

## **Studies show strong links between the endocrine system and COVID-19 incidence and mortality**

COVID -19 and the interlinkages to endocrine and metabolic diseases was an important programme topic for the 2020 edition of the European Congress of Endocrinology. With 4675 attendees from 112 countries this is the premier European endocrine meeting. Over 5 days, panel sessions covered the science behind COVID 19 and endocrine and metabolic disorders, as well as e-consulting and e-support to endocrine patients in times of COVID-19.

“One thing clear from the beginning of the pandemic is that patient with underlying endocrine diseases, like diabetes, obesity or the lack of vitamin D were more at risk of developing severe COVID-19” said Andrea Giustina, President of ESE, following the congress. “Therefore, disciplines that work in the prevention area, such as endocrinology, focusing on creating a healthier population, can be very important to be prepared for pandemics like COVID-10 that can affect our population.”

The need to address the links between endocrinology and COVID-19 have not gone unnoticed by policymakers. At the opening ceremony, John Ryan, Director of public health, country knowledge, crisis management at the Directorate General for Health and Food Safety (DG SANTE) of the European Commission said that “there is a huge issue regarding non-communicable diseases and the EU is investing heavily together with Member States in trying to find effective ways to prevent it, such as the Farm2Fork Strategy of the EU4Health program”

### **COVID-19 incidence higher for those with underlying endocrine conditions**

There is evidence that people with underlying endocrine conditions such as diabetes, obesity or autoimmune thyroid disease, among others, face an increased risk of infection from COVID-19. In fact, deficiency on the level of vitamin D makes people more vulnerable to infection and may increase lung injuries. In addition, recent studies show that certain underlying conditions associated with exposures to Endocrine Disrupting Chemicals (EDCs) are exacerbating the effects of COVID-19 in vulnerable populations.

### **Endocrine conditions lead to worse outcomes of COVID-19**

It has been proven that people suffering from underlying endocrine-related diseases and who get infected by COVID-19 are more likely to suffer with severe symptoms, enter intensive care units as well as have an increased risk of death. For instance, in a study by Matteo Rottoli, it is proved that obesity is also a risk factor for increasing respiratory failure, admission to the ICU and death among COVID-19 patients. In fact, patients with a Body Mass Index (BMI) superior to 35kg/m<sup>2</sup>, it dramatically increases their risk of death.

Moreover, endocrine systems could suffer in the long term from the impact of COVID-19 since the hormone system is the key regulator of maintenance of body weight, energy expenditure and energy (food) intake. In fact, COVID-19 is associated with anorexia, dysgeusia, dysfunction of gastrointestinal absorption and severe weight loss, mostly from muscle mass.

### **Urgent policy attention is needed to address these interlinkages**

In its COVID-19 and endocrinology position statement, ESE has stated that we need urgent policy attention to address the structural factors and underlying conditions that render populations vulnerable and exacerbate healthcare crises such as the COVID-19 pandemic. The upcoming EU4Health strategy needs a strong endocrine and metabolic element to achieve its objectives. Therefore, it is needed to focus on the following demands: an increase in research funding for the relationship between COVID-19 and hormones, a coordinated effort for global surveillance, new models of patient management and increased collaboration between countries, policymakers and stakeholders.

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### **Notes for Editors**

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#### **About the European Society of Endocrinology**

At the [European Society of Endocrinology](https://www.europeansocietyofendocrinology.org/) (ESE), we are working together to develop and share the best knowledge in endocrine science and medicine. ESE represents a community of over 20,000 European endocrinologists, enabling us to inform policy makers on health decisions at the highest level through engagement in advocacy efforts across Europe. It is by uniting and representing every part of the endocrine community that we are placed in the best possible position to improve life for the patient.

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