

The COVID-19 Pandemic: Challenges for Obesity Management – A Call for Providing Reliable Data and Solutions

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It has been more than 2 years since SARS-CoV-2 first appeared on the screen and rapidly changed our lives, both private and professional. We have quickly learned that the virus itself and the regulatory measures to tackle the pandemic are a particular challenge for people with obesity as well as for the healthcare professionals providing obesity management.

One of the early threatening insights was that people with obesity are at a higher risk of developing severe disease states and having fatal COVID-19 outcomes. There is now considerable evidence from large datasets that overweight and obesity increase the risk of hospital admission, intensive care unit admission, mechanical ventilation, and death due to COVID-19 [1, 2]. In this context, it is interesting to note that obesity is increasing the risk for hospitalization and death, particularly in those under the age of 65 [1] and 40 [2] years, respectively, suggesting that obesity in younger and middle-aged adults requires particular attention.

The close association between obesity and COVID-19 is currently explained by the subacute chronic inflammation accompanying obesity, thereby disrupting the immune and thrombogenic response to the viral infection [3, 4]. In addition, lung function is frequently impaired in

obesity due to excess body fat [5]. It was also shown that human adipose tissue is permissive to SARS-CoV-2 infection, probably mediated by tissue-specific alterations in the renin-angiotensin-aldosterone system [4, 6].

From the beginning of the pandemic, the European Association for the Study of Obesity (EASO) published a series of position statements dealing with the challenges of the pandemic from the perspective of obesity [4, 7, 8]. Recently, EASO emphasized prioritized vaccination of people with obesity with and without comorbidities due to their elevated risk from COVID-19 [9]. In all these statements, EASO recommended to intensify and accelerate research activities to specifically address the large number of open questions related to obesity.

Fortunately, the global threat induced by the SARS-CoV-2 pandemic initiated incredible and extraordinary joint research activities in numerous disciplines around the world to understand SARS-CoV-2 infection and its dissemination, to develop vaccines for protection against the virus, and to identify medications to treat those with clinical disease. It appears that people with obesity also

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benefit substantially from multiple novel insights including prevention and treatment options. Nevertheless, there are still many knowledge gaps as to whether all these benefits are really the same for people with obesity as compared to people with normal body weight or if specific or modified measures are needed.

A more recent but urgent question to be addressed by the obesity research community are the consequences of the measures taken by authorities to reduce direct social contact in the general population including closure of schools, fitness studios, restaurants, etc. These policy actions and media coverage of the pandemic have caused increased stress levels and disrupted daily routines, including eating habits. One relevant consequence of these changes may be substantial weight gain in 40–50% of the population, particularly in those with overweight or obesity [10]. Based on prospective data from the IQVIAs Ambulatory Electronic Medical Records database among a cohort of 432,302 persons aged 2–19 years from the USA, the rate of BMI increases approximately doubled during the first year of the pandemic compared to the prepandemic period. Children and adolescents with prepandemic overweight or obesity and younger school-aged children showed the largest increases [11].

These reports are alarming and may point to an aggravation of the obesity pandemic in children, adolescents, and adults. Thus, it has become evident that the COVID-19 pandemic has accelerated the obesity pandemic and its multiple complications, in the first place type 2 diabetes. Therefore, there is an urgent need to intensify

the medical and societal efforts to control both the COVID-19 and the obesity epidemic.

In view of this unprecedented challenge, *Obesity Facts* encourages the obesity community to share experiences, report reliable obesity-related data as well as develop and evaluate new concepts to deal with these dynamic changes. To date, many countries have installed their own strategies to tackle the pandemic. Therefore, it appears valuable and promising to learn from these national experiences throughout the COVID-19 pandemic. *Obesity Facts* is interested in providing a visible, open-access platform for reports on all these highly relevant issues for this still persisting global challenge.

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