



- اللَّهُمَّ أَرِنِى حَقِيقَةَ الْاَشْيَآءَ كَمَا هِىَ

"O Allah! Show me the reality of all things as it (really) is.."

# Sensory Physiology

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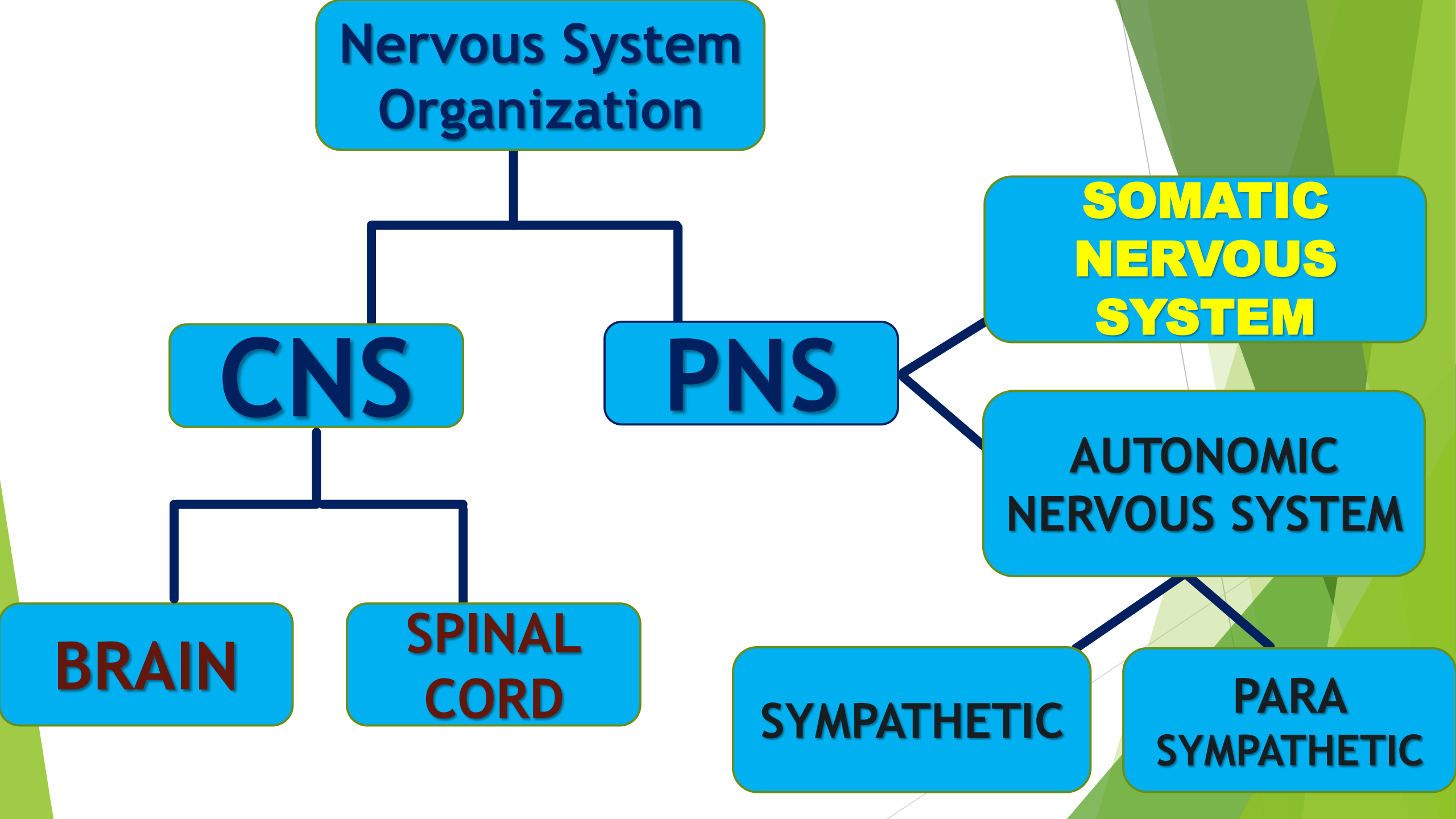
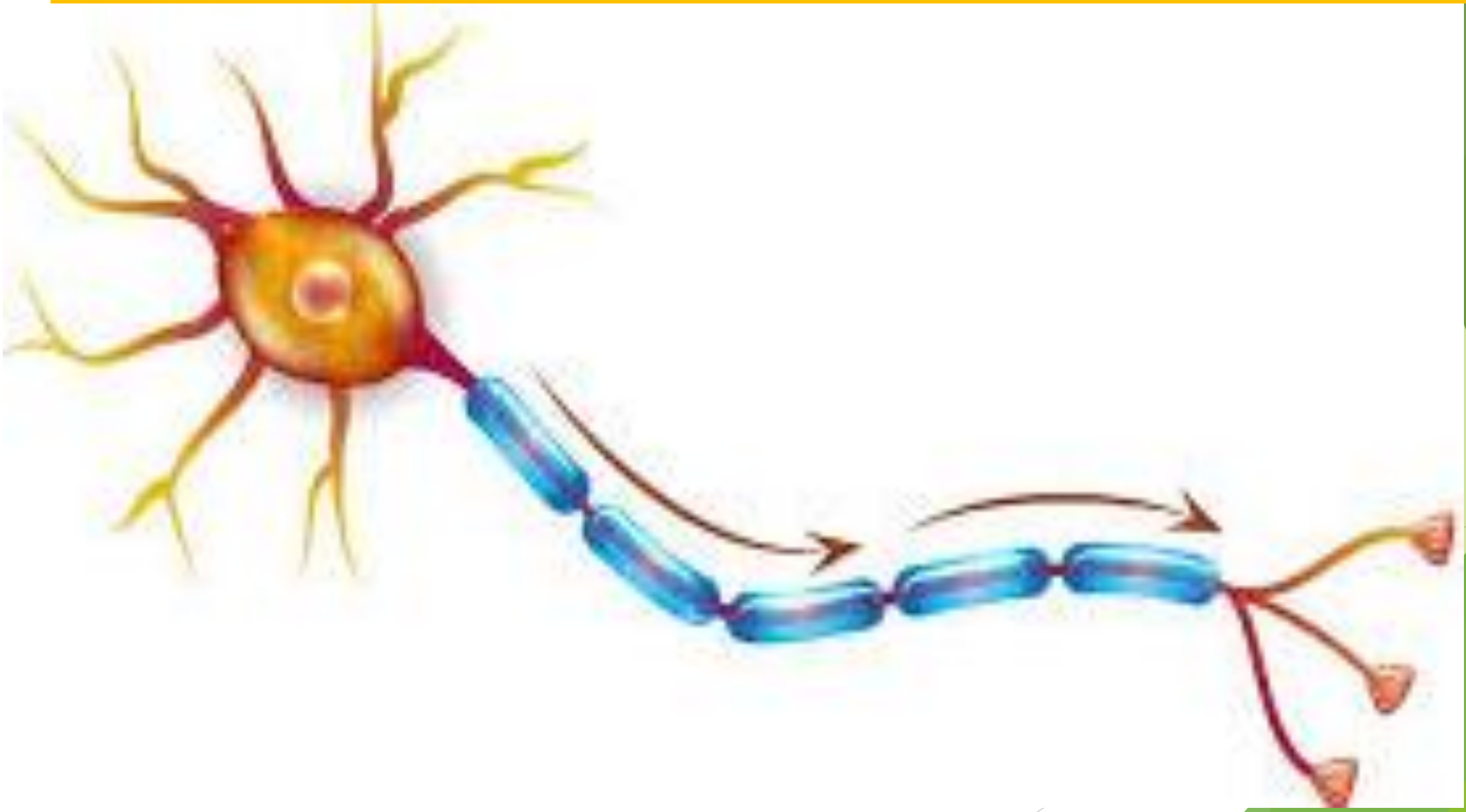
LECTURER in Physiology

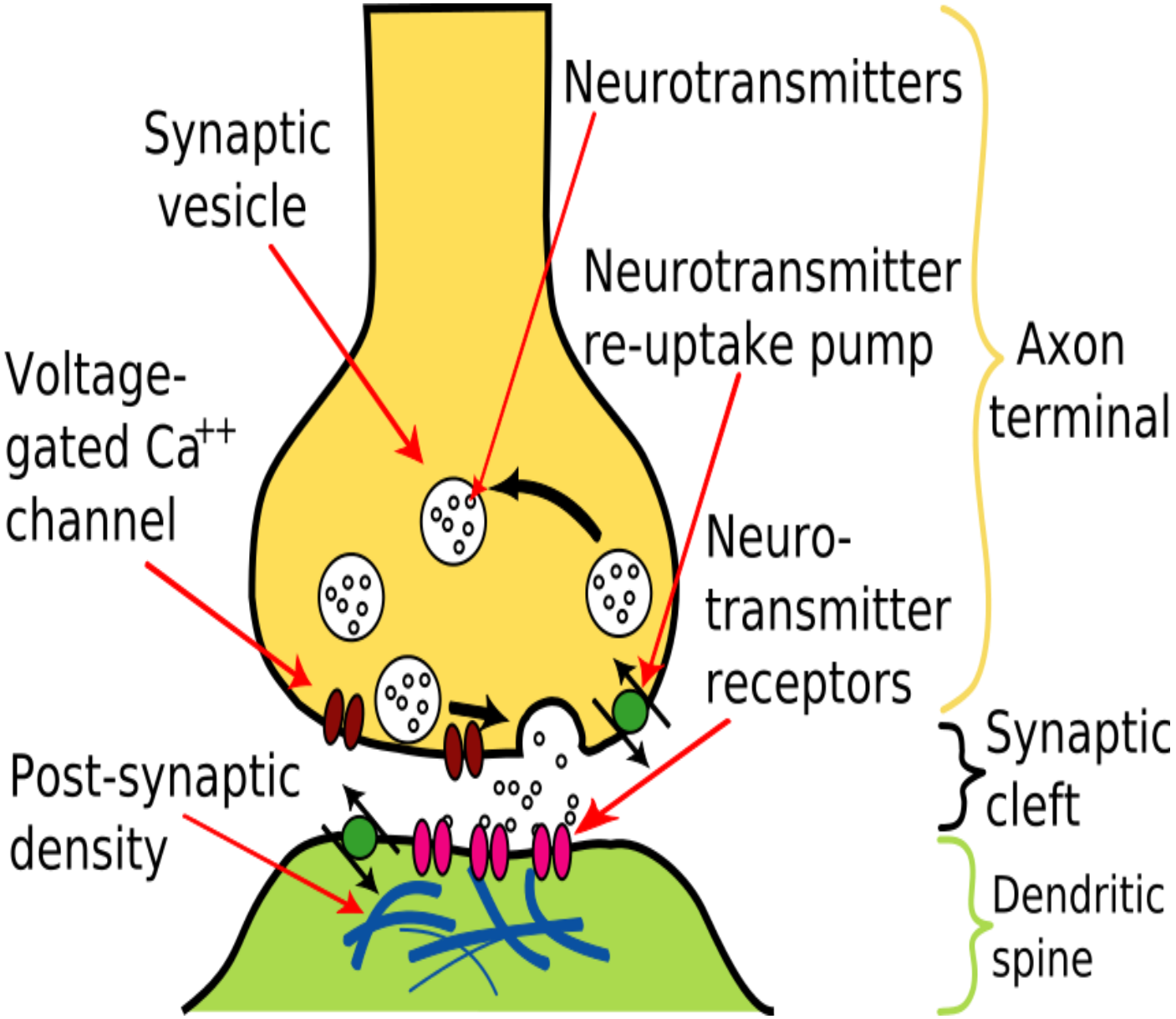
# Contents

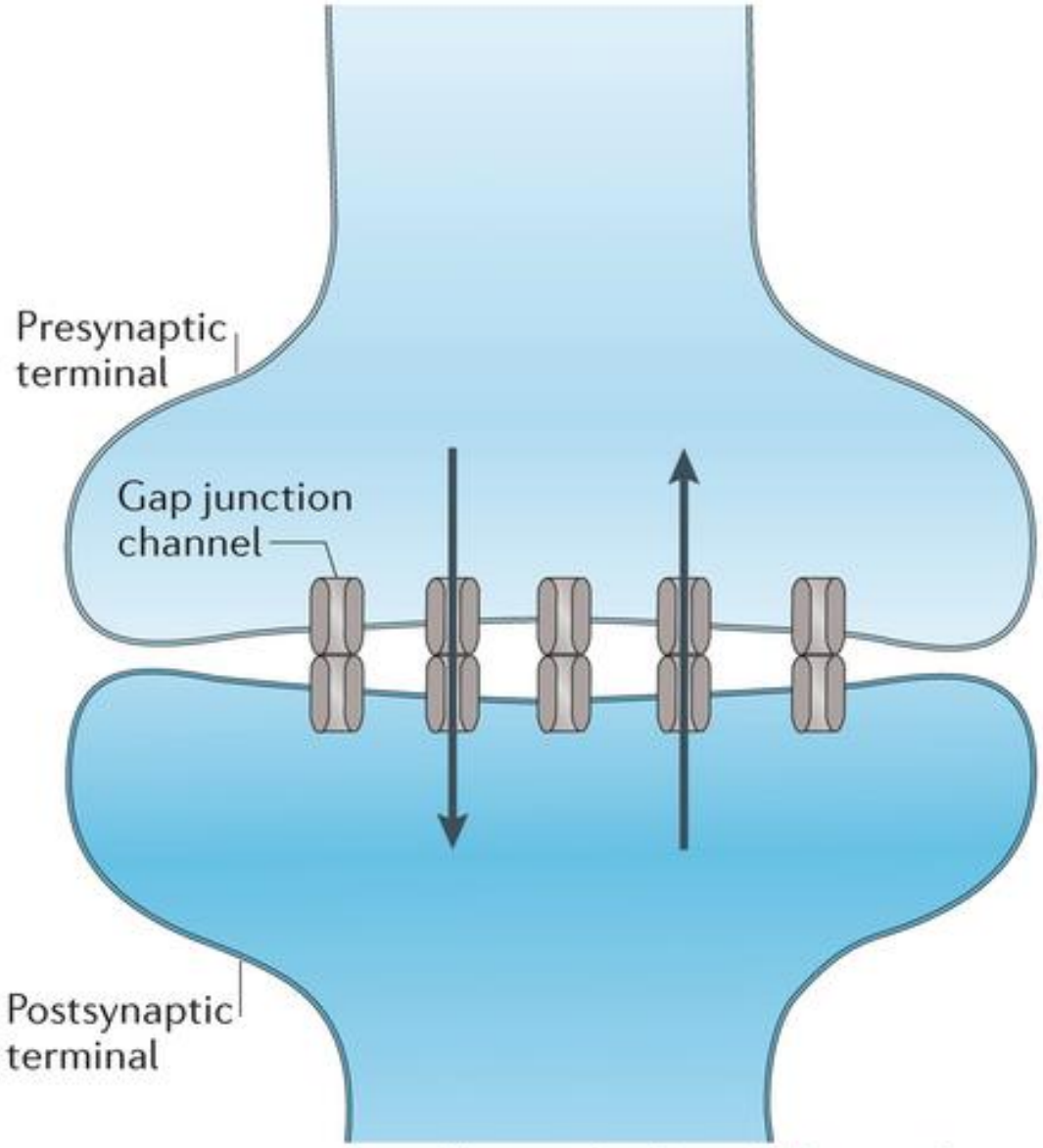

Nervous System Organization
CNS
PNS
SOMATIC NERVOUS SYSTEM
AUTONOMIC NERVOUS SYSTEM
BRAIN
SPINAL CORD
SYMPATHETIC
PARA SYMPATHETIC

# NEURON -

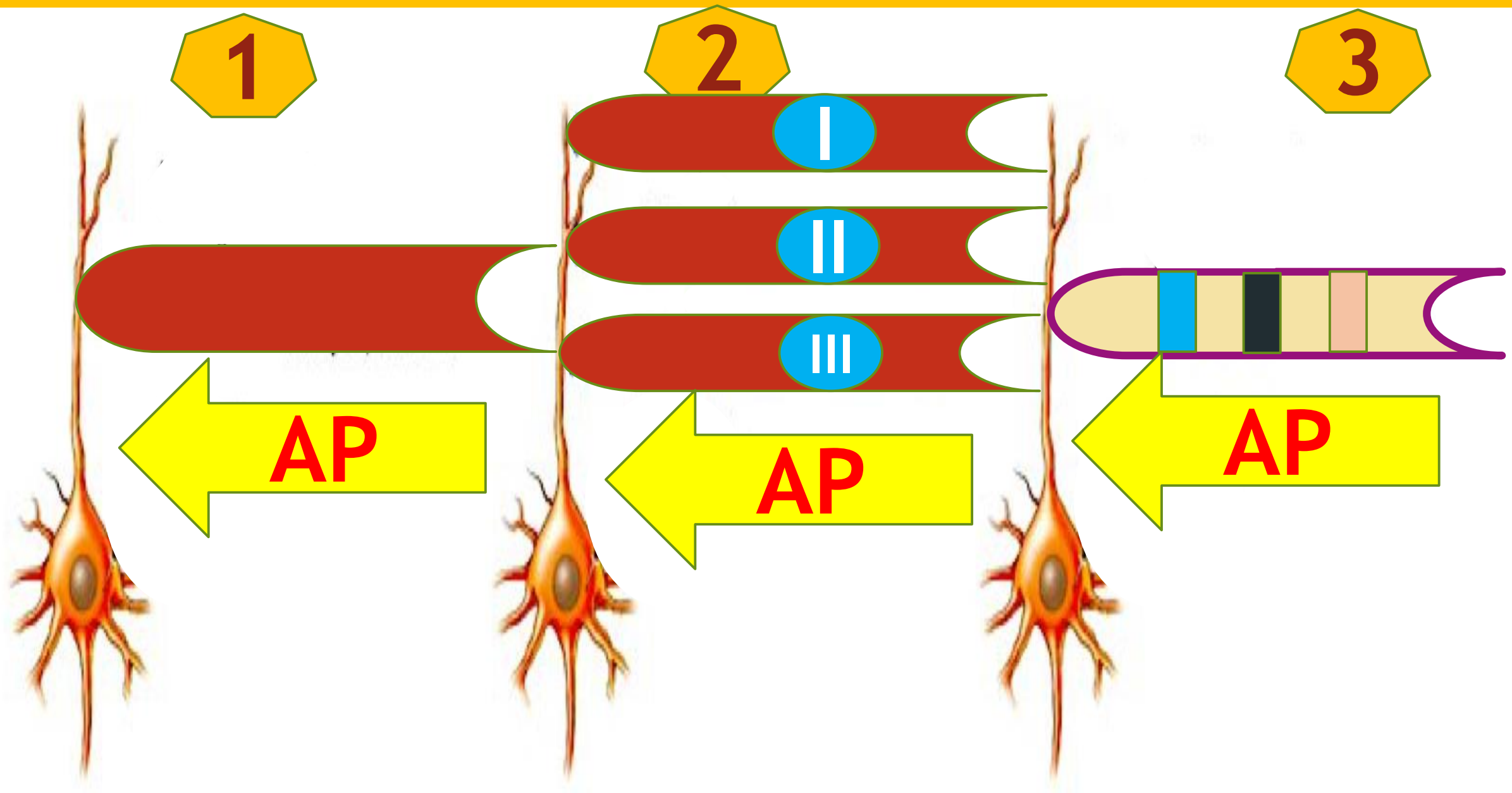


# SYNAPSES TYPES & NEUROTRANSMITTERS



# SPATIAL VS TEMPORAL SUMMATION



# SPATIAL VS TEMPORAL SUMMATION

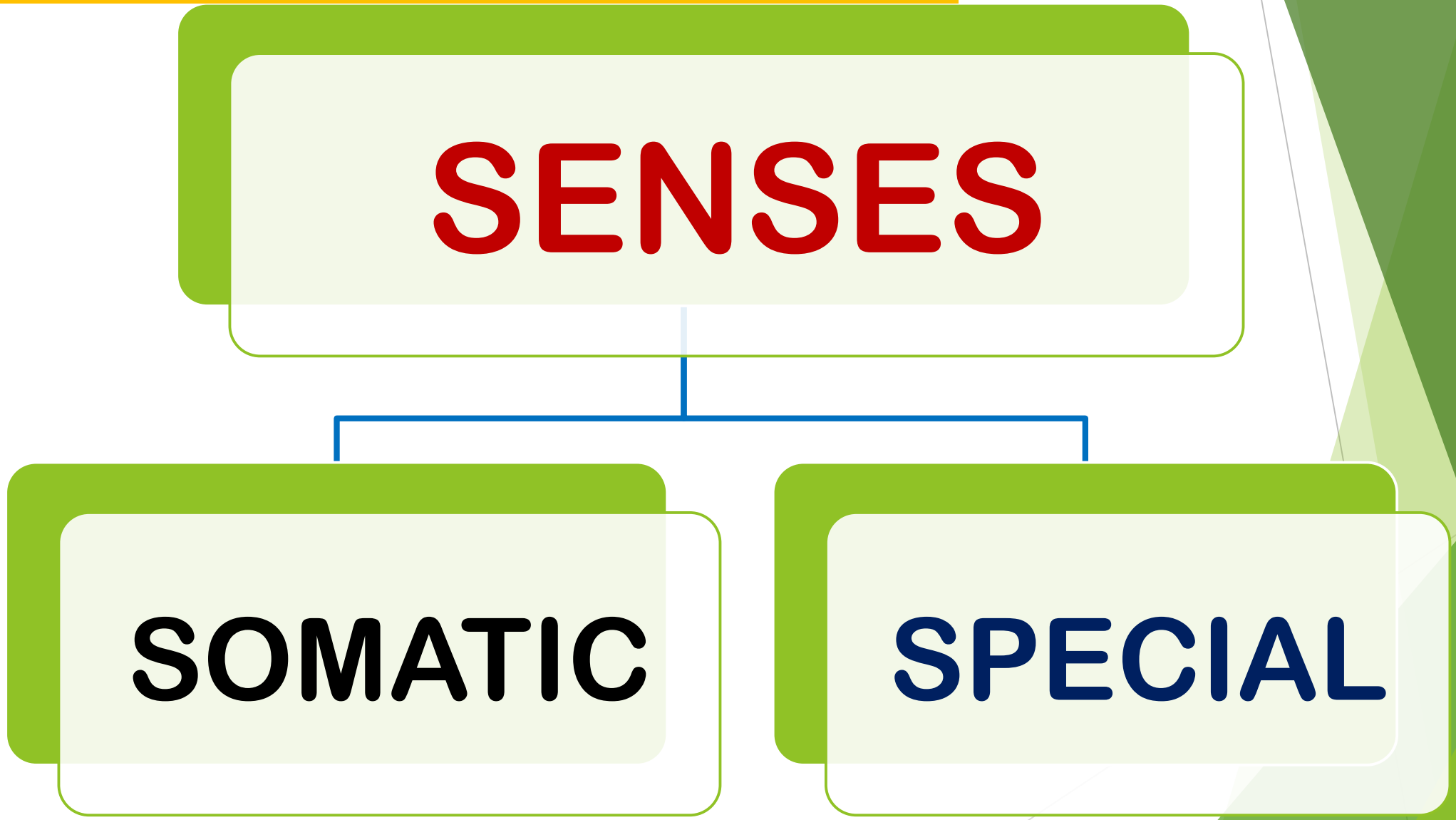
- W
- S

**S**

**E**

**Can CHANGE IN BLOOD pH, Tea , coffee *effect neuronal excitability?***

# TYPES OF SENSES



# SENSORY RECEPTORS

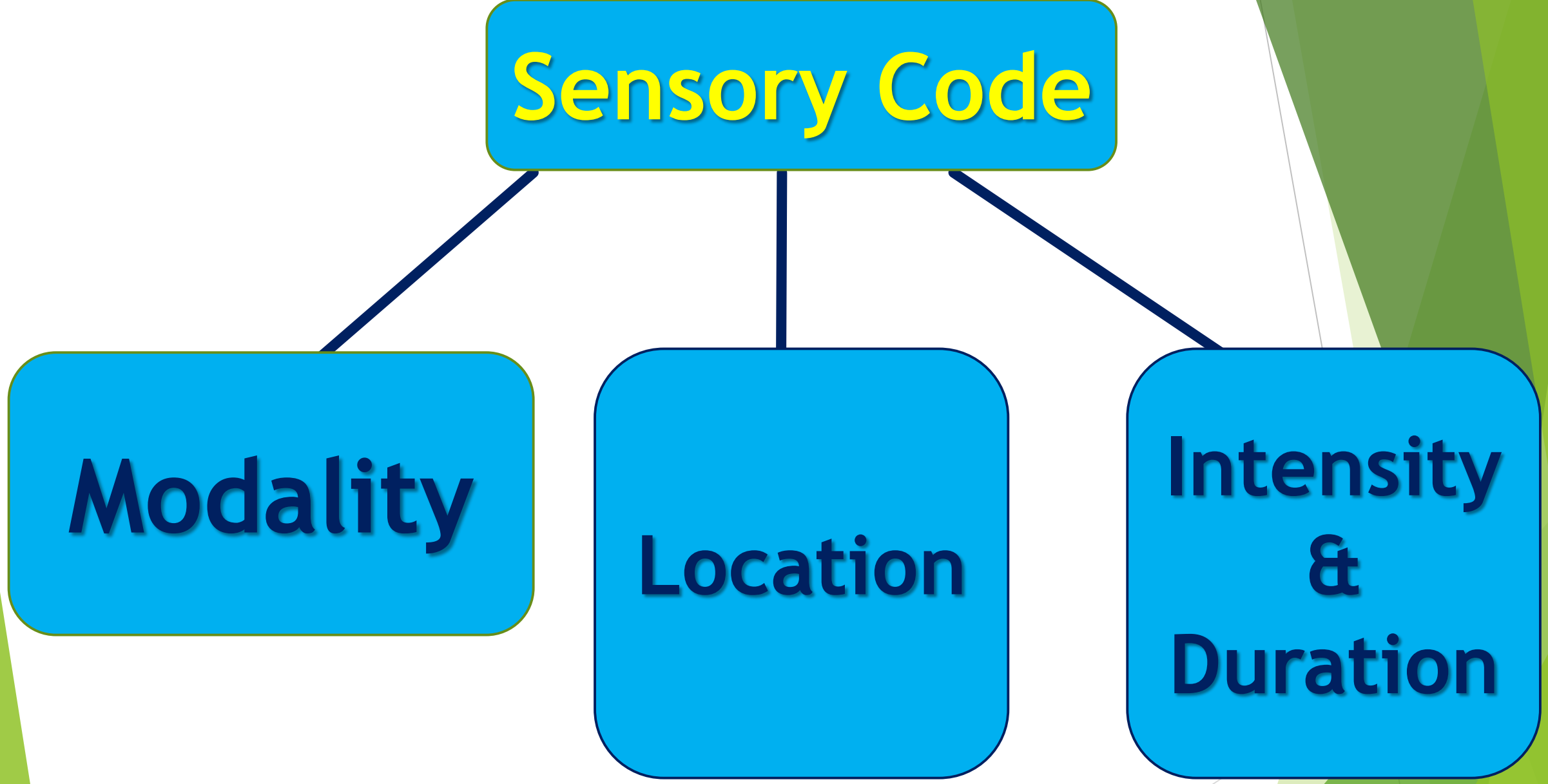
- Mechanoreceptors
- Thermoreceptors
- Chemoreceptors
- Photoreceptors
- Nocireceptors

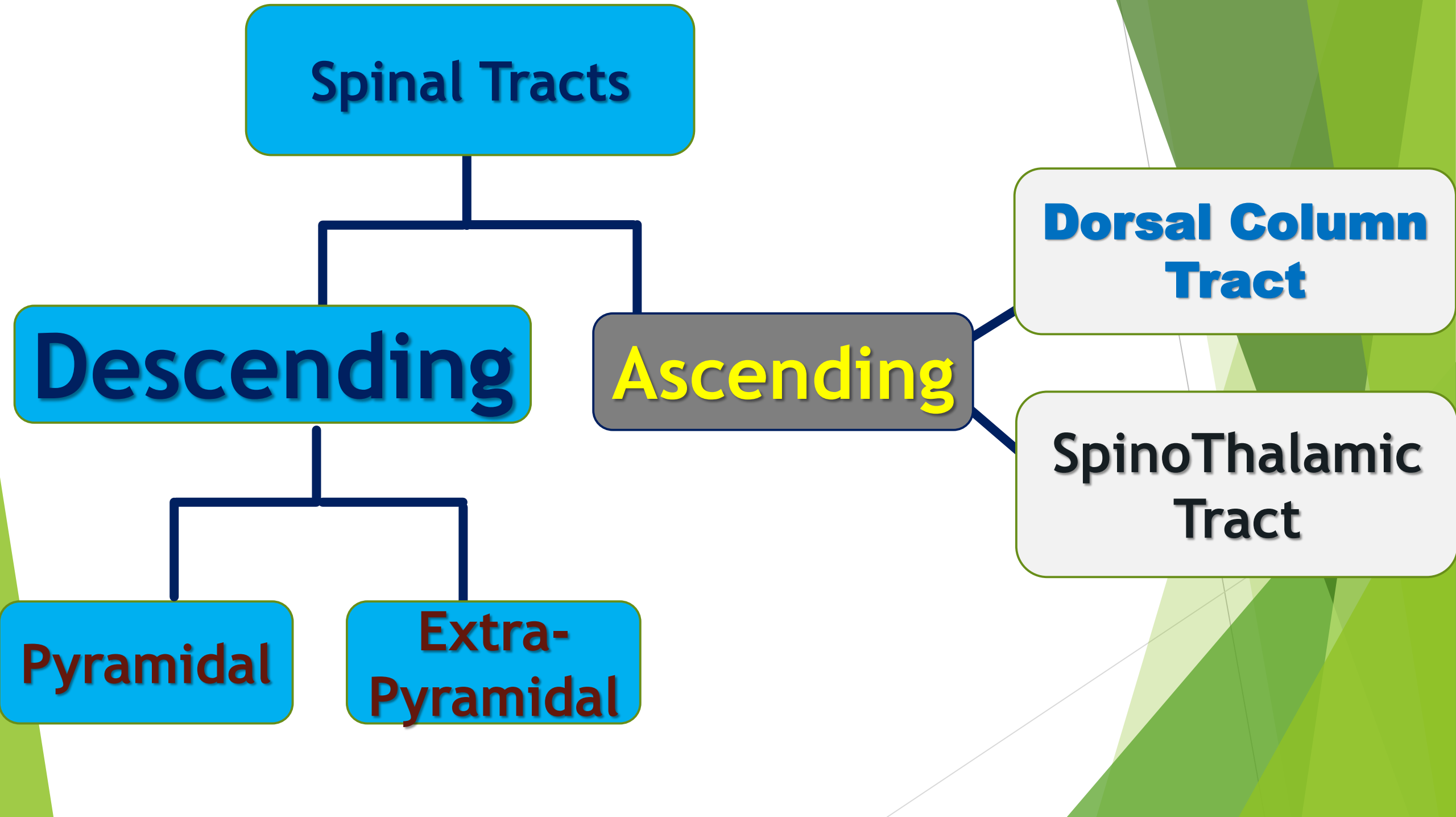
# Nerve Fiber Classification

- Histology
- Function
- Diameter & Conduction Velocity

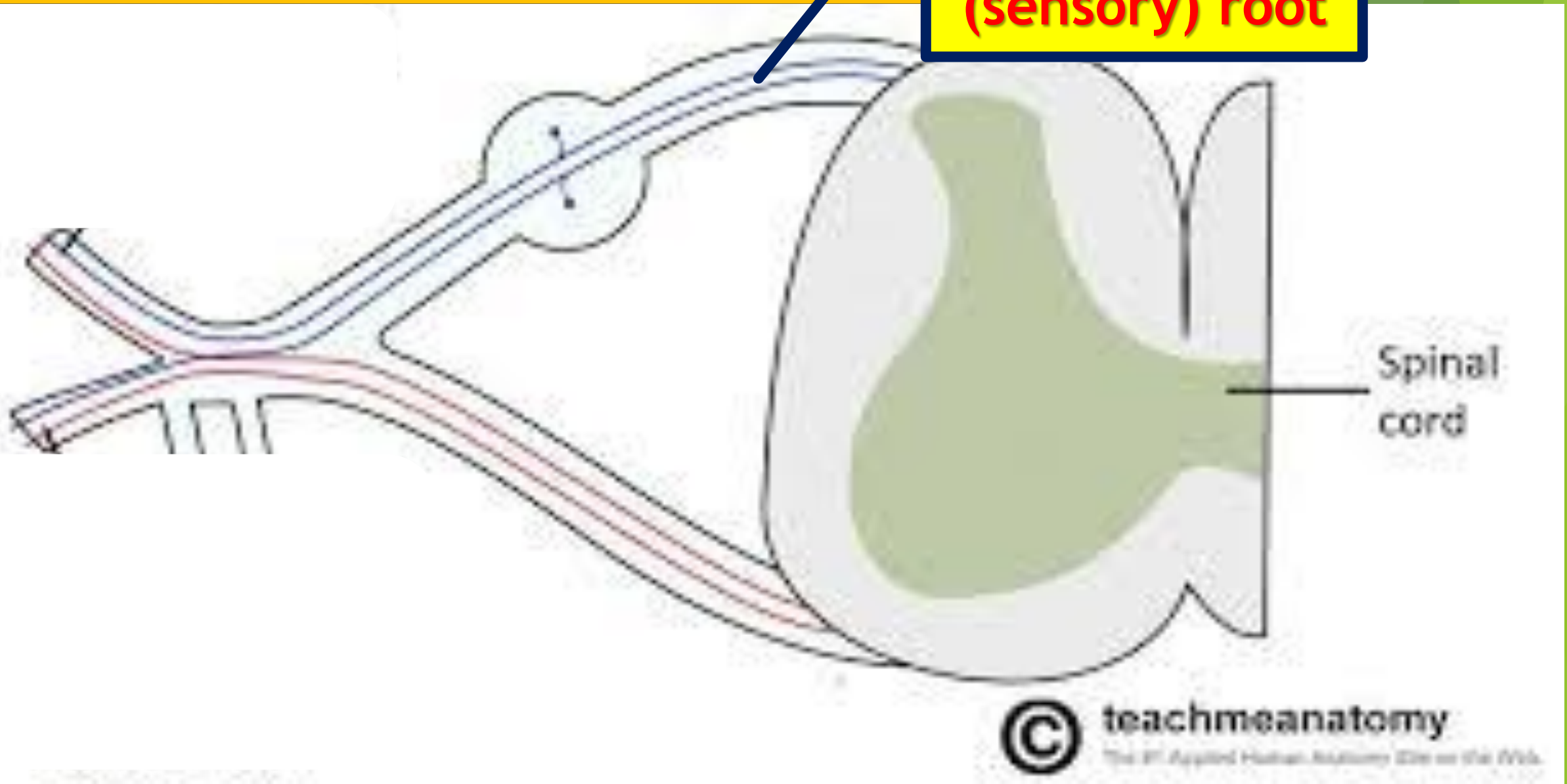
# SENSORY RECEPTORS

- Mechanoreceptors
- Thermoreceptors
- Chemoreceptors
- Photoreceptors
- Nocireceptors

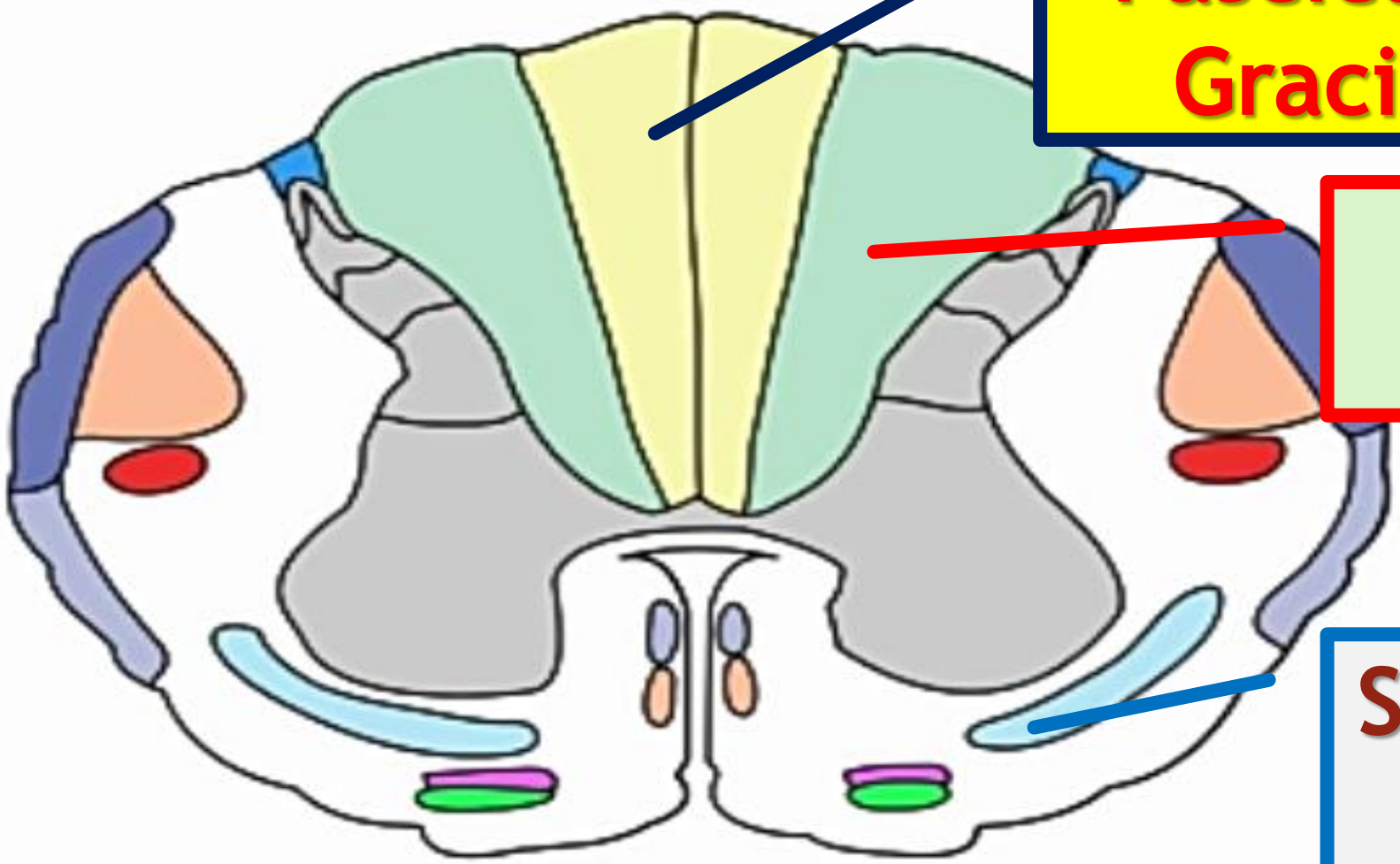

Sensory Code
Modality
Location
Intensity & Duration


Spinal Tracts
Descending
Ascending
Pyramidal
Extra-Pyramidal
Dorsal Column Tract
SpinoThalamic Tract

# C/S Spinal Cord



# Ascending Pathways

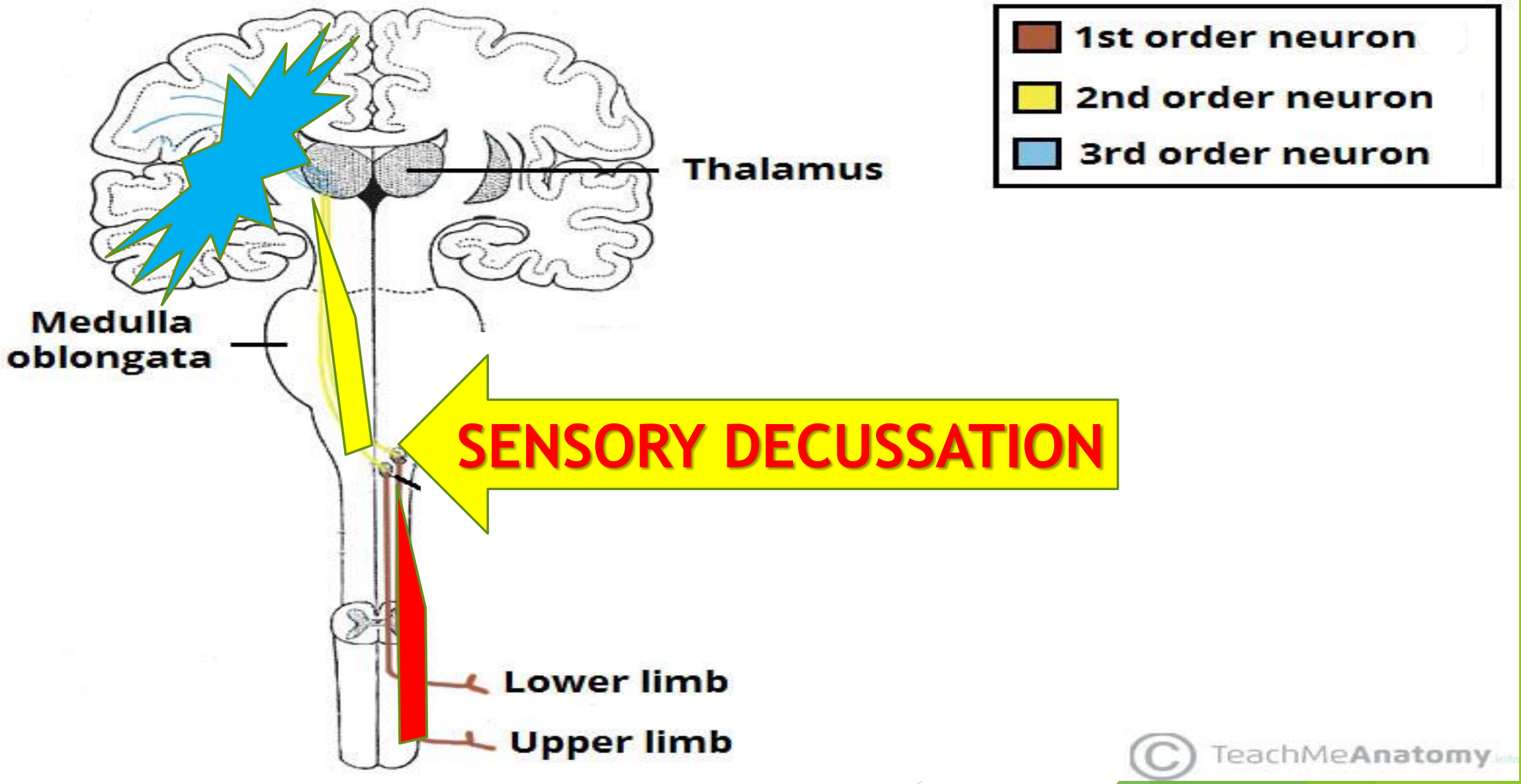


Fasciculus Gracilis

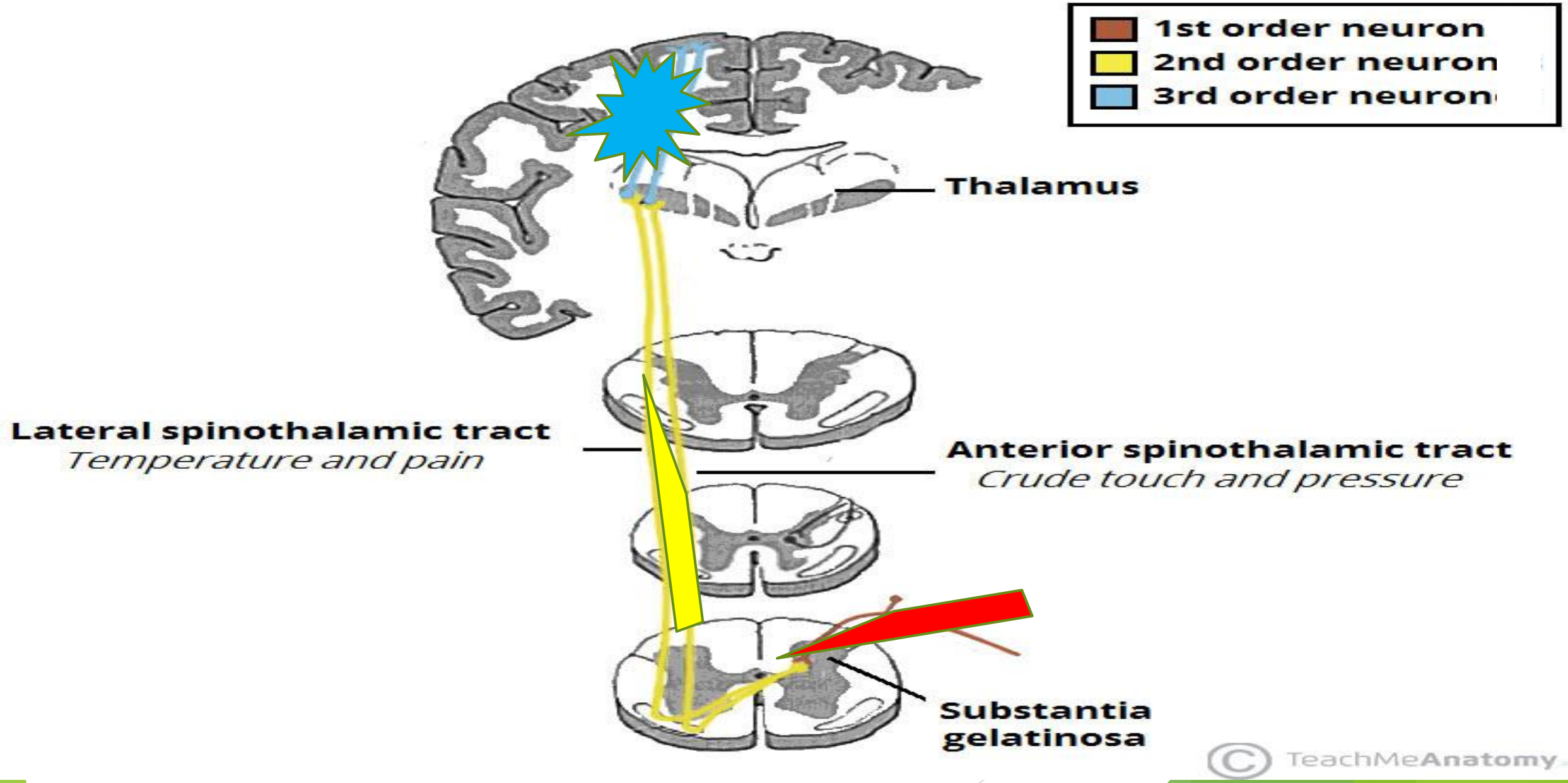
Fasciculus Cuneatus

SpinoThalamic Tract

# DORSAL COLUMN TRACT



# SPINOTHALAMIC TRACT

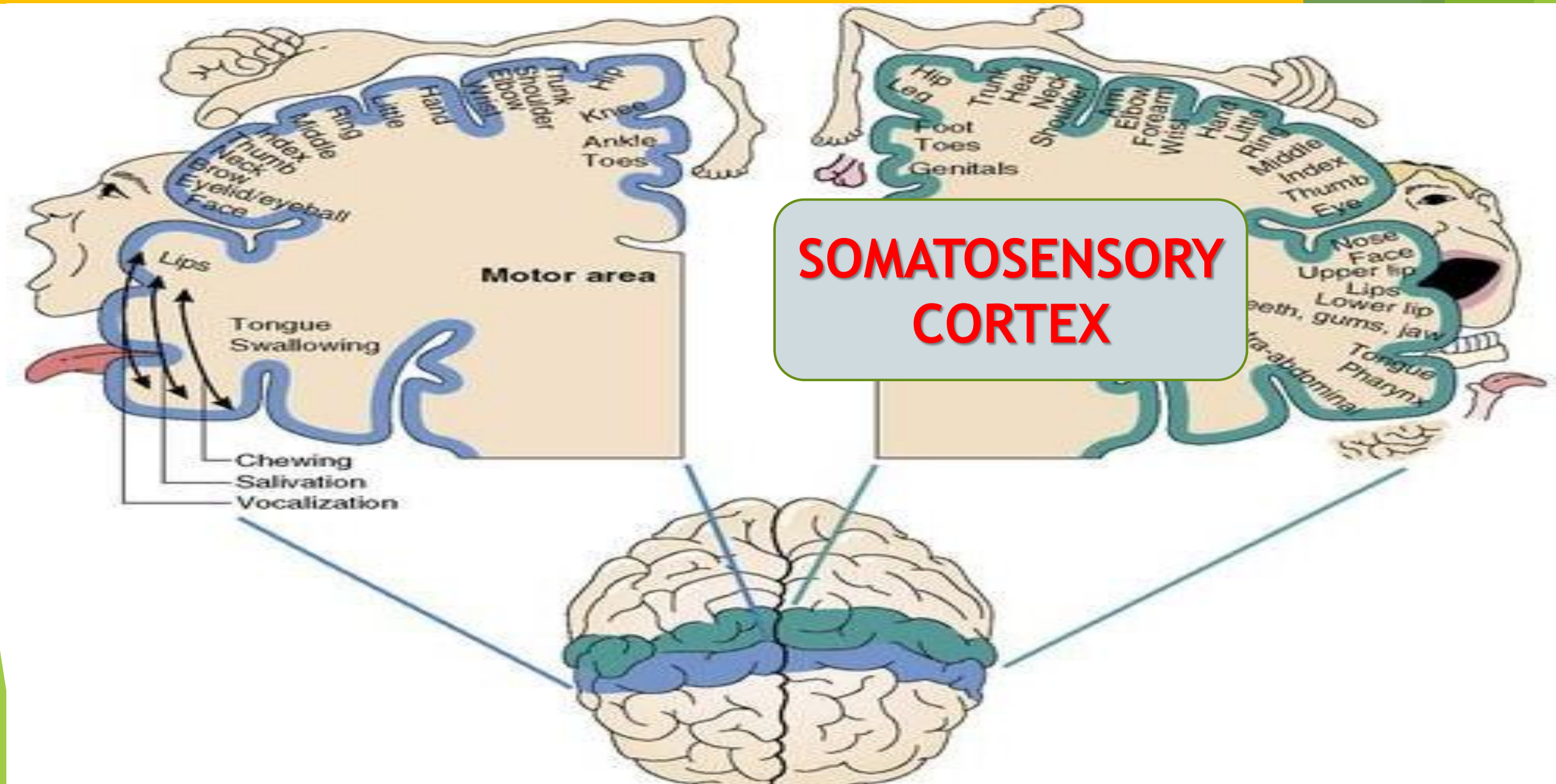


# SPINOTHALAMIC TRACT

**Neospinothalamic Tract**
**(Lateral Tract)**
**Fast Fiber**
**Pain & Temperature**

**Palaeospinothalamic Tract**
**(Anterior)**
**Slow fiber**
**Crude Touch & Pressure**

# SOMATOSENSORY CORTEX



- **Spinothalamic neurons send collateral bramches to:**

**1. medullary reticular formation**

**2. Tectal area - mesencephalon**

**3. Periaqueductal gray matter**

- Suppose a woman has been injured on the left side of her spinal cord, at the 10th thoracic vertebra.

**Comment on sense of pain and touch below the level of injury.**

- _Injury to the dorsal columns on one side results in loss of which senations?
- Ipisilateral OR Contralateral?