

Time-Restricted Eating Linked to Less Severe COVID

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✓ Fact Checked

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STORY AT-A-GLANCE

- › Researchers studied the effect of consistent periodic fasting on severe COVID illness and found it reduced the risk of hospitalization and mortality but not the risk of contracting the illness
- › The study confirmed past research that intermittent fasting and time-restricted eating, which are two different types of eating patterns, reduces the risk of severe COVID and promotes weight loss
- › Obesity is an independent risk factor for COVID-19 and a contributing factor to other comorbidities that are associated with severe disease; even mild obesity can influence disease severity
- › Data gathered since early 2020 have demonstrated the importance of optimal levels of vitamin D to reduce the severity of COVID, and deficiency is also associated with an increased risk of obesity
- › Several states in Mexico have taken steps to ban the sale of junk food to minors in an attempt to reduce the high rates of obesity and diabetes that are linked to the country's high death toll

During the first year of the COVID-19 pandemic, multiple studies began revealing some of the healthful strategies that could lower your risk of severe COVID disease, or even prevent you from contracting the virus. Research published in July 2022 continues to add to the mounting scientific evidence that eating patterns can improve your overall health and reduce your risk of severe COVID illness.¹

The study was published in *BMJ Nutrition, Prevention & Health*, finding that periodic fasting lowered the risk of severe COVID. Although the terms intermittent fasting and time-restricted eating or time-restricted fasting have been used interchangeably, they are unique eating patterns.

To clarify,² intermittent fasting includes energy restriction on two to three days per week or on alternate days. In other words, while it can include restricting the hours in which you eat, intermittent fasting must include restricting calories as well. Time-restricted fasting limits the period in which you eat food during the day but does not restrict the number of calories you eat.

Most people who practice time-restricted eating limit the time they consume food to eight to 10 hours or less on most days of each week. Animal studies^{3,4,5,6} have demonstrated that time-restricted and calorie-restricted eating patterns could lengthen life. The current study also demonstrates that it lowers the risk of severe COVID disease and therefore mortality.

Study Showed Periodic Fasting Lowered Risk of Severe COVID

In the featured study,⁷ researchers enrolled patients from a secondary care facility in Salt Lake City, Utah who had undergone cardiac catheterization and completed a sociobehavioral survey asking questions about periodic fasting, education, alcohol intake and sleep.

The subjects were not randomized but were followed through longitudinal surveillance of the Intermountain Healthcare Biological Samples Collection Project and Investigational Registry (INSPIRE). The researchers defined periodic fasting based on two survey questions that asked if participants engaged in periodic fasting and for how many years.

The researchers split the patients into two groups: those who routinely fasted for five years or more and those who stopped fasting before completing the survey. Patients

who were not periodically fasting at the time of the survey but had fasted for five years or more before the start of the study were excluded.

The study cohort included 1,524 individuals, 205 of whom tested positive for SARS-CoV-1 and 1,319 who tested negative.⁸ The results showed that those who engaged in periodic fasting had a lower risk of mortality or hospitalization from COVID-19. This occurred even after confounding factors were accounted for, such as prior myocardial infarction or transient ischemic attack, age and renal failure.

A secondary analysis was performed, during which the researchers found that while periodic fasting protected the participants from severe disease, this effect did not extend to lowering the risk of contracting COVID-19. The researchers noted that Utah has the lowest median age in the U.S. and the fourth lowest rate of coronary heart disease.

Overall, there was a low case fatality rate in Utah which they hypothesize could have occurred because the state has one of the lowest smoking rates. Even when those characteristics were accounted for, periodic fasting continued to be an independent predictor of a lower risk of hospitalization and mortality.

Utah presented a unique opportunity to evaluate routine periodic fasting as 60%⁹ of the residents are members of the Church of Jesus Christ of Latter-Day Saints (LDS), in which routine periodic fasting is a common practice.¹⁰ The researchers also noted¹¹ that, on average, up to 36% of all patients in the Intermountain System have routinely used periodic fasting for more than four decades.

A Post-COVID World Must Focus on Preventive Health

For those who have been paying attention to the characteristics of individuals with a higher and lower risk of severe disease, it has become blatantly obvious that in a post-COVID world, it is of great importance to pay close attention and focus on engaging in preventive health practices.

The reality is that getting in good shape through diet and exercise can help reduce your risk of severe disease from COVID and will likely have the same benefit for other viruses that may suddenly “emerge” in society. The good news is that much like other viral illnesses, your chances of staying well or getting a mild case are primarily dependent on your immune function, over which you have more influence than you might think.

One study¹² published in 2017 looked at time-restricted feeding and the effect it would have on weight gain using an animal model and high-fat, diet-induced obesity. They found that time-restricted feeding reduced weight gain significantly as compared to rats that were freely fed a high-fat diet, even though the 24-hour calorie intake was the same.

Another study¹³ that evaluated time-restricted feeding and the effect it had on metabolic health in individuals who were not obese, found those who restricted their food intake to the earlier part of the day demonstrated greater benefits in insulin resistance compared to those who restricted their food intake to the middle part of the day.

Finally, a review of the literature¹⁴ sought to compare intermittent calorie-restricted fasting, time-restricted eating, and continuous energy restriction. While there was limited comparison with continuous energy restriction, the researchers found evidence from animal studies that time-restricted eating protected against diet-induced obesity and gut microbiome obesogenic bacteria, as well as improved body weight regulation.

In addition to the health benefits from time-restricted eating, researchers have also identified beneficial physiological changes from periodic fasting, including:

- Normalizing insulin¹⁵ and leptin¹⁶ sensitivity
- Promoting human growth hormone (HGH) production¹⁷
- Lowering triglyceride levels¹⁸
- Reducing oxidative stress¹⁹

Reduce the Risk of COVID Comorbidities

Obesity is an independent risk factor for COVID-19 and a contributing factor to other comorbidities associated with severe disease. According to data, even mild obesity can influence COVID-19 severity. Researchers analyzed²⁰ 482 COVID-19 patients hospitalized between March 1 and April 20, 2020, and concluded:²¹

“Obesity is a strong, independent risk factor for respiratory failure, admission to the ICU and death among COVID-19 patients. A BMI ≥ 30 kg/m² identifies a population of patients at high risk for severe illness, whereas a BMI ≥ 35 kg/m² dramatically increases the risk of death.”

Individuals with moderate or severe obesity had a 28% to 30% greater risk of hospitalization^{22,23} with COVID than those who were in a normal BMI range.

When the effect of obesity, diabetes and high blood pressure were compared against age, data²⁴ showed the three health conditions had an additive effect and increased the risk of mortality to the level of risk observed in people of advanced age. The CDC has identified these health conditions that increase your risk of severe COVID disease:²⁵

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|-----------------------------------|---------------------------------------|---|
| Cancer | Chronic kidney disease | Chronic liver disease |
| Chronic lung disease | Cystic fibrosis | Dementia |
| Diabetes | Disabilities | Heart conditions |
| Immunocompromised conditions | Sickle cell disease or Thalassemia | Solid organ or blood stem cell transplant |
| Stroke or cerebrovascular disease | Smoking, current or former | Substance use disorders |
| HIV infection | Mental health conditions | Overweight and obesity |
| Physical inactivity | Pregnancy | Tuberculosis |

Small Changes Can Reap Big Rewards

As was demonstrated by the featured study,²⁶ even periodic fasting has a powerful effect on lowering your risk of severe COVID-19. The study also demonstrated it was a consistent effort that made the difference. Further research has also shown that time-restricted eating²⁷ offers the same benefit of reducing the severity of COVID-19.

Researchers in the featured study wrote, "A loss of appetite is a typical response to infection, which may indicate that the human body has intrinsic mechanisms for initiating fasting in order to activate the immune system."²⁸ Additionally, they wrote that fasting helps activate autophagy, which is the body's way of clearing damaged cells and pathogens.

Autophagy is a powerful way to treat disease and maintain homeostasis.²⁹ Another strategy is to attain and maintain optimal levels of vitamin D. Data³⁰ have demonstrated that vitamin D is an independent risk factor for severe disease, hospitalization and mortality from COVID-19 and that vitamin D deficiency is also associated with obesity.³¹

Grassroots Health³² recommends that you get your vitamin D level to a minimum of 40 ng/mL (100 nmol/L). Because everyone responds differently to sunshine and supplements, the only way to know your level is to test. You can use the results to determine how much supplement (or sun exposure) you may need to reach your optimal level using the Grassroots Health calculator.

Mexico Believes Healthy Food Is a Child's Right

Although time-restricted eating is a powerful strategy to promote health, you cannot out-fast or out-exercise ultraprocessed junk food. In August 2020, BBC³³ reported that Oaxaca, Mexico, would ban the sale of junk food to minors in an attempt to reduce the area's high rate of obesity and diabetes.

At that point, Mexico had one of the world's highest rates of childhood obesity, the nation consumed more carbonated sugary drinks per person than any other nation and

they had the third highest death toll from COVID in the world. Obesity levels are such a concern that police officers have enrolled in programs to lose weight. While the Mexican Congress applauded the action, shop owners and street sellers protested.

A little over one year later, one follow-up report³⁴ revealed that while Oaxaca was the first Mexican state to ban junk food for minors, it is not the only one. In what was described as a “true grassroots movement, ignited by the strong community advocacy of 13 different Indigenous groups”³⁵ two states followed suit and many others have introduced legislation.

Momentum was triggered by the role nutrition plays in promoting health. The Mexican media also carried messages about the harm of eating processed foods and comments from the undersecretary of health who called soda “bottled poison.” This is a far cry from the actions of other governments to protect children’s health.

Take Action to Take Control of Your Health

With a rapidly changing health care and financial landscape, it is more important than ever to take action each day to take control of your health. As data have demonstrated, some effective actions include optimizing your vitamin D level, practicing time-restricted eating and eliminating ultraprocessed junk food from your diet.

Losing weight can lower your risk of COVID-19 and may have an impact on reducing your risk of emerging future viruses. Even if you are mildly overweight, focusing on getting to a healthy weight may help ward off viral illnesses. It can also help you avoid other obesity-related health conditions that are comorbid conditions for COVID, such as heart disease, high blood pressure and diabetes.

One study in Italy showed that³⁶ more than 99% of people who died from COVID-19-related complications had underlying medical conditions. Among those fatalities, 76.1% had high blood pressure, 35.5% had diabetes and 33% had heart disease.

Another study³⁷ revealed that among 18- to 49-year-olds hospitalized due to COVID-19, obesity was the most prevalent underlying condition, just ahead of hypertension.

Processed foods, junk foods and soft drinks are key culprits in the development of these chronic diseases, and therefore play a key role in COVID-19 hospitalizations and deaths.

It really did not take long before it became apparent that the COVID-19 pandemic was illustrative of a far more widespread pandemic, namely that of insulin resistance. All the comorbidities that dramatically increase your COVID-19 risks (including your risk of symptomatic COVID-19 illness, hospitalization and complications resulting in death) are rooted in insulin resistance.

Remove insulin resistance, along with vitamin D deficiency, and very few people — except for very old and frail individuals — would be at significant risk from SARS-CoV-2 infection. It is time to take steps to improve health in general and avoid insulin resistance in particular. A healthy population simply isn't going to be as vulnerable to infectious diseases like COVID-19.

Sources and References

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