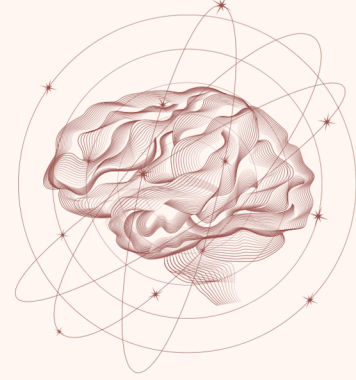


PHYSIO-CNS

L1 THERMAL SENSATION & SOMATIC PAIN
L2 VISCERAL SENSATION



قال عمر بن عبدالعزيز لرجاء بن حيوة :

[يا رجاء إنَّ لي نفساً تَوَاقَةً ، كلما حَقَّقْتُ شيئاً تَاقَت إلى ما بعده.

يا رجاء تَاقَت نفسي إلى ابنة عمي فاطمة بنت عبد الملك فتزوجتها، ثم تَاقَت

نفسي إلى الإمارة فوليتها، ثم تَاقَت نفسي إلى الخلافة فنلتها.. والآن تَاقَت

نفسي إلى الجنة ، وأرجو أن أكون من أهلها]



Characteristics**Subtypes****Receptors****Fibers****Tract****Crude touch**

Poorly localized

free nerve & hair endings end organs

A-delta

Ventral spinothalamic

Fine touch

* well-localized
 *includes (tactile localization ,discrimination & stereognosis)

Meissner's corpuscles & Merkel's disks

A-alpha & A-beta

Gracile & cuneate (dorsal column)

Pressure

* tested by ability to differentiate between various weights without lifting them
 * include muscle tension sensation :
 - it is a sensation evoked by traction on tendons
 -discriminate weights during lifting them)

Pressure

Golgi tendon , muscle spindles & Ruffini's endings

Muscle tention

Pacinian corpuscles

Vibration	<ul style="list-style-type: none"> * felt by tuning fork *repetitive tactile sensation *rapidly adapting 		Meissner's (up 80 Htz) Pacinian(up to 500Htz)		Gracile & cuneate (tested to check its integrity)
	<ul style="list-style-type: none"> * Tickle : Mild repeated tactile stimulation of skin * Itch : annoying sensation that results from skin irritation 		Free nerve endings	C fibers	Ventral spinothalamic
	<ul style="list-style-type: none"> * slowly adapting * static proprioception *called also with movement sensation as (kinesthetic sensation) 		Golgi tendon , muscle spindles & Ruffini's endings		Gracile & Cuneate
	<ul style="list-style-type: none"> * dynamic sensation * movement of joints * rapidly adapting 		Pacinian corpuscles		Gracile & Cuneate

Superficial thermoceptive

Deep thermoceptive

Mechanoceptive pain

Thermosensitive pain

Chemosenstive pain

* Receptors present in skin	Warm spot	Free nerve endings)	C fibrers	Paleo lat.spinothalamic
	Cold spot	Krause's end bulb	A delta	Neo lat.spinothalamic
* receptors in hypothalamus * detect temperature from blood		Hypothalamus		
		Free nerve endings		A-delta (5-15 m/sec)
* Stimulated by either hot (above 45) or cold (below10)		Free nerve endings		A-delta (5-15 m/sec)
		Free nerve endings		C-fibers (0.2 – 2 m/sec)