



Obesity: America's COVID-19 Achilles Heel

There are many reasons why the dangers of COVID-19 seemed to sneak up on the U.S. Outbreaks of viruses in recent years circulated in the news and resulted in illness and death, but were contained in pockets, didn't interfere with our daily lives, and then disappeared. Watching the virus cause havoc from across the world might have also lent itself to a false sense of spectatorship, but did not spark immediate concern. Perhaps one of the most compelling reasons why COVID-19 did not raise alarms was the idea that it only impacted people of advanced age, with multiple conditions, or who were considered medically fragile. However, as we are becoming better acquainted with this virus and how it impacts our population, it is highlighting one of our nation's most prevalent health concerns: obesity.

Between the years 2000 and 2018, the number of obese Americans climbed by nearly 12% to reach record high rates of 42%; rates of severe obesity also nearly doubled.¹ America's issues with weight should not be considered simply an issue of self-control; it is a complicated picture of socioeconomic factors, genetics, access to healthy food, and childhood obesity often progressing through adulthood. Recommendations to reduce weight include increasing activity and decreasing the consumption of calorically dense foods with little nutritional value, as well as interventions such as improved sleep and stress management to assist proper metabolic function.

As a novel virus, much of the information about SARS-CoV-2 has been limited by observations in a short time period and comparisons to similar viruses. Initial recommendations about higher risk groups were driven primarily by data from observing complications in patients in other countries. As more Americans are becoming ill with COVID-19, obesity is now proving to be a significant risk factor for severe complications, often without the presence of any other conditions or risk factors.

Among the findings of recent data on COVID-19 patients:

- In studies of patients in New York City, severe obesity was the second leading cause of hospitalizations, second only to age; obesity was noted as a stronger predictor of severe illness than heart disease, lung disease, and smoking history.²
- Body Mass Index (BMI, or weight to height ratio) although not a precise measurement of health status, has shown to correlate with the intensity of care required. In patients under 60, a BMI of 30-34 (obese) experienced a two-fold increased risk for hospitalization. Additionally, with a BMI of over 35, the increased risk of being placed in the intensive care unit was three-fold.²
- For hospitalizations studied between March 1-30, 2020 across several states, obesity was the most common underlying condition for hospitalized patients under the age of 50.³
- In studies of obese patients in China, the risk of developing severe pneumonia with COVID-19 was 142% higher than in non-obese patients.⁴
- For deaths related to the virus in Louisiana for March 2020, obesity was noted as the primary underlying condition in 25% of COVID-19 patient deaths, accounting for more patient deaths than both pulmonary and cardiac disease (12% and 21% of deaths, respectively). Diabetes was the leading co-morbidity, indicated in 40% of deaths.⁵



Why does it seem that the risks associated with body composition have been overlooked? With the initial data on cases, diseases of the heart and lung, along with compromised immune systems, diabetes, and advanced age were considered to be the most significant risk factors for hospitalizations and death. However, obesity rates are only 6% in China, and 20% in Italy, compared to over 40% in the US.⁶ Coupled with greater risks from co-morbid conditions such as diabetes, there is elevating concern over the devastating impacts that could occur as this virus spreads. Obesity might also be underrepresented as a risk factor, since other conditions that are potentially caused by obesity, such as diabetes or hypertension, could be listed as the primary underlying condition.

While the answers are not yet clear, there are a few theories as to why obesity is proving to be a dangerous risk factor. Excess weight, particularly around the midsection, could cause mechanical stress that may impair lung function. Other theories consider that inflammation caused by too much body fat and poorly controlled blood sugar could exacerbate the inflammation caused by the virus, or that excess sugar could cause an increase in the number of receptors in the body that the virus uses as a doorway.^{2,7}

Obesity is not the only lifestyle related condition linked to more severe illness caused by COVID-19. Type 2 diabetes, pre-diabetes, and non-alcoholic fatty liver disease (NAFLD) are often caused by poor eating habits, such as heavy sugar and processed carbohydrate intake, and a lack of physical activity. They can occur in people who are of all weights and sizes, and can all be considered risk factors for a more severe progression of the virus. A study of COVID-19 cases in China found that patients who had NAFLD were not only remaining infectious for longer periods of time, they were six times more likely to progress to “severe” illness than patients with normal liver function.⁸ In the same study, as the age and BMI of NAFLD patients increased, so did their risk of becoming more ill.

What you can do:

Many of the measures we hear to reduce the risks from COVID-19 focus on limiting exposure through distancing, sanitation, and increased awareness. While these practices are very important, improving employee health resiliency to promote a better recovery in the event that exposure is unavoidable should also be included in your risk management plan.

The illnesses and costs we generally associate with obesity tend to be chronic and build over time. The introduction of COVID-19, and the serious complications that can result, create a greater urgency to address modifiable risk factors. Some risk factors (such as age, genetics, and certain conditions) cannot be changed, but given the considerable risks from many lifestyle related conditions, we should take every step possible to make health improvement a priority.



For employers:

- Educate employees on not only following proper protocol for safety and sanitation practices, but how other conditions and lifestyle can impact their risk.
- Consider implementing weight management and disease improvement programs; include spouses.
- Speak with your broker partner about data analytics solutions to evaluate your modifiable population health risk factors and potential solutions.
- Provide resources to employees to eat healthy and become more active while they may be away from their normal routines and schedules.
- Host virtual lunch and learns with topics on health improvement and risk reduction.
- Speak with your carrier or condition management provider about targeted outreach for at risk members.
- Encourage and remind employees about options for telehealth, nurselines, and other resources for them to continue with regular check-ups, screenings, and condition management.
- Provide EAP and other mental and emotional health resources to help employees manage stress related to body image; removing the stigma and shame associated with weight can be helpful for employees to feel in control and positive about making changes.

Sources:

⁽¹⁾ CDC: Adult obesity facts. April 2020.

⁽²⁾ WebMD: "Obesity new risk factor for young COVID patients". April 2020.

⁽³⁾ Morbidity and Mortality Weekly Report. April 8, 2020.

⁽⁴⁾ Medical News Today: "Latest evidence on obesity and COVID-19". May 2020.

⁽⁵⁾ Louisiana Department of Health Updates, COVID-19. March 30, 2020.

⁽⁶⁾ The Lancet: "Obesity could shift severe COVID-19 to younger ages". May 2020.

⁽⁷⁾ Brufsky, A. *Journal of Medical Virology*: "Hyperglycemia, hydroxychloroquine, and the COVID-19 pandemic". April 2020.

⁽⁸⁾ World Hepatitis Alliance: "Fatty liver may increase risk of severe COVID-19 disease". April 2020.



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