

Smell loss

Do you have it? How do you treat it?



This pamphlet includes information about:

- Why smell is important
- The causes of smell loss
- How to treat smell loss
- Materials for smell training

Why is smell loss important?

Smell, or olfaction, is one the five principal human senses.

If you experienced any of the following symptom, you may have smell loss:

- Change in sensitivity to smells**
- Partial or complete loss of smell**
- Changes in flavors of food**
- Food tasting more bland**
- Bad or foul smells that are not there**

While loss of smell may not seem life-altering, smell serves a variety of critical health-related roles including:

- **Ability to detect health hazards such as fire or toxic fumes**
- **Ability to enjoy food, and the associated experiences**
- **Social awareness and ability to detect your own and others' scents**

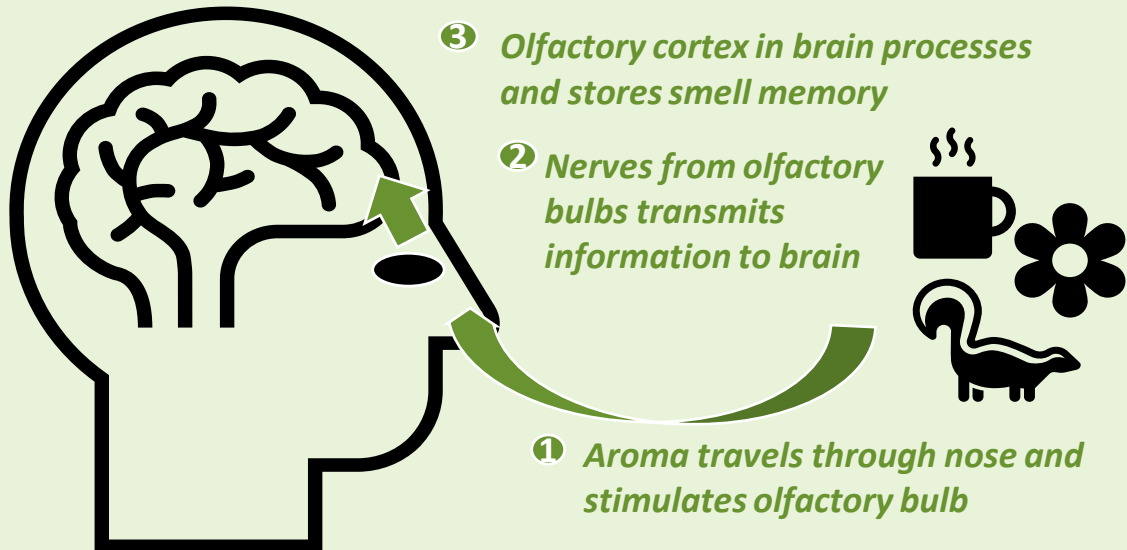
Smell dysfunction is associated with multiple comorbidities including:

- **Mental health conditions, like depression and anxiety**
- **Impaired cognition**
- **Decreased nutrition**
- **Negative impact on quality of life such as increased social isolation**
- **Higher levels of frailty, or the body's ability to withstand stress**
- **Mortality in a "dose-dependent" fashion**

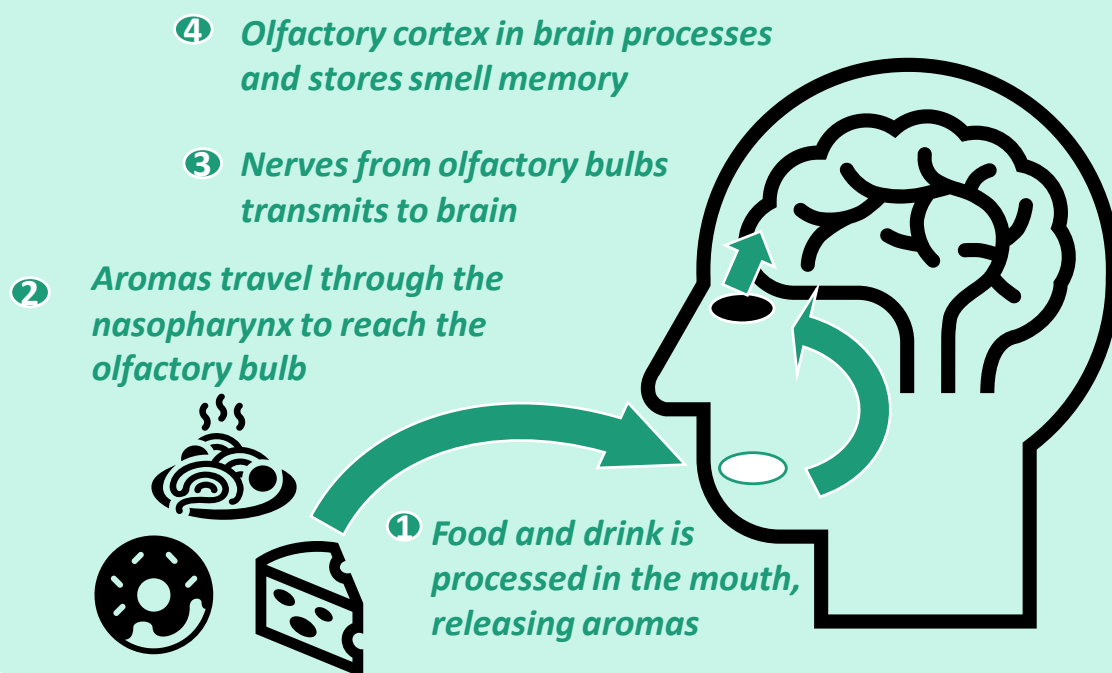
How does your sense of smell work?

There are two main ways that we “smell”:

1. Smells in the nose (“Orthonasal”)



2. Flavors in the mouth (“Retronasal”)



What causes smell loss?

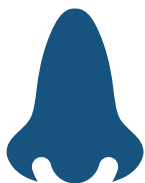
Causes of smell loss disrupt one or more of the steps in smell processing. Common causes include:



Upper respiratory infections (viral, bacterial, etc.)



Head trauma



Chronic sinusitis



Iatrogenic (surgery, endoscopy, foreign body, etc.)



Idiopathic

- Although many patients achieve some improvement in smell without treatment, few return to normal levels spontaneously
- **Treatment options are limited; the most efficacious is *Smell Training* (see next page)**





Smell training guidelines

A step-by-step instruction manual

1) Identify your scents / materials

We recommend using one scent from four odor categories: flowery, fruity, spicy, resinous

Use the suggested essential oil scents or other alternative methods:

		Scents
	Flowery	Lavender
	Fruity	Lemon
	Spicy	Clove
	Resinous	Eucalyptus

2) Steps for smell training

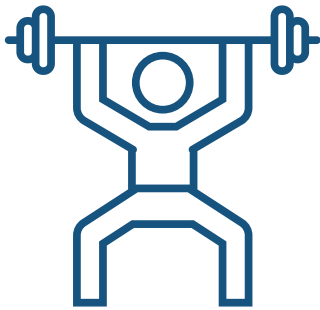
1. Find a quiet environment where you can focus on the scent.
2. Hold the sent directly to your nose.
3. Relax and inhale naturally through your nose (*do not sniff too deeply or quickly*).
4. Hold for approximately 10 seconds.
5. Try to visualize the scent you are smelling (*look at pictures found on Page 5-8*)
6. Repeat 3-4 times.
7. Move on to the next scent.
8. Repeat twice a day (*morning and evening is best*).

Repeat with the same essential oil scents for months 1-3, then use four different scents for months 4-6

FAQ

- 1) How long after starting smell-training will I start noticing results?
Smell training should be continued for at least 3 months. The timeline varies greatly for each individual. Some patients will notice a difference immediately while for others change will be minimal.
- 2) Will anything besides smell-training improve my sense of smell?
Studies thus far have shown that smell training is the best method of improving smell loss. Certain medications such as steroids may improve the efficacy of smell training – to learn more contact your otolaryngologist.

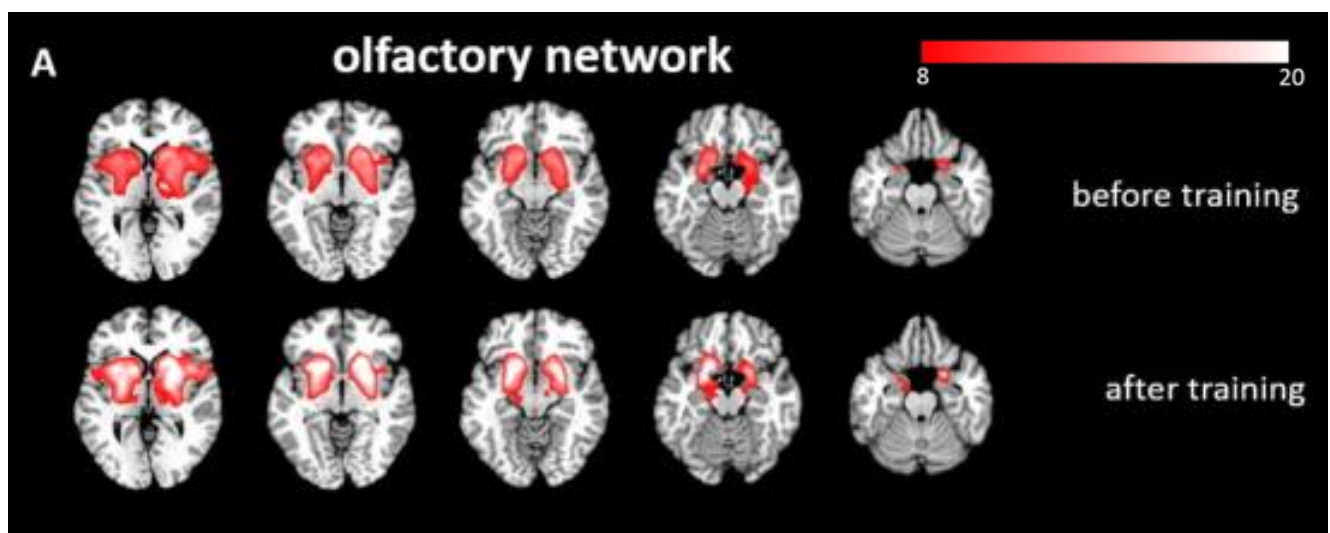
How does smell training work?



Smell training is like **Physical Therapy**
for your sense of smell

- Much like for chefs or wine experts, practice can improve your sense of smell
- Olfactory neurons have plasticity
- The olfactory system can be strengthened even with the act of practicing sniffing alone

In a 2015 study conducted by Kolindorfer et al., anosmic patients demonstrated an increase in signal intensity in the olfactory network on fMRI, after smell training.



Kolindorfer K, Fischmeister FPS, Kowalczyk K, et al. Olfactory training induces changes in regional functional connectivity in patients with long-term smell loss. *Neuroimage Clin.* 2015;9:401-410.

Smell training weekly journal

Identify the scents / materials you are using to represent each of the smell categories



Flowery



Fruity



Spicy



Resinous

Record whether you performed smell testing in the am AND pm every day

Bring this sheet to your appointments 😊

Month 1	M		T		W		Th		F		S		S	
	Am	Pm	Am	Pm	Am	Pm	Am	Pm	Am	Pm	Am	Pm	Am	Pm
Week 1														
Week 2														
Week 3														
Week 4														

Notes:

Month 2	M		T		W		Th		F		S		S	
	Am	Pm	Am	Pm	Am	Pm	Am	Pm	Am	Pm	Am	Pm	Am	Pm
Week 1														
Week 2														
Week 3														
Week 4														

Notes:

Month 3	M		T		W		Th		F		S		S	
	Am	Pm	Am	Pm	Am	Pm	Am	Pm	Am	Pm	Am	Pm	Am	Pm
Week 1														
Week 2														
Week 3														
Week 4														

Notes:

Images for smell training

Lavender



Images for smell training

Lemon



Images for smell training

Cloves



Images for smell training

Eucalyptus



References:

Hummel et al. Effects of olfactory training in patients with olfactory loss. *Laryngoscope*. 2009;119(3):496-9; Hura N, Xie DX, Choby GW, et al. Treatment of post-viral olfactory dysfunction: an evidence-based review with recommendations. *Int Forum Allergy Rhinol*. 2020;10(9):1065-1086.; Ahmed OG, Rowan NR. Olfactory Dysfunction and Chronic Rhinosinusitis. *Immunol Allergy Clin North Am*. 2020;40(2):223-232.; Whitcroft KL, Hummel T. Clinical Diagnosis and Current Management Strategies for Olfactory Dysfunction: A Review. *JAMA Otolaryngol Head Neck Surg*. 2019; Pinto JM, Wroblewski KE, Kern DW, Schumm LP, McClintock MK. Olfactory dysfunction predicts 5-year mortality in older adults. *PLoS ONE*. 2014;9(10):e107541.; Kollndorfer K, Fischmeister FPS, Kowalczyk K, et al. Olfactory training induces changes in regional functional connectivity in patients with long-term smell loss. *Neuroimage Clin*. 2015;9:401-410.