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Performing an olfactory-gustatory test to identify perceptual disorders related to Covid-19

>>> One of the characteristic symptoms caused by SARS-CoV-2 is a totally or partially altered sense of smell; which may or may not be combined with an altered sense of taste. This alteration appears to last anywhere from ten days to several weeks. It's not always easy, in our daily routines, to self-assess and notice a decline or change in the acuity of our sense of smell or taste. Yet, performing an effective olfactory-gustatory test is quite straightforward. <<<

The fight against SARS-CoV-2 involves a large number of researchers from various disciplines. Specialists in sensory science are also mobilized. Various surveys have been launched to better understand the extent to which the loss of smell occurs in the event of contamination by the coronavirus (Study by Drs. Saussez and Lechien www.umons.ac.be/covid19rechercheclinique – World-wide Study by the Global Consortium for Chemosensory Research - https://sites.google.com/view/gcchemosensr/). Initial results show that 34 % to 88 % of contaminated individuals (who present symptoms or appear asymptomatic) report disruption to smell and/or taste[1, 2]. These deficiencies, in non-crisis times, are far less frequent (5 % of general anosmia and 15 % of general hyposmia)[3, 4]. It is worth noting that these disruptions can occur even without a blocked nose! It is not, however, always easy to self-assess. For example, with tasting experts, knowledge might compensate for a passing deficiency. And when eating food during a meal, it can be difficult to differentiate accurately between smell and taste, and therefore to notice a potential problem with one of these two sensory systems.

However, certain tools are available in our daily lives to perform a quick and simple olfactory or gustatory test (https://gilles-sicard-olfac.monsite-orange.fr/).

The following test allows you to be particularly attentive to your current sense of smell and to detect any potential anosmia (total loss of smell) or hyposmia (partial loss of smell, general decline in the perception of its intensity) or a distortion in your olfactory perception, known as cacosmia (the frequent perception of bad smells in the absence of the associated odorant source) or parosmia (a change in the odorant's olfactory quality).
Hyposmia and qualitative problems with smell are often more difficult to detect than an absence of olfaction.



For instance, you can use food flavorings for baking that can be found in grocery stores and supermarkets (Figure 1).
Given that these products are fairly concentrated, a loss (no smell perceived), a decrease in the perceived aromatic intensity of all the flavors tested or a distortion of their qualities (distorted perception of smell) will help you to identify a potential olfactory problem.

However, you should still take a few precautions while carrying out your self-assessment:
➔ We advise against using essential oils for conducting the test. Their use could skew your reading by stimulating another sensory system (somatosensory perception), which is close to the olfactory system.
➔ Do not smell the bottles of flavoring directly. This is important so that you can safely reuse them and avoid spreading the virus. Only dip the cotton buds once to smell each of the odorants.
➔ Don't hesitate to confront your perceptions with people in lockdown with you, or remotely with other professionals to get a better pinpoint for your readings.

For the gustatory test, and in order to focus solely on the perception of flavors, use sugar, sweetener or salt to test your capacity. As these products are not flavored, retronasal perception will not skew your perceptions.

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Get some **colorless flavoring**,
3 small bottles will be enough, e.g.:
Vanilla, Strawberry, Almond



Dip a cotton bud in each bottle
and bring it **up to your nose**.
This step can be carried out blindly

Figure 1. An olfactory test that you can do yourself.

Taste a small quantity of these substances and if you do not perceive any of the flavors tasted, you may be suffering from ageusia.

We would like to specify that these self-assessments in no way constitute a test for the virus or diagnostic tools. Their purpose is to assess your olfactory and gustatory perception, the deficiency of which is a symptom that can be found in more than 80 % of individuals infected by Covid-19. There are other possible causes that can explain problems with olfaction.

Smell and taste are your tools, so go ahead and test yourself! The effects observed usually last for 8 to 9 days, but can go on for several weeks[2, 5]. If this is the case, you should know that it's possible to train yourself to strengthen or help recover your senses through daily exercises.[6, 7]. ■

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