

*peer-reviewed*

*observational study*

*people*

## **COVID-19 severity is increased in patients with mild obesity**

The risk of greater COVID-19 severity and death is higher in people with any obese body mass index (BMI), according to a study to be published in the [European Journal of Endocrinology](#). The study findings showed that BMI over 30 was associated with a significantly higher risk of respiratory failure, admission to intensive care and death in COVID-19 patients, regardless of age, gender and other associated diseases. The current guidelines for identifying those at higher risk in the UK are set at a BMI of 40 but these data suggest people with BMI over 30 should also be classified as at risk.

Obesity is a growing, global epidemic linked to numerous diseases and an increased risk of death. Since the onset of the COVID-19 pandemic, several studies have implicated obesity as a risk factor for more severe effects and death in Sars-COV-2 infection. The UK and USA guidelines for identifying those at greater risk are set at a BMI of 40 and above. However, these recommendations were necessarily based on smaller studies and limited data, given the novelty and fast progression of the Sars-COV-2 pandemic.

Dr Matteo Rottoli and colleagues from the Alma Mater Studiorum University of Bologna in Italy, analysed the outcomes of almost 500 patients hospitalised with COVID-19. Again, they found that obesity was associated with a significantly higher risk of severity and death but also that any BMI higher than 30 was associated with these adverse outcomes.

Dr Rottoli comments, “Our study showed that any grade of obesity is associated with severe COVID-19 illness and suggests that people with mild obesity should also be identified as a population at risk.”

The association between higher BMI and severe COVID-19 illness is strong but the cause remains to be explained. An impaired immunological response to viral infections, alterations of lung function and obesity-related chronic inflammatory states have all been suggested as the link. The next step for this research would be to understand these mechanisms.

“Our hypothesis is that Sars-CoV-2 infection outcomes depend on the metabolic profile of patients and that obesity, interlaced with diabetes and metabolic syndrome are involved too,” says Dr Rottoli.

Dr Rottoli cautions, “The BMI cut-off should be reassessed to ensure we identify everyone at higher risk of serious infection and to avoid underestimating the potential population impact of SARS-CoV-2 infection, particularly in Western countries with higher obesity rates.”

Dr Rottoli recommends that people and health-care practitioners should be aware of the increased risk of COVID-19 illness with any grade of obesity.

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1. The study, "[How important is obesity as a risk factor for respiratory failure, intensive care admission and death in hospitalised COVID-19 patients?](#)" was published on Thursday 16 July 2020.
2. [European Journal of Endocrinology](#) (*EJE*) is the official clinical journal of the European Society of Endocrinology, publishing high-quality original research and review articles on all aspects of clinical and translational endocrinology from around the globe. *European Journal of Endocrinology* is published by [Bioscientifica](#).