

Q1: The neuropathway of olfactory and taste involved :

1. Foramina of olfactory and taste

Olfactory : cribriform plate of ethmoid bone

Taste : Facial : Internal acoustic meatus , Glossopharyngeal and vagus : Jugular foramina

2. Cranial nerves of olfactory and taste

Olfactory : olfactory nerve

Taste : Facial (chorda tympani) Ant 2/3 , Glossopharyngeal post. 1/3 , vagus (pharynx, epiglottis, esophagus)

3. Neurotransmitters of olfactory and taste

Taste: ATP , Serotonin

Olfactory : excitatory and inhibitory (GABA released by granular cells)

4. Type of olfactory cells

Olfactory cells , mitral cells, glomerulus , granular cells

5. Brain lobe of olfactory and taste

Taste : Gustatory cortex (frontal lobe) , Insula lobe

Olfactory : Temporal lobe , insula lobe

6. Nucleus of the thalamus

Taste : ventral posteromedial nucleus of thalamus

Olfaction : Don't relay in thalamus

Q2: Causes of anosmia?

- 1) Nasal infection
- 2) paranasal sinus infection
- 3) olfactory groove meningiomas
- 4) trauma
- 5) Vagus reflex

Q3: What increases and decreases satiety?

INCREASE :

Increase fat storage

Increase leptin

Increase alpha - msh

Increase insulin level

Increase glucose level

Increase CRH

DECREASE :

Increase orexin

Increase neuropeptide y

Increase agouti-regulating peptide

Q4: Component of longitudinal fascicles?

Craniosacral :

Cranial nuclei

Sacral:

(S2-S4)

Q5: The causes of Bell's palsy and shingles?

Shingle : reactivation of varicella zoster virus

Bell's palsy : unknown cause (damage of facial nerve) , lead to loss of taste of Ant2/3 of the tongue

Q6: The connections between hypothalamus and limbic system?

- 1) Mammillothalamic tract : hippocampus to fornix to mamillary body to ant. thalamic n. to cingulate to hippocampus (papez circuit)
- 2) By stria terminalis : between hypothalamus and amygdala
- 3) Ventral amygdalofugal pathway
- 4) Fornix

Q7: The component of epithalamus?

- 1) pineal gland
- 2) Habenula
- 3) Posterior commissure

Q8: Disease caused by damage of ventral medial nucleus, mamillary body, dorsal medial nucleus, lateral hypothalamus nucleus?

- 1) VMN : obesity (hyperphagia)
- 2) Mamillary body : Wernicke's encephalopathy
- 3) DMN : Savage behavior
- 4) Lateral hypothalamus : Anorexia nervosa (adult) , Infants failure to thrive (FTT)