Mini Review

CrossMark

Covid-19 and obesity

Abstract

The Covid-19 virus has affected almost 35 million people resulting in the death of more than a million people. It started in 2019 in China and spread quickly worldwide. It has become the most extensive healthcare concern of the 21st century and has effectively caused trouble and loss to human life and challenges to health authorities as well. The Covid-19 virus can spread from one person to another, but older and obese people are at higher risk of severe disease and death.

 Research has shown that obese people are at higher risk of getting Covid and becoming severely ill because they have less capacity to fight off the diseases and infections than healthy weight people. One of the biggest reasons behind this is that the immune system weakens with increasing weight, which makes the obese person more susceptible to the disease. Consequently, the immunologic changes can be both in younger obese and older people. In addition, research has also shown that obese people store a lot of substances within their fat cells. They release more substances than they produce. This substance circulate into the blood and bind with the immune cells, which release the inflammatory factors.

According to new research, obese people have to face a tough time fighting the Coronavirus even if they have a milder form of the virus. The research of more than 500 corona patients, teens and adults who were obese had severe symptoms as compared to those who were healthy weight.

Certain lifestyle changes keep the body healthy and strengthen the immune system, especially during this pandemic, such as: balanced and healthy food, exercising and proper sleep. Because of the absence or lack of these practices can increase obesity and weight. On the other hand, weight loss can also improve blood pressure cholesterol levels and improve heart health. It can also reduce the severe Covid illness.

Keywords: nutrition, Covid 19, obesity

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Introduction

The Covid 19 virus becomes a serious threat in twentieth century. It spread in a quick and tentacle way. Recently it has become the primary concern of health care due to the great loss and challenges that has provoked; almost 35 million people died because this disease. It is considered as a contagious disease; it can be transmitted from one person to another but older people with obesity are at higher risk of severe disease and death. Research has shown that overweight and obese people have maximum risk and outcomes due to their body weight.[1]

Basics about obesity

Obesity is a disease that is caused by excessive body fat. It is a cosmetic concern and a medical problem that increases the risk of many diseases like diabetes, high blood pressure, cardiovascular diseases and certain cancers. There are many risk factors to obesity. Usually, obesity is caused by physiological factors, environmental factors, physical inactivity, diet choices, and inheritance. The number of obese people is increasing with time. Research has shown that from 1975 to 2016, the number of obese people has tripled; almost 340 million children and adults were overweight in 2016, increasing the numbers.[2] "Almost every nation is facing the problem of obesity, which affects every aspect of their people's life."

Causes and risk factors

The primary cause behind obesity of people is having more calories than they burn for a long time, which increases body fat and weight.

However, other factors of high considerations are behind obesity such as.

Genetics: Genetics is considered as one of the biggest factors of obesity as it can affect many different body functions, like the storage of fats and body processes food into energy.

Pregnancy: As women gain weight during pregnancy. It becomes challenging, for some, to lose that extra weight which leads to obesity.

Environment and community: The Environment and psychological surroundings highly affect quantity and quality of food people have and the type of exercising they practice.

Mental health: Depression and anxiety can also be a cause of weight gain as some people start stress-eating or smoking whenever they are mentally upset. Furthermore, some anti-depressants can also be a reason for weight gain.

Lack of sleep: Lack of sleep can cause many hormonal changes, increasing hunger and calorie intake.[3]

Diagnosis of obesity: Obesity or overweight can be diagnosed through BMI or body mass index. A BMI higher than 30 is considered overweight. And this higher BMI increases the health risks also. So, it is

necessary to check your BMI once or twice a year to get protected from certain health issues and obesity. Some many other exams and tests run by the physician to check the obesity:

Checking health history: For confirming the obesity, the physician may review the eating pattern, physical activity, exercise habits,

weight history, and family health history also to see if you have anything from genes

Physical examination: Physical examination includes checking heart rate, blood pressure, temperature, vital signs, and measuring heights.

Measuring waist circumference: Fat stored around the waist, also known as abdominal fat, can be a cause of obesity and also increase the risk of many diseases like diabetes and heart diseases. The normal waist circumference for women is lower than 30-35 and for men lower than 40. Moreover, above that can be included in obesity.

Checking health problems: Obese people are more likely to have heart problems and certain diseases like blood pressure, high cholesterol, and diabetes. Checking the health issue can be easier in the treatment of obesity.

Health consequences of obesity

Obese people are at higher risk of health issues as compared to healthy body weight people. Obese people can have certain health issues due to being overweight and having high body fat:

a. Cardiovascular diseases: Obese people are more likely to have cardiovascular diseases like high blood pressure and high cholesterol levels. Both of these conditions can be a cause of stroke or other heart diseases. But losing even a small amount of weight can reduce the chances of developing these diseases.

b. Diabetes: Most people with type-2 diabetes are obese. So the risk of developing diabetes can be cut down by losing weight, eating a balanced diet, keeping yourself active, and getting enough sleep. Being physically active can also control blood sugar levels.

c. Certain cancers: Certain cancers like colon, kidney, esophagus, and endometrium can because caused due to overweight. Some studies have also shown the link of obesity with gallbladder and pancreas cancer.

d. Gallstones: Various gallbladder diseases and gallstone is more common in people suffering from obesity or overweight. But research has shown that losing weight rapidly can also be a cause of gallstone, so start slow and at the rate of losing one pound per week.

e. Osteoarthritis: Osteoarthritis is a very common joint disease that mainly affects the back, knees, and hip. Gaining extra weight can put extra pressure on joints and damage the cartilage, which protects them. Losing weight can reduce the risk of osteoarthritis.

f. Sleeping problem: Sleeping problems or sleep apnea are also observed more in obese people. Sleep apnea is a condition in which the person faces sudden stop breathing during sleep. This condition can also cause certain heart diseases. And losing extra weight and fats from the body can lessen sleep apnea symptoms.[4]

Obese people are more Vulnerable to COVID

Research has shown that people who suffer from obesity or obese people are at higher risk of getting COVID and becoming severely ill because obese people have less ability to fight off the diseases and infections than normal people.

One of the biggest reasons behind this is that the immune system weakens with increasing weight, which makes the obese person more susceptible to the disease. And these immunologic changes can be in younger obese people and older obese. In a normal and healthy person, the tissues play an important role. Fat tissues also contain immune system cells, which secret the factors that have anti-inflammatory properties and pro- vide protection. But when these fat tissues become unhealthy, like in obese people, it affects their functions as these tissues start to secrete chemical signals that can cause inflammation.

Accordingly, this inflammation that forms in obese people is not the same as normal inflammation, which can affect the body's response to an infection, damage the cells and cause many other threats. This inflammation can cause many other health conditions like autoimmune disease, certain cancers, diseases of the lungs, stomach, and reproductive system.

Research has also shown that obese people store a lot of substances within their fat cells, but they release more substances than they produce. Which circulate into the blood and binds with the immune cells, which release the inflammatory factors.[5]

The severity of COVID symptoms in obese people

According to new research, obese people have to face a tough time fighting the coronavirus even if they have a milder form of the virus. According to the research of more than 500 corona patients, the teens and adults who were obese had severe symptoms as compared to those who were healthy body weight.[6] The symptoms of COVID are different for different people as some people may not face any symptoms, while for some, the symptoms are severe. There are the following symptoms that most of the Covid 19-virus patients face, but these symptoms were severe in obese people: Sore throat, headache, muscle pain, shivering and runny nose, loss of taste and smell, rash, pink eyes, vomiting, diarrhea, or nausea, shortness of breath, severe cough, high fever and chill and fatigue.

When to seek emergency: Most obese people have to face all of the symptoms of COVID. Cell the doctor or ambulance if the following symptoms are showing: shortness of breath, lips or face getting blue, constant pain in the chest, confusion and fatigue and difficulty in staying awake. [7]

Stroke has also been observed in many obese people. As obese people already have heart issues. COVID can make them worse. So in case of any above condition, immediately seek medical attention.

Life style: Some changes take time as losing weight, but this is the first and the most important thing that an obese person should do to keep himself and his family safe in this pandemic.

Eat healthy: Healthy eating like fruits, vegetables, whole grains, lean proteins, good fats, and a moderate amount of calories will keep you healthy and help in losing weight. A good and balanced diet can also boost the immune system and protect the body from risk factors of many diseases, including COVID.

Being active: Regular activity is not only good for health but also reduces stress, improves sleep, and makes you feel better. Exercise on a regular basis can help in weight loss as it burns calories. Physical activities also reduce the risk of severe illness from COVID.

Proper sleep: Lack of sleep can cause anxiety that lead to stress eating. So proper sleep can help lose weight as it prevents overeating or late-night snacking.

Managing stress: Stress or depression during an infectious illness like COVID can worsen the symptoms. It can also lead to bad habits like overeating, drinking, and smoking. So managing stress can help in reducing severe illness.

Conclusion

These actions can help obese people with their obesity and improve health. Weight loss can also improve blood pressure cholesterol levels and improve heart health. It also reduced the severe illness from COVID.[8]

"This pandemic has provided an opportunity to reset. To accelerate our pre-pandemic efforts."

Acknowledgments

None.

Conflicts of interest

None.

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