



Review Article

# Effect of Sedentary Lifestyle on Obesity

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## I N F O

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## A B S T R A C T

One of the biggest health hazards is a sedentary or inactive lifestyle. Sedentary behaviour entails spending too much time sitting or lying down without activity. Vital practices for good health are physical activity and regular exercise. However, many people do not exercise regularly. "All causes of death raised by Sedentary lifestyles, the risk of CVD, diabetes mellitus, and obesity doubled due to sedentary lifestyle and chances of colon cancer increase, development of high blood pressure, progression of osteoporosis, occurrence of lipid disorders, depression, and anxiety are also caused due to sedentary lifestyle. Sedentary behaviour is becoming a major public health concern according to the WHO. Despite being connected to a variety of chronic health disorders; sedentary lifestyles appear to be becoming more prevalent in many countries. The health concerns connected with a sedentary lifestyle are being confirmed by recent study.

**Keywords:** Health, Obesity, Sedentary Lifestyle

## Introduction

A sedentary lifestyle has a major role in developing obesity, overeating and inactivity reciprocally accumulate the fat and causes obesity, overeating produces excessive acid and causes mucus membrane lining to become congested, an excessive intake of food causes serious illnesses like cancer of the breast and womb, kidney disorders, gallstone, arteriosclerosis, osteoarthritis, high blood pressure, apoplexy. An obese person has high cholesterol and triglyceride level and is much more likely to die suddenly of a heart attack. It must be remembered that what is enough food for a hard-working man would be a great excess for a person of sedentary habits of living. The modern order in which food is served at meals is very destructive. The meal is arranged so that the most highly tempting dishes are presented last, such as pastries, ice cream, etc. This encourages excessive eating. After having eaten enough, a

person adds this extra rich food, which becomes a burden and poison to the system. When the intestines are full already, any additional food that is eaten is forced to remain in the stomach more than required time and ultimately become sour, when this particle is putrefied, its harmful substances are absorbed into the bloodstream and thus the whole body is affected. The work of heart, stomach, liver, kidney, and bowels become much more difficult due to overeating.<sup>1,2</sup>

## Sedentary Behaviour and its Outcomes

- Obesity
- Some kinds of cancers
- Type 2 diabetes
- Early death
- Cardiovascular illness

Inactivity for long periods of time can slow metabolism and decrease the body's capacity to manage blood pressure



levels at normal and to control blood glucose levels, and fat breakdown.

### Epidemic of Obesity

A greater public health concern across the world is obesity. It can be defined as a medical situation in which the accumulation of body fat to the extent that has a negative effect on health exists. A healthy body needs a minimal amount of fat for the proper hormonal, physiological, and immune functioning, fat works as a thermal insulator and shock absorber for sensitive portions of the body, and as an energy store for future sake. But the accumulation of too much storage fat can alter the body appearance, impair joint movement and make the organs inflexible, it may cause health-related problems, especially cardiovascular disease.<sup>3</sup>

Societal/ environmental changes are the primary cause of the worldwide obesity epidemic. Another significant cause could be an increase in time sedentarily spent and decreases in time being physically active spent and, advancement in multimedia (e.g., internet, cell phones) since 1980, and increased use of motor vehicles during the last forty years. There have been significant annual rises in BMI (i.e. 0.4 kg/m<sup>2</sup>) over the world. Obesity has been known also as a risk factor of carcinogenesis. In the overweight individual psychological well-being is also at risk due to social discrimination. However, children under the age of eight, because they are not much sensitive about social discrimination, psychologically, are normally not affected.

The trend of obesity and overweight is commonly related to the age group of the individual. The older age group is at high risk of becoming obese as compared to the second and third decade of age group. Those who are in the third and fourth decade of life are placed at the second-lowest risk category of overweight and obesity. Middle-aged people are put in the highest risk group of obesity or overweight.

The most popular method used to assess body fat is Quetelet index. The BMI is a statistical measurement of body weight and it depends on a person's height and weight. It is not a measure of the body fat of a person, instead, it is used to calculate a healthy body weight depending on a person's height. It is the most popular diagnostic technique to identify weight-related problems, it is generally used to classify underweight, overweight and obese adults. Finding BMI is possible by dividing the body mass in kg by the square of height in meters.<sup>4</sup>

### Classification

BMI less than 18.50 is for underweight, BMI between 17.00-18.49 is called mild thinness, between 16.00-16.99 is moderate thinness, and less than 16 BMI is considered severe thinness, Normal range of BMI is 18.50-24.49, while more than 25 BMI is put in overweight category,

25-29.99 BMI is considered pre-obese, more than 30 BMI is considered obese.

- BMI 30.00 - 34.99 Obese class 1
- BMI 35.00 - 39.99 Obese class 2
- BMI more than 40.00 is put in Obese class 3<sup>5</sup>

### Pathogenesis

Obesity (Siman Mufrat) is a disease caused by Sue Mizaj Balghami and this sue mizaj is caused by impaired hepatic metabolism. Impairment of hepatic metabolism, in turn, results in excessive baroodat in the liver which causes dominance of Balgham (phlegm) in Dam (blood) which leads to metabolic disturbance. According to the Unani scholars, all colourless, white fluid of the body comes under the Khilt-e-balgham. When the Khilt-e-balgham became abnormal qualitatively and quantitatively, Amraze-balghamiyah and ultimately pathological changes occur in the body. In obesity, due to increased buroodat, Hararat-ghariziyah (Calidum innatum) is highly compromised; compromised innate heat produces vasoconstriction which finally becomes the cause of early death. Narrowing of vessels promoted due to diminution of innate heat, causes obstructed transportation of ruh (pneuma), in the advanced stage of disease predispose to the death.

### What causes Obesity & Over Weight?

According to "The National Heart, Lung, and Blood Institute" there are several factors that can play a key role in gaining weight and accumulating excess fat inside the body. These are some specific diets, lack or withdrawal of exercise, and some environmental and genetic factors. For example:

- Unavailability of garden areas, pathways on roadside, and affordable health clubs and gyms make it difficult for people to be active physically and to maintain their health
- Heavy eating increases calorie intake, making physical activity more compulsory to maintain a healthy weight
- Some people don't have healthy foods, fresh fruits and vegetables for their consumption
- Encouragement of people to buy unhealthy foods, such as high-fat snacks, packed chips, and sugary drinks by the Food advertising companies is also responsible
- Genes also may contribute a major role to a person's weight gain susceptibility. Scientists believe that genes may play a key role in the development of having obesity along with external factors, such as an excess food supply, less or no physical activity, which also may be responsible for a person to gain weight<sup>6</sup>
- Some hormonal imbalances may cause overweight and obesity, underactive thyroid, Cushing syndrome and PCOS may develop obesity
- Some medications, such as corticosteroids, antide-

pressants, and seizure medications, might promote weight gain

- When bored, angry, irritated, or stressed, some people eat more than they need
- People who get less sleep are more likely to be obese and overweight
- Hormones generated during sleep regulate appetite and energy expenditure. Because hormone release is hampered by a lack of sleep, obesity develops<sup>7</sup>

### Soft Drink Use and Obesity

The common cause linking obesity and tooth wear among adults is the consumption of sugar-sweetened acidic liquids, such as soft drinks.

The common cause of obesity in adults is the consumption of sugar-sweetened acidic drinks, such as soft drinks. Being overweight or obese was highly linked to having worn out teeth, according to researchers at King's College London.

### Effect of Sugary Drinks on Weight Gain

Sugary drinks including soda water, canned fruit juices, fruit juice concentrates and syrups, yoghurt, and flavoured milk are harmful to the body because they are part of an unbalanced diet. Most Indian snacks, whether sweet or salty, are thought to be unhealthy, according to studies. Excessive ingestion of free sugars and Carbs is extremely hazardous. Excess sugar in the blood impairs the immune system by affecting immunological cells. It's an ideal environment for bacterial and virus growth. Excess sugar consumption, particularly refined sugars like high-fructose corn syrup, can cause insulin resistance in the body.

The immune system is trapped in a vicious cycle as the body produces more and more insulin to assist it to reach the cells. As a result, sugary foods that are nutritionally obsolete should be avoided.

Drinking water instead of sugar, sweetened beverages is a simple strategy to restrict sugar intake and excess calories. A determined effort and dedication to gradually reduce sugar consumption are required, and it is feasible. Make a commitment today and you'll be off to a solid start.<sup>8</sup>

According to a 2015 study, sugar-sweetened beverages are responsible for one out of every 200 deaths in India due to the increase in obesity, diabetes, and cardiovascular disease. According to India Spend, heart disease and diabetes have attained the level of epidemics in India, accounting for 28 per cent of all deaths. According to the World Health Organization, India's obesity rate has increased by one-and-a-half times in the last quarter-century. According to scientific research, one or two sugary drinks per day are sufficient to cause problems. People who consume one to two servings of sugar-sweetened beverages per day have a 26 per cent higher risk of acquiring type-2 diabetes as

compared to those who consume no sugar-sweetened beverage or less than one serving per month.

According to this study, women who consumed two or more sugary drinks per day had a 35 per cent higher risk of coronary heart disease than women who drank them infrequently. When compared to men who rarely drank sugary drinks, men who consumed an average of one can per day had a 20% higher chance of having a heart attack or dying from one.<sup>9</sup>

### How do Sugary Drinks contribute to Obesity and Malnutrition?

A typical serving size is 330 mL, which provides 36 grams of sugar (almost nine teaspoons), 145 kcal of energy, and is devoid of any minerals or vitamins. Sucrose and high-fructose corn syrup are the main constituents of sugar present in soft drinks, which are easily absorbed and increase the glycemic load, leading to weight gain, according to dietitians. Sugary drinks do not satisfy hunger sensations as well as substantial food. As a result, customers do not lower their food amounts to compensate for the additional calories present in the beverage, according to the study.

Weight gain is the result of all those extra calories: According to a 2014 Indian study, youngsters who consume 1.8 cans of cola each week gain approximately 1.3 kg per year. Adults, too, gain weight from soft drinks, according to research.<sup>10</sup>

"Sugary drinks can sometimes take the place of healthier menu choices, particularly healthy liquids like milk," Krishnaswamy added. "After that, they starve the body, producing and/ or aggravating malnutrition."

Do not be concerned; this has been proven to be fiction. Drinking cold water, according to the Journal of Clinical Endocrinology and Metabolism, can help you lose weight. Water has no calories, so it's inconceivable that drinking it - cold or room temperature will make you gain weight.

The metabolic rate is accelerated by cold water. When cold water enters the body, carbohydrates and fat are burned to provide energy, which produces heat and brings the core body system's temperature back into balance.<sup>11</sup>

Siman Mufrat's Usool-e-Ilaj (Obesity Management): Siman Mufrat's Management is Founded on the Following Principles:

Ta'dil-e-mizaj: To correct Sue mizaj with the help of regiminal therapy, foods and pharmaceuticals with a temperament opposite to obesity, are provided. Since obesity's temperament is braid ratav, Haar and Yabis Mizaj techniques are prescribed.

Izalah-e-Sabab: The removal of all existing causes.

Tanqiyah Maddah: If the Khilt-e-balgham is abnormal, medications with the following qualities should be given:

Munaffis-e-Balgham (expectorant), Mushil-e-Balgham (purgatives), Mudir (diuretics), Muarriq (diaphoretics), Mujaffif (diaphoretics), Mujaffif (diaphoretics), Mujaffif (desiccant).<sup>12</sup>

Dietary modification: Low-nutrition fibre foods should be employed to remove excess fat. As a result of eating such items, one's appetite is stifled.

Additional measures: The following Tadabeers (Regimens) should be considered when producing hararat and yaboosat:

- Haar yabis-temperament foods should be consumed
- Heavy exercise that aids in the reduction of extra fat should be done
- Muarriq advia is also useful because its diaphoretic activity helps to eliminate fat in the form of sweat
- Because this sort of habitat does not promote the creation of much fat, living in hot and dry locations may aid in fat decomposition<sup>13</sup>

## ILAJ (Management)

Unani management can be divided into the following categories:

- Ilaj bil Ghiza (Dietotherapy) is the first in the management series
- Ilaj bil Tadabeer (Regimental therapy)
- Ilaj bil Dawa (Pharmacotherapy)

### Dietary Treatment (Ilaj bil Ghiza)

- Kaseef qalilul taghziya foods, such as dry beef meat, should be consumed
- You should avoid any Aghziyah-e-duhniyah (oily foods)
- Ghiza should be raised in terms of quantity (in Kaifiyat) rather than quality (in Kammiyat), i.e. low-calorie foods should be preferred
- Foods with a dry temperament and desiccating properties are very useful
- Hot spices should be included in your diet as they have a mulattif effect. For example, carum carvi, piper longum, and allium sativum
- High-calorie foods such as meat, milk, and cheese are prohibited<sup>14</sup>

### Regiminal Therapy (Ilaj bil Tadbeer)

- Sleeping hours should be reduced because too much sleep produces an increase in Ratubat production in the body
- Heavy exercise should be recommended
- Taqleel-e-ghiza (restricted diet) has a very beneficial effect in reducing obesity
- Use of haar yaabis foods, and all those fruits, and dry fruits with haar yabis temperament should be prescribed
- Residence should be in hot and dry places

- Ishaal (purgation) of maddah-e-balghami with the help of mushil-e-balgham
- Increased physical activity and exercise are also useful
- Hammam Muarriq - it is a mode of excretion. Mudirrat-e-baul that are not mudirrat-e-baridah should be prescribed
- Hammam Muarriq - this is an excretion method. A steam bath is employed, which is similar to the third room of a typical hammam. Haar yaabis is the mizaj of the third room in a hammam (Turkish bath). A long stay in the hammam results in excessive sweating, which promotes heat and dryness. This heat is caused by heated air, while yaboosat is caused by excessive sweating, which causes the body to lose rutoobat<sup>15,16</sup>

### Ilaj bil dawa

Many single and compound medications are utilised in the treatment of Siman muftrat in the Unani system of medicine.

Anisoon, Afsanteen, Asarun, Ajwain, Badiyan, Elva, Filfil siyah, Kishneez, Karafsm Lehsun, Luk, Murmaki, Naana, Soya, Tukhme sudaab, Zanjabeel, Zaravand, Zeera are the single medications utilised in the case of obesity.<sup>17,18,19</sup>

### Compound Compositions that are Used to Treat Obesity

Sufoof e Muhazzil, Majoon e Muqil, Jawarish kamooni kabir, Anqardiya, Asanasiya, Dawa ul Luk, Itrifal Sagheer, Majoon Falafali and Sikanjabeen Unsuli have been proven effective to treat obesity.<sup>20,21,22</sup>

### The Weight-Loss Secrets

- The weight-loss secret is really easy. You must expend more calories than you consume. This is easier said than done for practically everyone. Only about 10% of people who follow special diets or other weight-loss regimens are able to maintain their weight loss. So they start a new diet, lose weight again, but then revert to their old eating habits and quickly regain all of their lost weight<sup>23,24</sup>
- To reduce weight, you must first decide that you truly want to, and then approach the problem with caution, safety, and graduality
- Any weight-loss regimen should nearly always incorporate proper exercise<sup>25</sup>
- It doesn't need to be a strenuous activity like swimming, aerobics, or jogging. Simply going for a brisk 20-30-minute walk three times a week can be beneficial and boost the pace at which excess calories are burned<sup>26,27</sup>
- Don't be in a hurry to lose weight; you should lose between one-half and two pounds every week, but never more
- Avoid eating or snacking in between meals

- Eat a well-balanced breakfast and lunch, but take it easy at dinner. Before going to bed, don't consume anything
- Learn to identify high-calorie foods and stay away from them
- Instead of desserts, eat fresh fruits<sup>28,29</sup>
- Don't accept a second helping; leave the table while you're still hungry
- Include a variety of fruits, vegetables, and whole grains in your diet. These will make you feel full while keeping your calorie intake low
- Limit fatty foods such as fatty meats, meat products, mayonnaise, nuts, and so on
- Create and stick to a regular fitness routine that meets your demands<sup>30</sup>

## Conclusion

Obesity is a new global epidemic that is putting millions of individuals at risk of major consequences and morbid diseases. It can be found all over the world. In industrialised countries, this is primarily due to the western food style, which includes high-carbohydrate, high-fat meals, as well as high-calorie desserts and other opulent foods. In underdeveloped countries, it is spreading due to a heavy reliance on low-cost meals that are high in calories and deficient in protein.

Obesity can be treated in a variety of ways, including through diet, exercise, medication, and bariatric surgery. As a result, it's evident how critical it is to tackle obesity, which is the new epidemic with several significant consequences for various body systems. Individuals should be encouraged to have a healthier lifestyle that includes better nutrition management. Obese people are more prone to some cancers, especially those with metabolic syndrome or diabetes mellitus, therefore indications and symptoms of any malignant transformation should be diagnosed and treated.

**Conflict of Interest:** None

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