

# Obesity and COVID-19

Recent studies are highlighting that people with obesity are at higher risk of developing more severe disease and complications from COVID-19.<sup>1-5</sup>

People with obesity are a high-risk group that can develop severe illness from COVID-19.<sup>3,5-7</sup>

~x3

The presence of obesity was found to increase the risk of severe illness ~x3 with a consequent longer hospital stay.<sup>7</sup>

12%

Studies have shown that each 1-unit increase in BMI was also associated with a 12% increase in the risk of severe COVID-19.<sup>7</sup>

People with obesity are likely to have a more serious outcome from COVID-19<sup>8</sup>

48.3%

of people hospitalised for COVID-19 had a BMI  $\geq 30$  (kg/m<sup>2</sup>)<sup>9</sup>



BMI >40 (kg/m<sup>2</sup>)

was the second strongest predictor of hospitalisation, after age<sup>3</sup>

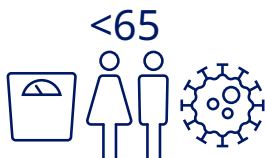


COVID-19

Patients with obesity and COVID-19 have an increased risk of mortality<sup>10</sup>

In addition to obesity being a common comorbidity in patients with severe COVID-19 illness, some of the common complications associated with obesity are also risk factors for serious illness:<sup>11</sup>

Obesity is the most prevalent risk factor among people <65 years with COVID-19.<sup>8,12,13</sup>



Obesity is associated with other health complications which can lead to serious illness, including:<sup>11</sup>



Cardiovascular disease



Diabetes

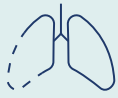


Hypertension

For more information about obesity and COVID-19, visit <https://www.rethinkobesity.global/global/en/weight-and-health/obesity-and-covid-19>

## Potential pathways linking severity of COVID-19 and obesity

While data investigating a full understanding of the links between COVID-19 and obesity is still emerging, recent studies have suggested the increased severity of COVID-19 in people with obesity are due to specific pathways that link to:<sup>2,3</sup>



Reduced cardiorespiratory protective mechanisms<sup>14</sup>



Obesity-related complications and other comorbid conditions (such as cardiovascular disease and diabetes)<sup>14</sup>



Metabolic factors (such as hypertension, insulin resistance and dyslipidaemia)<sup>2</sup>



Increased viral exposure OR Reduced immune response<sup>15</sup>

## The importance of maintaining long-term management for obesity

The current pandemic may leave people with some chronic diseases without the appropriate care they need.<sup>16</sup> The specific challenges people with obesity are faced with during the pandemic, include:<sup>17</sup>

- Reduced mobility and physical activity due to lockdown measures
- Higher reliance on processed food instead of fresh produce
- Interventions such as bariatric surgery severely curtailed
- Regular non-acute patient appointments scaled down
- Weight loss programmes (often delivered in groups) severely reduced



It remains important to ensure people with obesity are able to maintain or start a healthy weight management plan, as easily as possible.<sup>16,17</sup>

Visit [RethinkObesity.Global](https://www.rethinkobesity.global)

to discover a range of useful resources to guide obesity management conversations with your patients

Truth About Weight™ is an online educational resource where your patients can find information on obesity, including guidance on how to cope with the current COVID-19 crisis. Visit [truthaboutweight.global](https://www.truthaboutweight.global) for more information

## Where can I get more information?

Professional organisations across the world have created information to help stay up to date on obesity and COVID-19:

### Resources on COVID-19:

- Centers for Disease Control and Prevention: [Coronavirus Disease 2019 \(COVID-19\)](https://www.cdc.gov/coronavirus/2019-ncov/)
- European Medicines Agency: [Coronavirus disease \(COVID-19\)](https://www.ema.europa.eu/en/coronavirus)
- World Health Organization: [Coronavirus disease \(COVID-19\) pandemic](https://www.who.int/news/item/11-03-2020-coronavirus-disease-(covid-19)-pandemic)

### Useful journals include:

- British Medical Journal: [BMI's Coronavirus \(covid-19\)](https://www.bmj.com/)
- Nature: [www.nature.com/nature/articles?type=news](https://www.nature.com/nature/articles?type=news)
- New England Journal of Medicine: [Coronavirus \(Covid-19\)](https://www.nejm.org/)

### Resources on obesity and COVID-19:

- American Society for Metabolic and Bariatric Surgery: [COVID-19 Resource Center](https://www.facs.org/obesity/)
- European Association for the Study of Obesity: [COVID-19 and Obesity](https://www.easo.europa.eu/covid-19)
- Obesity Canada: <https://obesitycanada.ca/covid-19/>
- The Obesity Society: [Obesity & COVID-19](https://www.theobesitysociety.com/)
- World Obesity Federation: <https://www.worldobesity.org/news/statement-coronavirus-covid-19-obesity>

**References:** 1. Obesity Canada. Obesity and COVID-19 Infographic. Available at: <http://obesitycanada.ca/wp-content/uploads/2020/04/Obesity-and-COVID-19-FINAL-april-2.pdf>. Last accessed: November 2020. 2. Naveed Sattar, N, McInnes IB, McMurray JVV. Obesity a Risk Factor for Severe COVID-19 Infection: Multiple Potential Mechanisms. *Circulation*. 22 April 2020. doi.org/10.1161/CIRCULATIONAHA.120.047659. 3. Petrilli CM, Jones SA, Yang J, et al. Factors associated with hospitalization and critical illness among 4,103 patients with COVID-19 disease in New York City. 2020.04.08.20057794. doi: 10.1101/2020.04.08.20057794. 4. Simonnet A, Chetboun M, Poissy J, et al. Intensive Care COVID-19 and Obesity study group. High prevalence of obesity in severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) requiring invasive mechanical ventilation. *Obesity (Silver Spring)*. 9 April 2020. doi: 10.1002/oby.22831. [epub ahead of print]. 5. World Health Organization. Information Note on COVID-19 and NCDs. 23 March 2020. Available at: <https://www.who.int/teams/ncds/covid-19>. Last accessed: November 2020. 6. CDC. Groups at Higher Risk for Severe Illness. Available at: <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/groups-at-higher-risk.html>. Last accessed: November 2020. 7. Gao F, Zheng KI, Wang XB, et al. Obesity Is a Risk Factor for Greater COVID-19 Severity. *Diabetes Care*. 2020. 8. CDC. ICNARC report on COVID-19 in critical care 31 July 2020. Available at: <https://www.icnarc.org/DataServices/Attachments/Download/42ceb4d2-3dd3-11-9128-00505601089b>. Last accessed: November 2020. 9. Garg S, Kim L, Whitaker M, et al. Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019 - COVID-NET, 14 States, March 1-30, 2020. *MMWR Morb Mortal Wkly Rep*. 2020; 69:458-464. 10. Williamson EJ, Walker AJ, Bhaskaran K, et al. Factors associated with COVID-19-related death using OpenSAFELY. *Nature*. 2020; 584:430-436. 11. Ryan DH, Ravussin E, Heymsfield S. COVID 19 and the Patient with Obesity - The Editors Speak Out. *Obesity*. 2020; 28:847. doi:10.1002/oby.22808. 12. Kass DA, Dugal P, Cingolani O. Obesity could shift severe COVID-19 disease to younger ages. *Lancet*. 4 May 2020. DOI: [https://doi.org/10.1016/S0140-6736\(20\)31024-2](https://doi.org/10.1016/S0140-6736(20)31024-2). 13. Lighter J, Phillips M, Hochman S, et al. Obesity in patients younger than 60 years is a risk factor for Covid-19 hospital admission. *Clin Infect Dis*. April 9, 2020 doi: 10.1093/cid/ciaa415. [epub ahead of print]. 14. Dietz W and Santos-Burgoa C. Obesity and its Implications for COVID-19 Mortality. *Obesity (Silver Spring)*. 2020; 28:1005. 15. Qingxian C, Fengjuan C, Fang L, et al. Obesity and COVID-19 Severity in a Designated Hospital in Shenzhen, China. *SSRN Electronic Journal*. 2020. 16. Fruhbeck G, Baker JL, Busetto L, et al. European Association for the Study of Obesity Position Statement on the Global COVID-19 Pandemic. *Obes Facts*. 2020; 13:292-296. 17. World Obesity Federation. Coronavirus (COVID-19) & Obesity. Available at: <https://www.worldobesity.org/news/obesity-and-covid-19-policy-statement>. Last accessed: November 2020.

HQ200B00184, Approval date: December 2020