

## The Impact of COVID-19 on Healthy Eating Habits

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### Abstract

SARS-CoV-2 which is the causative agent of COVID-19 is a single-stranded RNA virus, commonly spread by respiratory droplets and human-to-human contact. The COVID-19 pandemic has compromised the eating habits of individuals making them vulnerable to food insecurity and triggering eating disorders in individuals at risk of these disorders causing severity or relapse. Extreme quarantine measures because of the COVID-19 pandemic have also contributed to the increase in the severity of eating disorders and altered eating habits. Thus, we review the implications of COVID-19 on eating habits. This study would serve as a foundation for further research on Covid-19 and its implications on healthy eating habits.

**Keywords:** COVID-19; Eating disorders; Food insecurity; Quarantine

### Introduction

The coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was first reported in Wuhan, a city in China in December, 2019, and have spread fast around the world making it a global pandemic [1]. SARS-CoV-2 which is a single-stranded ribonucleic acid (RNA) virus like the Middle East respiratory syndrome (MERS-CoV) and severe acute respiratory syndrome coronavirus (SARS-CoV) share a high percentage of nucleotide identity with bat coronaviruses [2]. COVID-19 which is a respiratory illness is commonly spread via respiratory droplets or by human contact [3]. The most reported symptoms of COVID-19 include fever, fatigue, and cough, other reported symptoms include dyspnea, headache, and sore throat [2]. About 20% - 30% of patients infected with COVID-19 require mechanical ventilation and are admitted into the intensive care unit, an average of 10% of infected patients die, with an increase in mortality rate among those with underlying disease conditions and older adults [4]. This paper reviews eating habits during COVID-19 and the effect of food insecurity, eating disorders, and quarantine on eating habits. The studies used in this review are recent and were assessed for value and quality.

### Healthy Eating Habits

Good nutrition refers to the consumption of a well-balanced

diet, and adequate intake of nutrients to meet body needs crucial to achieve optimum health and development [5,6]. According to the dietary guidelines for Americans 2015-2020, healthy eating includes intake of fruits, vegetables, dairy products such as low-fat milk or fat-free milk, whole grains, animal and plant proteins such as lean meat, eggs, fish, nuts, reduced intake of saturated fats, trans-fat, sodium, added sugars and cholesterol [7]. A healthy diet helps in sustaining and improving body health by providing essential nutrients and adequate calories to the body thereby protecting against all forms of malnutrition and chronic diseases such as diabetes and heart disease [8].

At the onset of the pandemic, most businesses were shut down and employees laid off resulting in an increase in the rate of unemployment. The high rate of unemployment coupled with increased prices of some food products resulted in an increase in food insecurity [9]. As the COVID-19 pandemic progresses, the United Nations World Food Program predicted that about 265 million people would suffer from severe food insecurity before the end of 2020 [10]. Food insecurity refers to the limited access to adequate and healthy foods to sustain growth and development [11]. The progression of the COVID-19 pandemic has resulted in an increased rate of food insecurity especially among households with children. A recent survey showed that about 34% of households with children ≤ 18

years of age experienced food insecurity before the end of April 2020 [12]. The households more vulnerable to food insecurity especially during the pandemic include low income households, single-mother households, households with children  $\leq 6$  years, households with minority groups such as blacks and Hispanics and adults living alone or with disabilities. Food insecure households are at a high risk of morbidity and mortality resulting from chronic diseases [13].

Lifestyle habits, such as the eating habits of most individuals have been altered during the quarantine. Limited access to food due to restricted store hours and stores running out of food quickly than they can be replaced has affected the eating habits and food intake of individuals. There is an increased intake of fast foods and packaged foods and a reduced intake of fruits and vegetables causing weight gain. Increased consumption of fruits and vegetables has been attributed to an increase in antioxidant status resulting in weight loss and increased resistance to diseases [14].

Quarantine in the form of social isolation has been associated with eating disorders. Large amounts of food supplies stored at home can trigger binge eating disorder in individuals at risk of this type of eating disorder. The progression of the COVID-19 pandemic has impacted people with eating disorders due to social isolation resulting in increased severity of the disorder and lack of sufficient psychological treatments as the pandemic advances [15,16]. Anorexia nervosa, which is also a common eating disorder requires intensive treatment and close observation in patients with this disorder. Due to a lot of focus on patients with Covid-19 and a reduction in hospital visits as well as emergency services, lots of patients with this eating disorder are at a high risk of severity and relapse [15]. Anorexia nervosa also predisposes individuals to COVID-19 due to their increased susceptibility to diseases and sometimes low body weight. COVID-19 has a major effect on individuals with anorexia nervosa when compared with other individuals of the same age group [17].

In conclusion, an increase in the rate of unemployment, limited access to food and an increase in the price of food products predispose individuals to food insecurity. Extreme quarantine measures in response to the COVID-19 pandemic have been observed to trigger binge eating order and anorexia nervosa in individuals at risk of these eating disorders. The eating habits of most people have also been compromised resulting in increased consumption of packaged foods and unhealthy foods combined with a decreased consumption of healthy foods rich in fruits and vegetables because of the COVID-19 pandemic.

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## Author contributions

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## Conflicts of interest

The authors have no conflicts of interest.

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