



## **Impact of Festivals on Weight Gain**

**Arya Thakur<sup>a#</sup>, Yeshwant Lamture<sup>b\*≡</sup>, Meenakshi Yeola Pate<sup>a<sup>o</sup></sup>,  
Pankaj Garde<sup>b≡</sup>, Tushar Nagtode<sup>b≡</sup> and Venkatesh Rewate<sup>b≡</sup>**

<sup>a</sup> *Jawaharlal Nehru Medical College, Datta Meghe institute of Medical Science (Deemed to be University), Sawangi (Meghe), Wardha-442001, Maharashtra, India.*

<sup>b</sup> *Department of Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Science (Deemed to be University), Sawangi (Meghe), Wardha-442001, Maharashtra, India.*

### **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

Obesity is on the rise, and the fundamental causes of this development are still a source of debate. The extent of holiday weight gain and its relation to annual weight gain was recently investigated. The study aims to review the literature to ascertain the consequences of holidays on weight gain. In India, holidays during summer vacation and festive show a significant rise in weight gain, whereas in USA UK, the 6-week long winter vacation shows a significant rise in weight gain. The COVID-19 Millions of people's habits were undoubtedly changed by the imposed lockdown to control the pandemic. People of all ages have reduced physical activity and had their food habits influenced by imprisonment, which was marked by the confiscation of most activities. Likewise, during the 6-week holiday season, weight transformation represent 51% of annual weight gain among the total public. Even though the absolute values for weight gain in this study were weaker than anticipated, these findings demonstrate that holiday weight gain may be a critical enabler to the rising epidemic of obesity. To substantiate these findings, greater exploration using representative populations seems needed. The volunteers were weighed four times at six-to-eight-week intervals to ensure weight change for three periods: just before the holiday, during the holiday, then after the holiday. To

<sup>#</sup> Student;

<sup>≡</sup> Professor;

<sup>o</sup> Professor and HOD;

\*Corresponding author: E-mail: Yash18671@yahoo.com.in;

shield the core concept of interest, the subjects provided data on other vital signs and self-reported health metrics. We highlight the instance of an NHS healthcare worker, which is the first of its kind, in which fasting and other elements have played a hand in shaping substantial weight fluctuations.

**Keywords:** BMI; weight gain; COVID -19; weight change; weight loss; holidays.

## 1. INTRODUCTION

A holiday is a pause, a rest, and time to recharge. A holiday is a time to get away from your day-to-day life, away from work, from stress. Sure, You can simply take time off work or pursue new interests, but getting away totally is far more rejuvenating. It broadens your horizons, relaxes you, so you're more relaxed, and when you return, you're more alert and alive, more grateful.

Going on holiday can also be inspiring; perhaps you stumbled upon something that made you want to learn more about it, or to give it a try, like an exotic art or music, a new sport, a wilderness, or scenery that struck a chord.

Since there has recently been research interest in the health benefits and adverse health effects associated with vacations, the present study aimed to identify the characteristics of vacations predicting health outcomes.

Weight gain, some malignancies, migraines, heart disease, hypertension, and immunological issues are all symptoms. You may be unaware of the additional stress you're experiencing around the holidays, but learning to recognize stress signs is the first step toward adequately managing it. Here are some examples of warning signs:

- Sleeping difficulties
- Irritability
- Dissatisfaction with the task has decreased
- A persistent sense of impending doom

- Hands that are clammy and sweaty
- Tension headaches, backaches, stomach-aches, and other physical aches and pains are among the most common aches and pains.

Weight gain is defined as extra mass added to the body due to overeating or lack of physical activities. Excessive weight gain can also be acknowledged as obesity.

## 2. MATERIALS AND METHODS

The narrative review compiles data from various formats in PubMed. IT also includes data from Retrospective studies, Wikipedia's and books . When searched on PubMed using keywords like weight gain, BMI, covid-19, weight loss, holiday season, 15 results were found out of which 5 were narrative review, 1 open study, 1 prospective study and 1 longitudinal study.

## 3. DISCUSSION

Obesity, which is recognized as an abnormal or excessive buildup of fat that can be harmful to one's health, is a major risk factor for more than 200 comorbid illnesses including diabetes, hypertension, cardiovascular disease, and cancer. Obesity affects over 1.2 billion people worldwide, according to TOS officials [1]. ( The Obesity Society. "New strategy for preventing holiday weight gain." ScienceDaily. Science Daily, 23 May 2019.)

Obesity can be further classified as [2] (drvinodbnair.blogspot.com)

**Table 1. Classification of BMI**

BMI (Kgm-1)	Definition
<18.5	Underweight
18.5-24.9	Ideal Weight
25-29.9	OverWeight
30-39.9	Obese
40-49.9	Morbidly Obese
50-59.9	Super Obese
60-69.9	Super Super Obese
>70	Hyper Obese

### 3.1 Obesity Classification Predicted on Fat Distribution

- Android - fat accumulation, primarily in the abdomen
- Insulin resistance and heart disease are linked
- Gynoid - fat deposits on the hips and buttocks
- Linked to a mechanical difficulty

### 3.2 Pathophysiology

Obesity is considered to be one of the most prevalent diseases that can be avoided [3,4] It is a global epidemic. Obesity is driven by a complex of biological, Ecological, societal, and familial factors and behavioural or intellectual factors [5]. Adiposity is caused by a long-term positive energy balance, which seems controlled by endocrine tissues and the central nervous system dealings in a sophisticated way [6].

Dimension of obesity can also be used to quantify morbidity and death. The body mass index (BMI) has long been used to categorize overweight and obese people. Waist circumference is the best anthropometric predictor of visceral fat and a better predictor of metabolic disorders such as diabetes, hypertension, and lipid accumulation [7]. People with a normal BMI but a wider waist seem to be more prone to diabetes. However, given BMI and waist circumference are coherent in nature, combining these yields fairly negligible risk prediction. In fact, hip circumference seems to have an adverse connection with metabolic syndrome. Diabetes and coronary heart disease are tied to reaching a massive hip circumference. That's most closely attributable to a large muscle mass in the hip area. [8].

The Visceral Adiposity Index (VAI) is a more specific and sensitive sampling procedure than those of the Body Mass Index (BMI). As an outcome, the VAI is a credible marker of a patient's expanded danger of cardiometabolic ailments [6,7]. At the moment, there is a scarcity of fundamental evidence of the biochemical intellectual complexities involved. The assertion that unlike subcutaneous white adipose tissue, visceral fat has direct access to the portal venous system, perhaps support the VAI's heightened specificity and sensitivity [9].

Obesity has inflammatory components which are correlated diabetes, atherosclerosis,

hypertension, and other significant chronic disorders and numerous malignancies, either directly and indirectly [10,11]. Inflammatory cytokines such as IL-6, TNF, C-reactive protein (CRP), IL-18, resisting, and vastatin have altered hemodynamic levels in obesity prevalence [12,13]. Body fat metrics have a good rapport with inflammatory markers than BMI [14,4]. Dietary restraints and exercise have often been recommended to help people lose weight and minimize the challenges that come with it. Caloric restriction is said to promote healing in obese people [15,16]. A few trials, however, observed displaying long-term anti-inflammatory approaches are untouched by dietary weight loss. [17] Regular exercise, on the other hand, has a profound effect on chronic inflammation linked with obesity and adiposity ailments such as hypertension, diabetes, dyslipidemia, and so on [17].

### 3.3 Early Days Vs Today

During early times people lead a healthy maintained disciplinary lifestyle. The technologies were not that developed .man use to exercise ,do more physical activities ,children use to play outdoors, transport qualities were not that good , to save money people tend to walk more as financial condition were not good, people used to eat healthy food, homecooked food rich in all macro and micro nutrients. But gradually things start to get better ,technologies ,environment, mans conditions everything started to gradually improve.

As the conditions of man improved, the health started determining the physical activities minimized, people eat junk food more, mostly than doing physical activity today people use brains a lot as of leading to long sitting hours. Better conditions lead to more stress, the harmful environment. Children instead of going outside love to be addicted to mobiles and video games. The competitive state which is rising is not giving any chance for relaxation, to pause and enjoy life. People have grown habituated to having easy lifestyle than hard one. They like to take shortcuts thinking of near future and not the full picture.

The underlying role for weight gain in adulthood happening disproportionately during festive season are obscure. Increased consumption of a wide variety of high-energy foods, from the other extreme, have persistently proven tied to weight

gain in both animal models and people [18]. Likewise, short-term findings demonstrate that highly palatable foods are devoured in larger abundance than less palatable foods of exceptional quality [19]. Because special foods are widely consumed during the festivities, the increased nutritional diversification and palatability in addition to the routine foods may lead to overeating, which could account for the increase in body weight and fatness [20].

### 3.4 The Framingham Study

The morbidity obese cohort was the first to be abandoned leading to the loss of all participants. Morbid Obesity

- HTN -often known as high or fluid overload pressure, is an ailment in which the blood vessels have an abnormally elevated pressure for an extended duration.
- Diabetes mellitus is a condition wherein your blood glucose, popularly known as blood sugar, is insanely high.
- CAD caused by plaque accumulation in the arteries' doorframes
- CHF
- Cirrhosis of liver
- Osteoarthritis
- Vascular disease
- Sleep apnea or insomnia
- Breast cancer in cells of breasts
- Uterine cancer
- Prostate cancer a seminal gland the size of a walnut that generates seminal fluid
- The first line of defence is to make lifestyle and nutritional modifications
- Only 5 to 10 % of people maintain there weight loss after a year
- If conservative treatment fails surgery may be required

### 3.5 The COVID Period

The PA level dropped considerably during the COVID-19 lockdown, according to a research. three - quarters of the subjects claimed they exercised less than usual, and 63 percent said they only exercised three times a week or fewer, which again was associated with elevated weight gain (54.8 percent ). By use of home digital PA modalities were tied to PA level. During COVID-19, the available literature suggests how lockdown and social estrangement strategies had quite a detrimental effect on PA levels, exercising customs, and Folks that are physically

active have a good medical score. We believe that the premise led to a reduction in PA below the minimum proposed by medical associations, which is consistent with other research which have shown a dip in PA levels during closure phases. According to the study, rampants, such as the ongoing rampants, produce innovative health difficulties due to the need to stay at home, causing a drop in PA among all people, especially among physically active individuals who regularly participate in sports. While a lockdown is fundamental to confront the pandemic, it represents additional health hazards.

Longer periods of amount of time may increase immobile behaviour and diminish PA levels, which can have negative repercussions as an instance, a serious chance of developing health disorders (particularly chronic ones), weight gain, and other issues. Suboptimal solar exposure, social isolation, and metabolic health can all be detrimental to one's health. While regular exercise has been shown to improve mental health and general outlook, staying at home for an extended period of time can lead to inactivity and anxiety, as well as despair and gloom, culminating in an even more immobile lifestyle and weight gain. Sedentary lifestyle and When due to lack of physical action are compounded, people can have catastrophic consequences for one's life and quality of life. As a result of our poll, we discovered how difficult it was to maintain a Well during lockout, pursue a healthier lifestyle. Seventy percent of people who were physically occupied in their regular lifestyle preceding to the outbreak experienced their PA levels drop dramatically, which was coupled to excess weight. A link was identified between epoch, health status, and a lower PA level. Pandemic quarantine was most likely to impact the individuals with low health. They were less inclined to start activities at home. As a result of the absence of physical exercise, their health toll is greater, which can lead to impairment of their health. There was a constructive association between age and frequency of physical fitness among the seniors. Peers were less inclined to interact in virtual home-based workout, but they had well-developed and reliable training regimes that lasted forever after the program concluded. This unfortunate twist may reflect the older healthy trained population's higher resilience in not forsaking their ways of life.

An increase in PA energy expenditure of roughly 6300–8400kJ/week (1500–2000kcal/week) is

with decent lifestyle modification, according to observational studies. The decrement in – anti activity thermogenesis (NEAT), which could also be interpreted as the caloric burn of almost any physical activities other than intended sporting-like exercise, illustrates how some active learners possess fat. Considering activity levels have dropped, it's no surprise that cumulative NEAT has dropped dramatically, emulating rising duration indoors. It is crucial to set tactics by reconfiguring our home settings in order to rebuild it to its past value. Long-term weight loss is also tied to exercise's concomitant psychological changes, as well as improved nutrition, rather than the downstream regarding energy expenditures, which in deconditioned folks are generally insignificant. Exercising and following a balanced diet have a symbiotic relationship. Exercise can boost dietary behaviors and weight loss while also influencing demeanor, self image, soul, and consciousness.

Overall dietary quirks also have an impact on quality of life. Engaging in healthy habits boosts one's motivation and morale to improve oneself holistic well-being and mental health. The indirect impacts of The bilateral consequence is dwarfed by fuel usage, which are notoriously low in deconditioned folks. Not only is PA level tied to weight increase, but so is nutrition. COVID-19 has had an impression on people's dietary pattern [21-27].

#### 4. WHY ARE WE ADDRESSING IT?

- Co morbidities
- Standard of life
- Survival life expectancy

#### 5. THE BENEFITS OF WEIGHT LOSS

- A 9 kg weight loss was coupled to a 53 percent drop in cancer deaths as well as a 4.4 point drop in diabetes-related fatality.
- For every kilogramme of weight lost, survival rose by 3-4 months.
- Hypertension, hyperlipidemia, and insulin resistance are all reduced.
- Diseases are becoming less severe.
- The individual feels more physically fit and intellectually alert.

#### 6. OBJECTIVES OF TREATMENT

- Preventing weight gain is one of the most important things you can do.

- Weight loss to attain a BMI target that is realistic
- Keeping a reduced body weight for a long time

#### 7. TREATMENT

- Medications
- Dietary changes
- Behavioural therapy
- Exercise
- Psychotherapy
- Hypnosis
- Surgeries
- People can add adventurous things like trekking ,hiking, various games like basketball ,football, swimming , skipping to their daily life styles to maintain it.
- People can also practice yoga ,meditation and various dance exercises like Zumba.

#### 8. CONCLUSION

Obesity or weight gain is a major problem worldwide which affects a person physical ,social and mental well being.it also hinders in daily lifestyles. For morbidly obese patients, current diet and pharmacological therapy has shown to be ineffective. People should include some physical activities or some form of exercise in there day to day life to maintain their well being. People should also look forward to community and group activities as refreshment or health benefits.

#### CONSENT

It is not applicable.

#### ETHICAL APPROVAL

It is not applicable.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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