

## PRESS RELEASE

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### **A global survey says loss of taste and smell, even without a “stuffy nose”, are a distinctive feature of COVID-19**

**More than 40 countries involved, a multilingual questionnaire, thousands of answers from patients for a huge open access and participatory study whose first results have been published on Chemical Senses. The phenomenon of “parosmia”, namely the distortion of the sense of smell because of the infection, was also investigated**



Trieste, 11 November 2020

A global survey conducted in more than forty countries around the world provides the most important evidence of the connection between COVID-19 and the loss of smell, taste and so-called chemesthesis, namely the sensitivity to molecules like those present in chili peppers. In particular, in these patients this loss is often not associated with a “stuffy nose”, an important feature for diagnostics to distinguish the disease from other viral infections, such as a cold or flu. The first results of the study have been published on the scientific journal, Chemical Senses, while the study continues investigating also other aspects of the relationship between COVID-19 and smell. Like that of “parosmia”, the distortion of the sense of smell that leads to the inability to correctly identify smells. It is an anomaly often found in people who have contracted the Coronavirus, even months after their recovery. SISSA of Trieste is taking part in the investigation through Prof. Anna Menini’s workgroup.



## **Smell, taste and chemesthesis in COVID-19 patients. And attention to “parosmia”**

Based on questionnaires answered by thousands of people from around the world, the study on Chemical Senses reveals that smell, taste and chemesthesis are significantly reduced in patients with COVID-19. “The data show that COVID-19 has a major impact on chemosensory functions and that their impairment should be considered as a possible indicator of the disease” explains Professor Menini. “This evidence can also provide doctors with an extra element to initiate patients on the diagnostic test for COVID-19”. But there is more, explains the professor: “Thanks to this research, which is still underway, we can investigate aspects which were unknown in the initial phases of the infection, such as that of parosmia: in different patients or people who have already recovered, in fact, the recovery of smell presents this peculiarity. The olfactory system injured by the virus is no longer able to correctly distinguish the components of a smell, leading, for example to exchange one smell with another. This phenomenon has already been described, but it is not known how common it is in people affected by Coronavirus. With this survey we will also try to deepen this aspect”.

### **A questionnaire in 30 languages for an ongoing survey**

Male and female researchers of the Global Consortium for Chemosensory Research launched the survey on a worldwide scale on 7 April last. A first collection of data took place on 18 April: the first results of the analysis are shown in the recent publication. The questionnaire, currently available in more than 30 languages, collects the information on smell, taste and chemesthetic functions directly from the patients but also from former patients. Everyone is asked different questions relating to their ability not only to perceive smells and tastes but also sensations such as coolness, burning or fizziness in the mouth, before and during the disease. The same questionnaire also asks to quantify the feeling of “stuffy nose”. Many other important elements, explains Anna Menini, may emerge from the subsequent phases of the survey: “We invite all those who have or have had a respiratory disease, including COVID-19, to go to <https://gcchemosensr.org/> and fill in the questionnaire in their own language to provide further data and allow us to deepen the study. Not to mention that anyone who wishes to simply test their senses can do so by going to the website. Everything is done with the maximum respect for anonymity.

### **A service for those who want to test smell, taste and chemesthesis**

Who wants to test smell, taste and chemesthesis, for those who have been sick or are simply curious, the site [gcchemosensr.org](https://gcchemosensr.org/) also makes available two different routes entitled “I have been sick and I now want to monitor my sense of smell and taste” and “I want to monitor my sense of smell and taste”. “No substance or particular tool is required”. You can do the test with substances that are found in all households. It is an interesting test to do, to understand the condition of our senses which are so important and, as in the case of smell, sometimes overlooked,” explains the professor.

## The innovative approach of the study

“What we have observed to date is a significant change in smell, taste and chemesthesis, in cases of COVID-19. We can therefore conclude that a significant reduction in the chemosensory abilities is a distinctive trait of this disease”. The project, explains Professor Menini, distinguishes itself from preceding investigations on this subject also by the way it has been conducted. This study is based, in fact, on a participatory approach that involves the patients directly, and on the principles of open science. Anna Menini concludes, “Our hope is that this inclusive survey, carried out globally, together with the data collected and made available to all, can serve as a basis and model for future study in this area”.

<b>USEFUL LINKS</b> Full paper: <a href="https://academic.oup.com/chemse/article/45/7/609/5860460">https://academic.oup.com/chemse/article/45/7/609/5860460</a>	<b>SISSA</b> Scuola Internazionale Superiore di Studi Avanzati Via Bonomea 265, Trieste <b>W</b> <a href="http://www.sissa.it">www.sissa.it</a>	<b>CONTACTS</b> Nico Pitrelli ➔ <a href="mailto:pitrelli@sissa.it">pitrelli@sissa.it</a> <b>T</b> +39 040 3787462 <b>M</b> +39 339 1337950
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