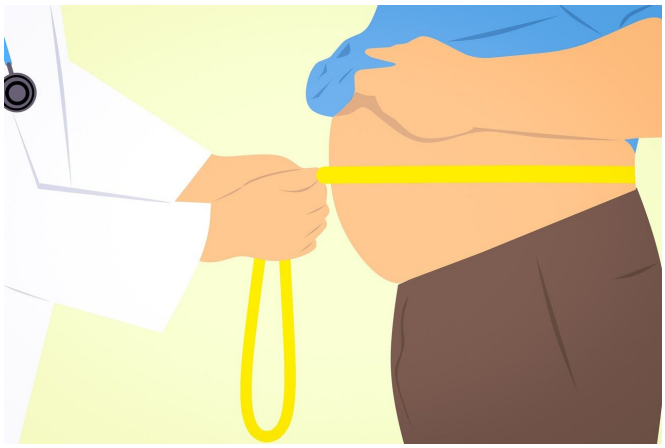
Summary of preliminary data about obesity and severity of COVID-19

24 April 2020



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In a *Nature Reviews Endocrinology* "Comment," authors from the German Center for Diabetes Research (DZD), the Boston Children's Hospital and the Harvard T.H. Chan School of Public Health call for more research about the relationships of obesity, disproportionate fat distribution and impaired metabolic health with the severity of COVID-19.

The authors raise the point that most of the studies that have reported comorbidities in patients with COVID-19 did not provide data on body weight and height, which are used to estimate adipose tissue mass, by calculating the BMI. In their Comment they also briefly summarize novel research findings, deriving in part from articles which have not yet undergone peer-review, indicating that overweight and, particularly, obesity may associate with a substantial risk of a severe course of COVID-19. Importantly, these studies suggest that this risk is independent of cardiometabolic diseases and other comorbidities.

The authors then discuss possible mechanisms explaining this relationship. Among them respiratory dysfunction in obesity may result in hypoventilation-associated pneumonia and hypoxia-induced cardiac stress. Furthermore, they highlight that not only the calculation of the BMI, but also the measurement of the waist circumference and of glucose and insulin levels, which can be used to determine the presence of prediabetes and insulin resistance, may be important, as these parameters are independent determinants of cardiometabolic diseases, pneumonia and mortality.

More information: Norbert Stefan et al, Obesity and impaired metabolic health in patients with COVID-19, *Nature Reviews Endocrinology* (2020). DOI: 10.1038/s41574-020-0364-6

Provided by Deutsches Zentrum fuer Diabetesforschung DZD