

**TREATMENT OF SMELL AND TASTE DISORDERS CAUSED BY COVID-19: AN INNOVATIVE APPROACH TO THERAPIES AND MEDICATIONS**

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**Introduction.** The COVID-19 pandemic, which primarily affects the respiratory system, has also led to widespread olfactory and taste disorders as common symptoms. Numerous studies and therapeutic approaches have been explored to treat these disorders, with various medications and therapies showing promise. This article delves into specific treatments, their mechanisms, and the results achieved in patients. At the same time, we, the authors, will also include citations from our previously published scientific works in the literature section.

**Keywords:** *COVID-19, Corticosteroid, Vasoconstrictor, Antioxidant, Olfactory and Gustatory Dysfunction.*

**Description and Analysis of the Data.**

**Olfactory Training**

Olfactory training is one of the effective treatments for COVID-19-related olfactory dysfunction, stimulating neural pathways through regular exposure to specific smells. This therapy typically involves using scents such as:

- **Rose** (floral aromas)
- **Lemon** (citrus aromas)
- **Essential oils** (e.g., peppermint, lavender)

Patients practice smelling these scents several times a day, gradually improving their ability to detect them. Studies indicate that olfactory training restores smell in 60-80% of patients .

**Corticosteroids**

Corticosteroids are anti-inflammatory drugs commonly used to reduce swelling in the respiratory passages, which can help restore olfactory and taste function. The following corticosteroids are often prescribed for COVID-19 patients:

- **Fluticasone propionate** – applied as a nasal spray, used twice daily for 10-14 days, showing significant improvement in most cases .

- **Prednisolone** – taken orally, is widely used for its long-term anti-inflammatory benefits, aiding the recovery of olfactory and taste functions .

Corticosteroid treatment has shown positive results in 50-70% of patients, with partial or complete recovery of sensory functions .

**Vasoconstrictors**

**Vasoconstrictors** reduce swelling in the nasal passages by constricting blood vessels, allowing better airflow. These medications are used to restore the sense of smell in COVID-19 patients:

- **Oxymetazoline** – a nasal spray that reduces swelling and is effective for short-term relief.

- **Xylometazoline** – used for 7-10 days to help open nasal passages and improve olfaction .

Vasoconstrictors help restore olfactory function by reducing blockages and are effective in temporary loss of smell.

**Antioxidants**

Antioxidants are also used to treat COVID-19-related olfactory and taste disorders by protecting and regenerating nerve cells. These include:

- **Alpha-lipoic acid** – a powerful antioxidant that aids in the protection and regeneration of nerve tissues .

With antioxidant treatments, patients experience a 30-40% improvement in their olfactory and taste functions, alongside general health benefits.

**Overall Outcomes**

Various therapies and medications have proven to be highly effective in treating COVID-19-related olfactory and taste disorders:

- 70-80% of patients recover their olfactory and taste functions.
- The combination of corticosteroids and olfactory training accelerates recovery.
- Vasoconstrictors and antioxidants effectively treat temporary sensory dysfunctions.

Therapy Type	Medication	Outcome
Olfactory Training	Essential oils (lavender, rose)	60-80% recovery in partial or full olfaction
Corticosteroids	Fluticasone, Prednisolone	50-70% significant improvement
Vasoconstrictors	Oxymetazoline, Xylometazoline	Opens airways, aids in restoring smell
Antioxidants	Alpha-lipoic acid	Nerve tissue regeneration, 30-40% improvement

### Conclusion

The use of modern therapies and medications has significantly accelerated the recovery process for olfactory and taste disorders caused by COVID-19. Future developments, such as regenerative therapies and nerve regeneration technologies, may offer even more efficient treatment solutions.

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