

## COVID's effect on smell



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The most common cause of smell loss (anosmia) to the general population is through the effects of viruses. Smell loss is regarded to be one of the initial signs of COVID-19<sup>1</sup>. Those who have contracted COVID can also be prone to long-term loss of smell and taste due to damaged olfactory cells following recovery of the

virus. The NHS state that a person's sense of smell MAY return to normal in a few weeks or months<sup>2</sup>. However, of the people who stated loss of smell as a symptom for their experience of COVID, 25% stated they are yet to regain their sense of smell<sup>3</sup>. Loss of sense of smell can mean missing out on experiences taken for granted such as the smell of food, flowers and perfumes. A particular loss is food, because 80% of the flavour from food comes from the experience of smell<sup>4</sup>.

The effects of losing one's sense of smell can significantly affect mental and emotional health and/or wellbeing<sup>5</sup>. There is a correlation between olfaction and depression. A study deduced that patients

### Recent activities from the POTION Team!



The POTION consortium recently took part in the highly successful EIC Future Tech Week 2020! We delivered the webinar: 'An overview on the project POTION: Promoting social interaction through emotional body odors'.

with depression have reduced olfactory performance compared to healthy patients<sup>6</sup>. A sense of smell also has a close relationship to the brain's ability to recall memories<sup>7</sup>. The perfume industry has been aware of this connection for years and is built around the relationship between smell and memories<sup>8</sup>. Psychologically, loss of smell

<sup>1</sup> <https://www.pennmedicine.org/updates/blogs/health-and-wellness/2020/june/covid-and-smell>

<sup>2</sup> <https://www.nhs.uk/conditions/lost-or-changed-sense-smell/>

<sup>3</sup> <https://www.dentistry.co.uk/2020/07/13/anosmia-covid-helping-patients-senses/>

<sup>4</sup> <https://www.practitionerhealth.nhs.uk/syndication/conditions/anosmia>

<sup>5</sup> <https://www.medicalnewstoday.com/articles/what-its-like-to-live-without-a-sense-of-smell#A-lack-of-connection-with-doctors>

<sup>6</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4918728/>

<sup>7</sup> <https://www.fifthsense.org.uk/psychology-and-smell/>

<sup>8</sup> <https://www.fifthsense.org.uk/psychology-and-smell/>

can lead to a feeling of isolation and loneliness; smell is one of our 5 senses, therefore not being able to experience one of the senses that a majority of people have, may lead to these negative feelings.

## POTION PROJECT CAPABILITIES

The POTION project consortium is looking to investigate meaningful social interaction, combining new knowledge about the chemical composition of human social chemo signals, with a novel olfactory-based technology designed to drive social behaviour. The effects of COVID-19 and its short-term and long-term effects of anosmia will be of curiosity to

the project team and how POTION may be able to help with such circumstances.

## POTION PROJECT PAPERS

The POTION Project consortium have recently had three papers published. The three papers are from Instituto Universitário (ISPA).

Paper one: Gomes, N. & Semin, G. R. (2020). Mapping Human Vigilance: The Influence of Conspicifics. *Evolution and Human Behavior*, 41, 69-75. <https://doi.org/10.1016/j.evolhumbehav.2019.10.002>

Paper two: Silva, F., Gomes, N., Korb, S. & Semin, G. R. (2020). Not All Emotions Are Equal: Fear Chemosignals Lower Awareness Thresholds Only

for Fearful Faces. *Chemical Senses*, Volume 45, Issue 7, September 2020, Pages 601–608.

<https://doi.org/10.1093/chemse/bjaa047>

Paper three: Gomes, N., Silva, F. & Semin, G. R. (2020). The Lasting Smell of Emotions: The Effects of Reutilizing Fear Sweat Samples, *Behavior Research Methods*, <https://doi.org/10.3758/s13428-020-01412-5>

**About POTION Project...**

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