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## COVID-19 anosmia

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### Does such a phenomenon exist? If so, what is the correct approach?

Smell disorders (hyposmia, anosmia) occur among 15–20 % of the general population (1–). The term anosmia means complete loss of the ability to smell. In our daily clinical work, anosmia is the term used to describe the inability to smell ourselves or our surroundings. Fragments of olfaction (sense of smell) may be preserved but are generally useless in a social context. The prevalence of anosmia is 2–5 % (1–3). Loss of olfactory input has several consequences: we no longer receive information about potential hazards such as smoke, fire, leakage of chemicals and poisonous substances, as well as spoiled food, leading to anxiety and stressful alertness. In addition, the smell of food is absent or distorted to such a degree that sufferers are unable to prepare and enjoy a meal. In one-third of patients, this hedonic loss gives rise to depression (2, 4). In many cases, the patient's primary complaint is loss of taste (ageusia). The underlying mechanism is that the sense of smell adds all the subtle elements of taste beyond sour, salt, sweet, and bitter. As clinicians, we should be very aware of anosmic symptoms.

The causes of anosmia are many, the foremost of which is chronic rhinosinusitis. However, the second most frequent underlying mechanism is post-infectious – meaning that a viral upper airway infection (common cold) may induce permanent anosmia. Viral infections are responsible for approximately 20 % of all cases of anosmia. Influenza virus is a well-known species; however, several other viruses play a role – in fact, more than 200 viruses are listed as potential 'villains'. According to the literature, coronaviruses account for 10–15 % of cases (5). The mechanisms underlying post-infectious anosmia are not fully understood. Most likely, the neuroepithelium embedded in the nasal mucosa is damaged directly by the microorganisms, or the pathogenesis involves immunological processes (6, 7).

In the current pandemic, symptoms of anosmia should not be unexpected. On the other hand, other viruses may also be part of the scenario. Therefore, as doctors, we are indeed challenged. When confronted with a patient with acute/subacute onset of anosmia/ageusia, what should we do? If other signs of COVID-19 are present, we know what to do. But in the absence of these symptoms, we are somewhat at a loss.

*«In my opinion, monosymptomatic anosmic patients ought to undergo COVID-19 testing»*

Monosymptomatic anosmia has been reported in cases of COVID-19 (8), therefore the current advice should be to suspect COVID-19 in monosymptomatic cases of anosmia and encourage the patients to isolate themselves and their cohabitants (5). Otherwise, contamination on a larger scale may emerge. Treatment with nasal steroids is not recommended because of uncertainty with regard to their benefits (co-occurring hay fever and chronic rhinosinusitis receive standard treatment) (5).

In my opinion, monosymptomatic anosmic patients ought to undergo COVID-19 testing. Self-isolation has many consequences. Overall, it is of the utmost importance to register individuals who have tested positive to COVID-19 in order to regain normal social conditions at the end of this scourge. We must expect COVID-19-positive individuals to develop immunity, and as such they will be ideal as the first line in re-establishing normality worldwide. Furthermore, a vaccine may be in the pipeline; if immunity has already been obtained through primary infection, costs could be reduced and vaccination programmes focused on populations without immunity.

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