship, financial or lifetime aggravations), 40% or more of people will increase their caloric expenditure; 40% will decrease their caloric intake; and 20% will not change their eating behavior in any way. Consequently, stress-induced eating may be directly associated with weight gain and obesity for some people, but not for others.

It is interesting to note that during periods of chronic stress, people often have limited time to prepare healthy food choices and consequently tend to choose fast foods, which are usually more calorically dense. The research suggests that overweight individuals tend to eat more when exposed to chronic stress, whereas normal-weight or underweight individuals do not. It appears that people who are chronically stressed—regardless of whether they eat more or less—tend to choose more pleasurable or palatable foods containing higher levels of fat and/or sugar. This temporarily decreases stress levels, which reinforces more eating of pleasurable foods. Thus, dealing with life's stressors using food can become an incessant cycle that continues to contribute to obesity.

The Buffering Effect of Exercise on Stress

There is hope. The Physical Activity Guidelines Advisory Committee Report, published in 2008, concludes that physical activity can protect against feelings of distress, defend against symptoms of anxiety, guard against depressive symptoms and the development of major depressive disorder and enhance psychological well-being. Exercise bouts of 30 minutes (but not longer than 60 minutes) appear to have the best "stress-reducing" benefits. There does not appear to be a differential effect based on the type of exercise (e.g., running, swimming, cycling, elliptical training, etc.). As to exercise intensity, the Physical Activity Guidelines report indicates that moderate to vigorous physical activity (with regular participation) reduces stress better than low-intensity activity.

So, it is better to exercise than eat to reduce your stress. Here is to a stress free month!

