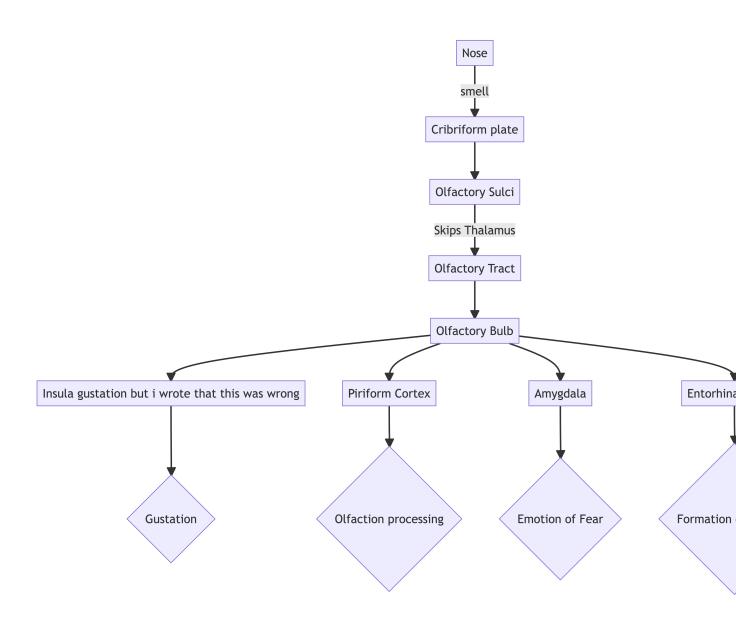
CN I: Olfactory nerve

Table of contents

1	Path	way:	3
	1.1	First order neurons:	3
	1.2	Second order neurons:	3
2	Rele	vant Structures	4

3 Dysfunction 4



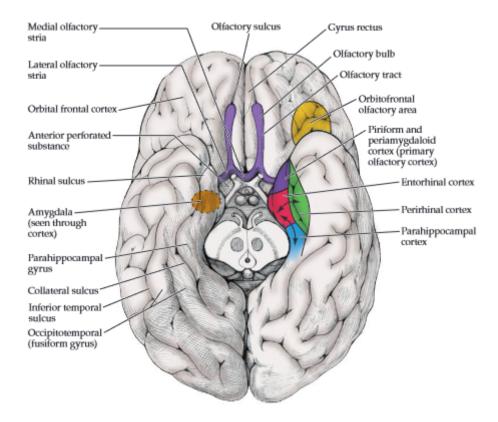


Figure 1: Central Olfactory Structures

1 Pathway:

1.1 First order neurons:

- 1. Smell is detected by specialized chemoreceptors on bipolar primary sensory neurons found in the olfactory neuroepithelium¹
- 2. Olfactory nerve (made up of axons combined with other receptor cell axons)¹
- 3. Pass through Cribriform plate of Ethmoid bone¹
- 4. Terminate on the olfactory bulb (main relay station of olfactory pathway)¹

1.2 Second order neurons:

- 1. Olfactory tract
- 2. Split: Medial & Lateral striae
 - 1. Medial Stria: Projects to subcallosal gyrus

2. Lateral Stria: continues on to Parahippocampal gyrus

2 Relevant Structures

The olfactory nerve does not have peripheral ganglia

Olfactory cortex: no single structure - Piriform cortex: - Located: Below lateral olfactory stria - Function: Olfactory processing - Amygdala: - Located: Anterior to Temporal/Inferior horn of Lateral Ventricle - Function: Emotion & Fear - Entorhinal cortex: - Location: Anterior part of Parahippocampal gyrus - Function: Formation of Memory

3 Dysfunction

- Anosmia
- 1. Blumenfeld H. Neuroanatomy Through Clinical Cases. 3rd ed. Oxford university press; 2022.