

Smoking may explain why more men than women die of COVID-19 in Spain

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Whether or not you are a smoker could determine how the coronavirus affects you. At least that is what numerous researchers are saying, insisting that tobacco use is to blame for the weakened cardiovascular systems which are at greatest risk from COVID-19. Among these researchers are Javier C. Vázquez, from the Bordeaux Neurocampus, and Diego Redolar, from the Universitat Oberta de Catalunya (UOC), who confirm that the data indicates that "tobacco use is one of the reasons that more men die from the virus than women in Spain."

Over 30% of those who have died from the disease suffered from some form of cardiovascular disease—the leading cause of death in Spain (28% in 2018)—and approximately 10% of cardiovascular disease is attributed to smoking. COVID-19 is an infectious disease provoked by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). As explained repeatedly in the news on the virus, it is transmitted mainly person to person via small respiratory droplets through sneezing or coughing, and the most common symptoms are fever, cough and difficulty breathing. Regarding its

impact on the population in Spain, over 90% of deaths have occurred in people over 60 and over 45% had some pre-existing condition.

Men versus women

Although the number of COVID-19 infections among men and women is fairly similar in Spain, the mortality rate after 5 April stood at 8% for men and 4% for women. This is what the analysis by Redolar, associate dean for research at the UOC's Faculty of Health Sciences and researcher with the Cognitive NeuroLab research group, and Vázquez, researcher in the University of Bordeaux's Neuroscience Department, has shown. In Redolar's opinion, "it is evidence that gender plays a role in patterns such as the prevalence of [tobacco](#) use," since according to data for 2017, in Spain over 25% of men smoke while only 18% of women do.

The biological effects of tobacco use

The researchers, who have published an article on this topic in the scientific journal Tobacco Induced Diseases, state that it is important that biological data be taken into account. For instance, smoking tobacco can upregulate the angiotensin-converting enzyme 2 (ACE2), which, among other things, lowers blood pressure. Some coronaviruses use this enzyme as a cellular entry receptor. SARS-CoV-2 is one such virus, joining itself to ACE2 receptors in the lower respiratory tract of infected individuals to gain access to the lungs. The researchers confirm that "existing data suggests that patients with COPD, or chronic obstructive pulmonary disease, or who smoke have a higher risk of becoming more seriously ill from COVID-19, since it increases ACE2 expression in weaker airways, which this type of patient has." These conclusions have already been confirmed in lab mice.

More data and measures against tobacco use

Given tobacco's apparent interaction with the coronavirus, the two researchers are alarmed at the lack of data that would allow us to better study how smoking and the pandemic are related. The researchers point out that in Spain there is currently no data on smoking in patients with COVID-19 and that this is something to be remedied by registering and sharing data on the issue.

Regarding its impact on the population in Spain, over 90% of deaths have occurred in people over 60 and over 45% had some pre-existing condition.

More information: Javier Vázquez et al, COVID-19 outbreak impact in Spain: A role for tobacco smoking?, *Tobacco Induced Diseases* (2020). [DOI: 10.18332/tid/120005](https://doi.org/10.18332/tid/120005)

They also state that we should launch campaigns to reduce tobacco use adapted to the current context and adopt interventions that have proven effective in curbing the habit, like increased taxes on tobacco, prohibiting its sale during the pandemic or improving programmes to help people quit smoking.

Provided by Universitat Oberta de Catalunya

Researchers demand data on tobacco use among those infected and advise that its sale should be prohibited during the pandemic

Cardiovascular diseases aggravated by smoking are present in over 30% of coronavirus mortalities

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