

ANATOMY

Nuclei of the Brain Hypothalamus

	Function	Lesion	Mnemonics	
H	Anterior	Control parasympathetic - ↓ temperature	Hypothermia	AC (anterior cooling)
Y	Posterior	Control sympathetic - ↑ temperature	Poikilothermia (↑ temp) & ipsilateral Horner	Post Poikilothermia
P	Medial	Satiety center	Obesity	
O	Lateral	Hunger center, Thirst center	Aphagia	Gas tank is lateral
T	Mammillary	Memory	Amnesia (Wernicke's)	
H	Suprachiasmatic	Controls circadian rhythm		
A	Preoptic	Secretes GnRH		
L	Supraoptic	Synthesize ADH (vasopressin)	DI	
A	Paraventricular	Synthesize oxytocin , TRH, CRH		
M	Arcuate	GHRH – PIF		

Thalamus

	Function	Afferent	Efferent		
T	Anterior	Attention & memory	Mammillary body	Cingulate gyrus	N O N
H	Medial Dorsal	Emotions & executive functions	Hypothalamus	Prefrontal cortex	
A	CentroMedial (intralaminar)	Emotional content of pain	Slow pain pathway	Cortex	
L	Pulvinar	Visual attention	Superior colliculus	Visual cortex	P E C
A	Reticular	Sensory inhibition Generates sleep spindles <small>temporarily inhibit sensory output from the thalamus so distracting sensations do not reach conscious awareness while attention is focused in another sensory modality.</small>	Thalamic nuclei	Thalamic nuclei	
M	Intralaminar	Arousal	Reticular formation	All cortex	I C
U	VL, VI (intermediate)	Coordination of movements	Cerebellum & BG	Motor cortex	
S	VA	Initiation & Planning of movement	BG	Premotor cortex	
S	VPL	Somatic sensation	STT – ML	Sensory cortex	M O T O R S E N S O R Y
	VPM	Somatic sensation	Trigeminal nucleus	Sensory cortex	
	MGN	Hearing	Brachium of inf. colliculus	Auditory cortex	
	LGN	Vision	Optic tract	Visual cortex	