

Changes in smell can be a sign of COVID-19 and Lyme disease

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Changes in smell have been described in COVID-19 and Lyme disease. According to Parma and colleagues, “A sudden loss of smell [and] taste is consistent with the now typical presentation of COVID-19 symptoms, it is highly probable that COVID-19 infection is the main reason of their smell and taste change.” [2]

Patients with other illnesses, including Lyme disease, frequently report changes in smell. An impaired or heightened sense of smell has been described in patients suffering from neurological disorders, like Alzheimer’s and Parkinson’s disease, [3] autoimmune diseases, [3] fibromyalgia, [4] and Lyme disease. [5]

A decreased sense (hyposmia) or loss of smell has been described in patients diagnosed with fibromyalgia. These patients had “significantly lower thresholds of smell compared to healthy controls,” writes Amital et al. [4]

Meanwhile, another study found that 50% of 16 patients with Lyme disease suffered from hyperosmia (heightened sense of smell) versus none of the 18 control subjects. [5]

“The high prevalence of this olfactory disorder found in our study suggests the need for further studies of olfactory function in [Lyme] disease,” conclude the authors. [5]

Fallon et al. described a hypersensitivity in photophobia, sound sensitivity, touch, taste, and smell. “Foods may taste abnormally sour and bitter,” he writes. “Smells may seem overly intense and noxious.” [6]

Other chemosensory disturbances

Parma and colleagues found that COVID-19 patients can present with more than changes in smell. The chemosensory system refers to the body’s perception of chemical signals by the senses, particularly the perception of taste and smell.

“These results show that COVID-19-associated chemosensory impairment is not limited to smell, but also affects taste and chemesthesis [chemical sensitivity of the skin and mucous membranes].” [2]

The number of cases, however, were limited. “We found little incidence of qualitative changes in olfactory function, with only a small percentage of participants reporting distorted smells (consistent with parosmia) or phantom smells (consistent with phantosmia).”

Additional chemosensory disturbances included:

- Anosmia: The loss of the ability to detect one or more smells.
- Hyposmia: A decreased sensitivity to some or all smells.
- Ageusia: The loss of taste functions of the tongue, including sweetness, sourness, bitterness, saltiness.
- Hypogeusia: The reduced ability to taste things.
- Parosmia: Distortions of the sense of smell, including the inability to correctly identify odors.
- Dysgeusia: A distortion of the sense of taste.
- Phantosmia: Smelling something that is not actually there.
- Phantogeusia: A metallic or salty taste in the mouth for no reason.

Editor's note: It is important to consider Lyme disease in a COVID-10 evaluation as a potential cause of changes in smell.

Related Articles:

[What's that smell?](#)

[Study finds hearing loss and tinnitus common in patients with Lyme disease](#)

[Central sensitization syndrome worsens Lyme disease symptoms?](#)

References:

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