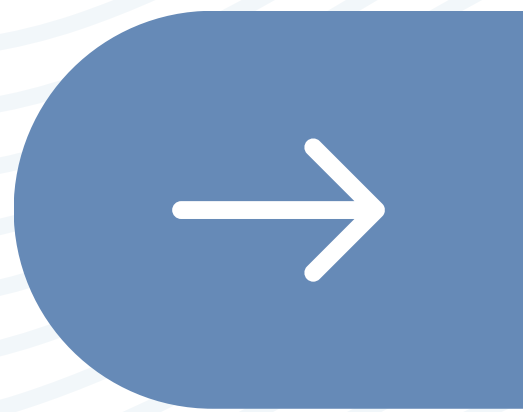


#DIBS BY NEXTILLO

DAILY INFORMATION BULLETIN SERVICE

PUPILLARY MUSCLES





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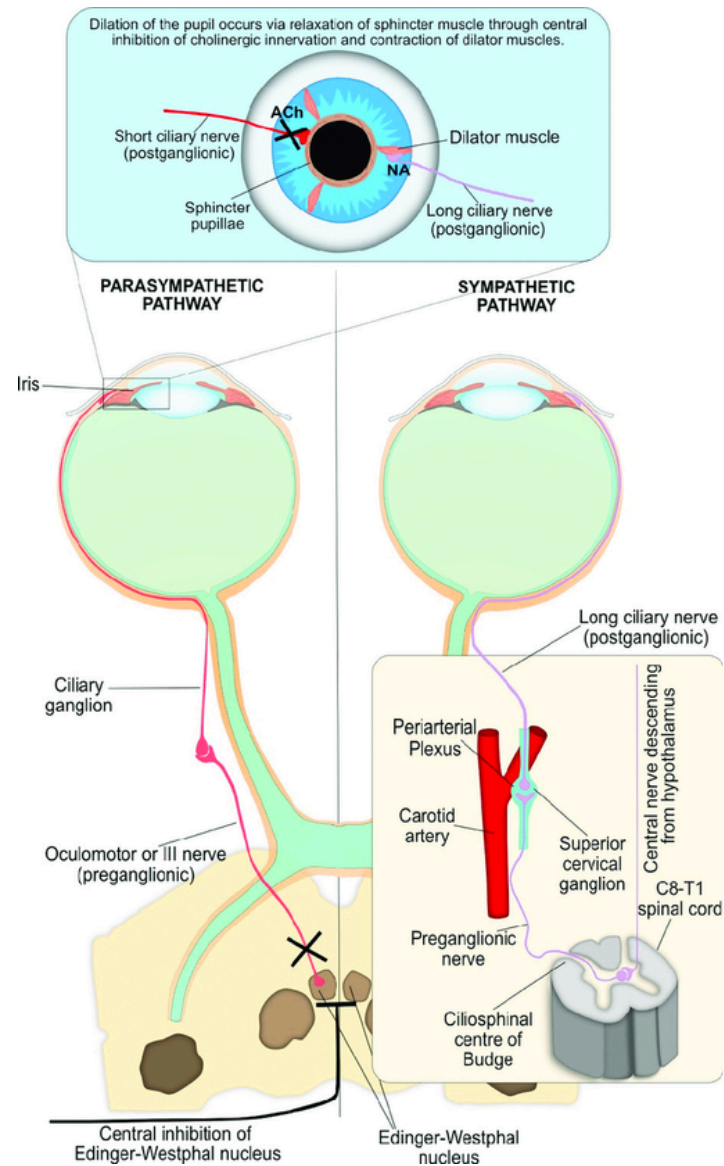
PUPILLARY MUSCLES

Pupillary diameter, or more precisely iris size, is controlled by two muscles,

1. the sphincter pupillae, which is primarily under the control of the parasympathetic nervous system,
2. and the dilator pupillae, which is primarily under the control of the sympathetic nervous system



VISUAL REPRESENTATION





PUPILLARY MUSCLES

SYMPATHETIC NERVE SUPPLY

- *Innervation by cervical ganglion induces mydriasis, enlarging pupils in the "fight or flight" response.*
- *Radial muscle activation increases alertness during stress, preparing the body for potential danger.*
- *Dilator pupillae receives postganglionic sympathetic nerves for pupil dilation (mydriasis).*
- *Sympathetic pathways play a crucial role in adjusting pupil size based on environmental conditions.*
- *Sympathetic nerves from the cervical ganglion prepare the eye for heightened visual responsiveness to threats.*



PUPILLARY MUSCLES

PARASYMPATHETIC NERVE SUPPLY

- *Ciliary ganglion controls miosis, causing the circular muscle to contract and pupils to constrict.*
- *Constrictor pupillae activated by parasympathetic postganglionic nerves, associated with the "rest and digest" response.*
- *Edinger-Westphal nucleus connection ensures precise regulation of pupil size for various visual tasks.*
- *Parasympathetic pathways helps in maintaining visual function and adaptation to environmental demands.*



PUPILLARY MUSCLES

FUNCTIONAL COORDINATION

- *Sympathetic-parasympathetic balance is essential for precise control of pupil size in varying conditions.*
- *The Coordination between sympathetic and parasympathetic systems adjusts pupil size according to light levels.*
- *Neural coordination ensures adaptive responsiveness, optimizing visual function for different environmental demands.*
- *Functional synergy between sympathetic and parasympathetic inputs maintains dynamic regulation of the iris muscles.*



MCQ

Question: Which nervous system stimulates the iris dilator muscle for pupil dilation?

- a) Parasympathetic nervous system
- b) Sympathetic nervous system
- c) Both systems simultaneously
- d) None of the above

Answer: b) Sympathetic nervous system