

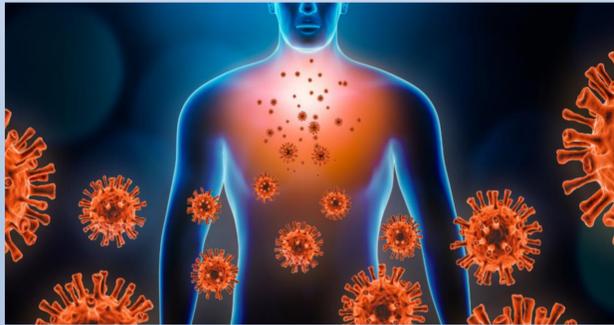
How Has Obesity Impacted Health Outcomes In Individuals Diagnosed With COVID-19?

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Goal of This research

Identify how much of a risk patients with obesity are and how lowering their weight can help lower the modifiable risk factors for severe COVID-19 cases based on peer reviewed articles released within the past 2 years.



Methods

- PubMed.gov and Tennessee Technological University Library Database Eagle Search
- Article analysis
- Statistical analysis
- Articles must be published within the past two years

Demographic

- World-wide
- Adult
- Male
- Female
- Very broad due to the new nature of COVID-19

Findings

- Study by Kompaniyets et al. found that there was a relationship between advanced respiratory therapy and COVID-19 patients with obesity.¹
- Obesity is a risk factor for hospitalization and mortality.¹
- As the degree of obesity increases so does the risk for death related to COVID-19 complications.²
- As the degree of obesity rises, the degree of care required by the patient statistically increases.²
- It is speculated that vaccinations wane faster in patients with obesity due to obesity-inflammation in the body.³
- BMI has been shown to be positively associated with the level of infectious virus in the exhaled air.²
- The additional mRNA translation material in individuals with obesity may be the mechanism that COVID-19 takes advantage of.⁴
- In a study with 148,494 adults with COVID-19, it was observed that 50.8% had obesity and 28.3% were overweight.⁵
- Individuals with obesity are at risk for reduction in vaccine effectiveness.⁶
- Researchers hypothesize that the hyperactivation of the mTOR pathway might be putting individuals with obesity at a greater risk for COVID-19.⁴

What can be done?

- providing nondiscriminatory care to patients of all sizes.⁷
- Staying in a healthy weight range to combat the effects of the virus.⁵
- The Physical Activity Guidelines for Americans recommends that adults should partake in at least 150 minutes of aerobic physical activity each week.⁸

Limitations

No long-term studies regarding the effects of obesity in individuals that have had COVID-19 or what waning effects it may have on the vaccinations. The virus has impacted communities in different ways making it impossible to produce one way to stop the spread.

References

1. WHO. "Obesity."
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3. Townsend MJ, et al. "COVID-19 Vaccination and Obesity: Optimism and Challenges."
4. Bolourian A, Mojtahedi Z. "Obesity and COVID-19: The mTOR pathway as a possible culprit."
5. Kompaniyets L, et al. "Body Mass Index and Risk for COVID-19-Related Hospitalization, Intensive Care Unit Admission, Invasive Mechanical Ventilation, and Death - United States, March-December 2020."
6. Popkin B, et al. "Individuals with obesity and COVID-19: A global perspective on the epidemiology and biological relationships."
7. Talking With Patients About Weight Loss: Tips for Primary Care Providers.
8. "U.S. Department of Health and Human Services. "Physical Activity Guidelines for Americans 2nd Edition."

Body mass index and its impact on COVID-19 outcomes:

