

## Some Common Causes of Unintentional Weight Gain – A Recent Review of Literature

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### ABSTRACT

Weight gain is a problem that affects not only the body, but also influences people's self-esteem. This condition is often not only related to the lack of healthy habits, such as physical exercise and a balanced diet, but may have other causes, such as, thyroid problems, genetics/heredity, excess cortisol, medicines that influence appetite and metabolism etc. In addition, other factors that can influence unintentional weight gain include stress and sleep disturbances. There is scientific evidence of the role of *stress* as a contributing factor to weight gain. The explanation is simple and involves the body's production of hormones and enzymes that influence appetite and weight gain. Studies show, for example, that *stress* accelerates the production of cortisol. This hormone, in addition to slowing down metabolism, increases appetite when produced in excess. Cortisol also reinforces the desire for high-calorie foods that are high in sugar and fat, such as chips or cakes. One of the effects of *stress* is changes in sleep. Difficulty falling asleep, intermittent sleep and nightmares are some of the consequences that this state can have on the sleep cycle. It turns out that systematically sleeping less than 8 hours causes changes in the hormones leptin and ghrelin, responsible for controlling hunger: leptin levels (decreased appetite) decrease, while ghrelin levels (increased appetite) increase. In conclusion, other factors than diet including stress and sleep contribute to weight gain. The reverse can help in healthy weight management.

**Key words:** Unintentional weight gain, Stress, Sleep, Calories, Lifestyle

### Introduction

Obesity and unintentional weight gain are major public health concerns all over the world.<sup>[1,2]</sup> The conditions can be very frustrating, especially if the causes are unknown. Conversely, weight loss is a goal for many individuals, but it often seems like an insurmountable task. While the usual advice focuses on diet and exercise, there are other factors that must also be taken into account.

The amount of sleep an individual gets affects his/her overall health and well-being.<sup>[3]</sup> Sleep deprivation can lead to a range of physical and mental problems, including obesity and depression. Studies have shown that when people sleep less than 7-8 hours a night, they can gain up to a pound a week due to an increase in food cravings.<sup>[4]</sup> In

addition, those who lack quality sleep release more ghrelin – a hormone that stimulates hunger – leading them to consume more caloric foods. As such, getting adequate rest is important to any weight loss plan.<sup>[5]</sup>

Stress can also play a role in weight. During times of stress, cortisol levels rise, leading to crave energy-dense comfort foods.<sup>[6]</sup> This means we are more likely to reach for high-calorie snacks, which can quickly add up over time, resulting in weight gain or difficulty losing weight. Additionally, chronic stress has been linked to inflammation, which can contribute to metabolic disorders that further contribute to obesity or make it difficult to lose weight while dieting or exercising.<sup>[7]</sup>

In brief, eating unhealthy foods, too much sugar and processed foods are the main factors for unintentional weight

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gain. Other contributing factors including stress and sleep disturbance further worsen the situation of unintentional weight gain. Poor sleep habits and high levels of stress can have detrimental effects on our bodies when it comes time to lose weight – making it even harder for us to reach our goals without the added support of healthy lifestyle habits like sufficient amounts of sleep, restorative and conscious relaxation techniques such as meditation or yoga practice. Therefore, it is important for all diet seekers to pay attention to not only what they eat, but also how much and how well they rest to maximize their chances of achieving their desired results.

## Eating too much highly processed foods

Oats, frozen fruit, and yogurt, among other healthy options, are minimally processed. However, profoundly handled food sources, for example, high-sugar breakfast grains, quick food sources, and microwavable feasts are loaded with destructive fixings, added sugars, additives, and undesirable fats. Additionally, numerous studies indicate a link between a processed diet and weight gain.<sup>[8]</sup> For instance, a study conducted in 2019 on 19,636 adults in Canada found that those who consumed the most processed foods were 32 percent more likely to be obese than those who consumed the least processed foods.<sup>[9]</sup> Foods that have been highly processed tend to be high in calories and lack important nutrients like protein and fiber, which help you feel fuller for longer. In point of fact, 20 people participated in a two-week study that found that those who consumed highly processed foods consumed 500 more calories per day than those who consumed unprocessed foods. Therefore, switching to whole foods and avoiding processed meals and snacks is worthwhile.<sup>[10]</sup>

Sugary foods and beverages like candy, cookies, soda, sports drinks, ice cream, iced tea, and sweet coffee drinks are likely to quickly increase waist size. Sugar consumption has been linked to both weight gain and an increased risk of chronic diseases like type 2 diabetes and heart disease in numerous studies.<sup>[11]</sup> According to a review of 30 studies involving 242,352 children and adults, the largest source of added sugar in the United States is sweetened beverages, which also have a strong correlation with weight gain.<sup>[12]</sup> Another study of 11,218 women found that drinking one glass of sweetened soda every day resulted in a one-kilogram weight gain over the course of two years. This suggests that cutting back on soda consumption may have the opposite effect.<sup>[13]</sup>

## Lifestyle of sedentary living

Lack of physical activity is a major factor in weight gain and chronic disease.<sup>[14-15]</sup> Sedentary activities include

driving, working at a computer or phone, watching television, and sitting at a desk. On average, 464 obese or overweight individuals sat for 6.2 hours on workdays and 6 hours on other days, according to a study. Watching television came in second, followed by work-related activities.<sup>[15]</sup> A significant change can be made by making a few straightforward adjustments to one's lifestyle, such as exercising less frequently or sitting for longer periods of time. A study that lasted three months and involved 317 workers found that standing for one hour rather than sitting during the workday reduced overall fat mass and waist size while increasing muscle mass.<sup>[16]</sup> Additionally, studies demonstrate that excessive screen time significantly contributes to unwanted weight gain.<sup>[17-19]</sup> Taking a walk after dinner instead of watching television, exercising or walking during lunch break, investing in a sit-stand desk or desk bike, or cycling to work can all help prevent weight gain. These are just a few examples of small changes that can help.

## yo-yoing

The yo-yo effect causes people to either gain weight unintentionally or lose weight on purpose through dieting. Interestingly, this pattern is linked to a higher likelihood of weight gain over time (20,21). Dieters gained more weight than non-dieters over the previous year.<sup>[21]</sup> Due to body's physiological responses to such behaviors, such as changes in hunger and satiety hormones, restrictive eating and dieting can, according to other studies, result in weight gain.<sup>[22-24]</sup> Furthermore, a great many people who shed pounds on a severe, prohibitive eating routine frequently recapture similar sum in no less than five years.<sup>[25]</sup> Long-term lifestyle changes like exercising, avoiding processed and sugary foods, and eating whole foods that are high in nutrients, fiber, and protein are necessary to avoid weight gain in the long run.<sup>[26]</sup>

Undiagnosed underlying medical issue While a variety of lifestyle factors can contribute to unintentional weight gain, medical conditions can also play a role, including:

- Underactive thyroid a slow thyroid gland or Weight gain or difficulty losing weight can result from slowed thyroid function.<sup>[25,27]</sup>
- Feeling down. Obesity and weight gain are linked to this common mental illness.<sup>[28,29]</sup>
- Hormonal imbalances are the hallmark of this condition, which affects women of childbearing age. It can make it hard to lose weight and make you gain weight.<sup>[30]</sup>
- Disorder of binge eating. Also known as binge eating disorder or BED. The recurrent episodes of uncontrollable binge eating are characteristic of BED. Various health issues, including weight gain, can result from this.<sup>[31]</sup>

Because weight gain is also linked to other conditions like diabetes and Cushing's syndrome, it's important to get the right diagnosis from your doctor.<sup>[32]</sup> Additionally, taking certain medications, such as antipsychotics and antidepressants, can make you gain weight. If you think your medication is making you gain weight, talk to a doctor.<sup>[33]</sup>

Sleep deprivation is detrimental to one's health. Sleep deprivation can cause weight gain and other health problems. When compared to women who slept six hours or more, those who slept less than six hours a night had the highest BMI and the highest levels of visfatin, a protein produced by fat cells, in a study of 92 women. slept.<sup>[34]</sup> Ten overweight adults were subjected to a low-calorie diet for two weeks as part of a study. Compared to those who slept 8.5 hours per night, those who slept 5.5 hours per night lost 55% less fat mass and 60% more muscle mass.<sup>[35]</sup> As a result, getting more sleep can help you lose weight. There is some proof that dozing 7 hours or more each night is related with a 33% more noteworthy possibility of weight reduction, contrasted with resting under 7 hours of the evening.<sup>[36]</sup>

From the preceding discussion, it can be argued that diet that includes more whole and unprocessed foods is an easy and effective way to lose weight and improve other aspects of one's health.

### **Not eating enough unprocessed food**

In fact, the most important factor in weight loss is choosing the unprocessed foods. In a study, 69 adult participants were divided into two groups. One group followed a low-carbohydrate diet for a year, while the other followed a low-fat diet. Both groups were required to consume as many vegetables as they could, cut back on refined carbohydrates, added sugars, and trans fats, eat real, minimally processed, and nutrient-dense foods, and prepare the majority of their meals themselves. People in both groups lost about the same amount of weight, 5.4 kilograms for the low-fat group and 5.9 kilograms for the low-carb group, according to the study.<sup>[37]</sup> The results of this study may be suggestive of the fact that by gradually increasing intake of nutrient-dense foods like beans, eggs, nuts, and seeds eating whole, unprocessed foods is not difficult.

### **Overstressed**

Chronic stress is a common issue that can cause obesity and overweightness.<sup>[38]</sup> It has been demonstrated that high levels of the stress hormone cortisol can cause weight gain by increasing the appetite for highly palatable, high-calorie foods.<sup>[39]</sup> Additionally, research indicates that obese individuals have higher cortisol levels than non-obese

individuals.<sup>[40]</sup> Interestingly, managing stress can help people lose weight. In an eight-week study of 45 obese adults, those who used relaxation techniques like deep breathing, lost significantly more weight than those who only received conventional dietary advice.<sup>[41]</sup> Yoga, spending time in nature, religious prayers, and meditation are examples of relaxation exercises that have been shown to reduce stress.<sup>[42-44]</sup> Older individuals, in particular, have malnutrition coupled with immune decline can be victim of stress.<sup>[45-49]</sup>

## **Conclusion**

In conclusion, weight gain can be caused by a variety of factors. Some of the habits that can make it more likely that you'll gain weight are not getting enough sleep, living a sedentary lifestyle, and eating too much food that is processed and/or sugary. Still, weight management is not impossible for a healthy life with a few easy steps like mindful eating, exercise, and focusing on whole foods.

## **Recommendations for Individuals**

Weight gain may be a concern for most of the individuals. There is a need to investigate the reason for sudden undesirable and unintentional weight gain. Once the reason is found, it is always easy to control weight gain. Doctors who are treating their patients for various diseases also should have some knowledge about weight disturbances. They should encourage their patients how to have a check on their weight gain. Diet, exercise, sleeping habits – all are contributing factors and these must be kept under control.

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Not Applicable

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## **Conflicts of interest**

All authors declare “no conflicts of interest”

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