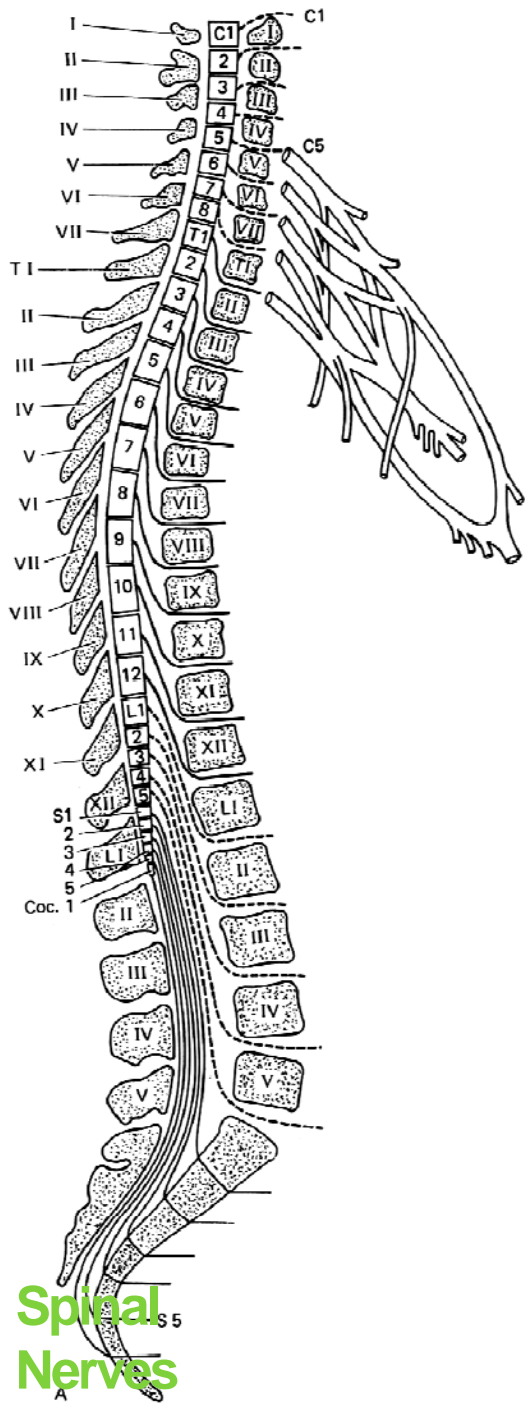


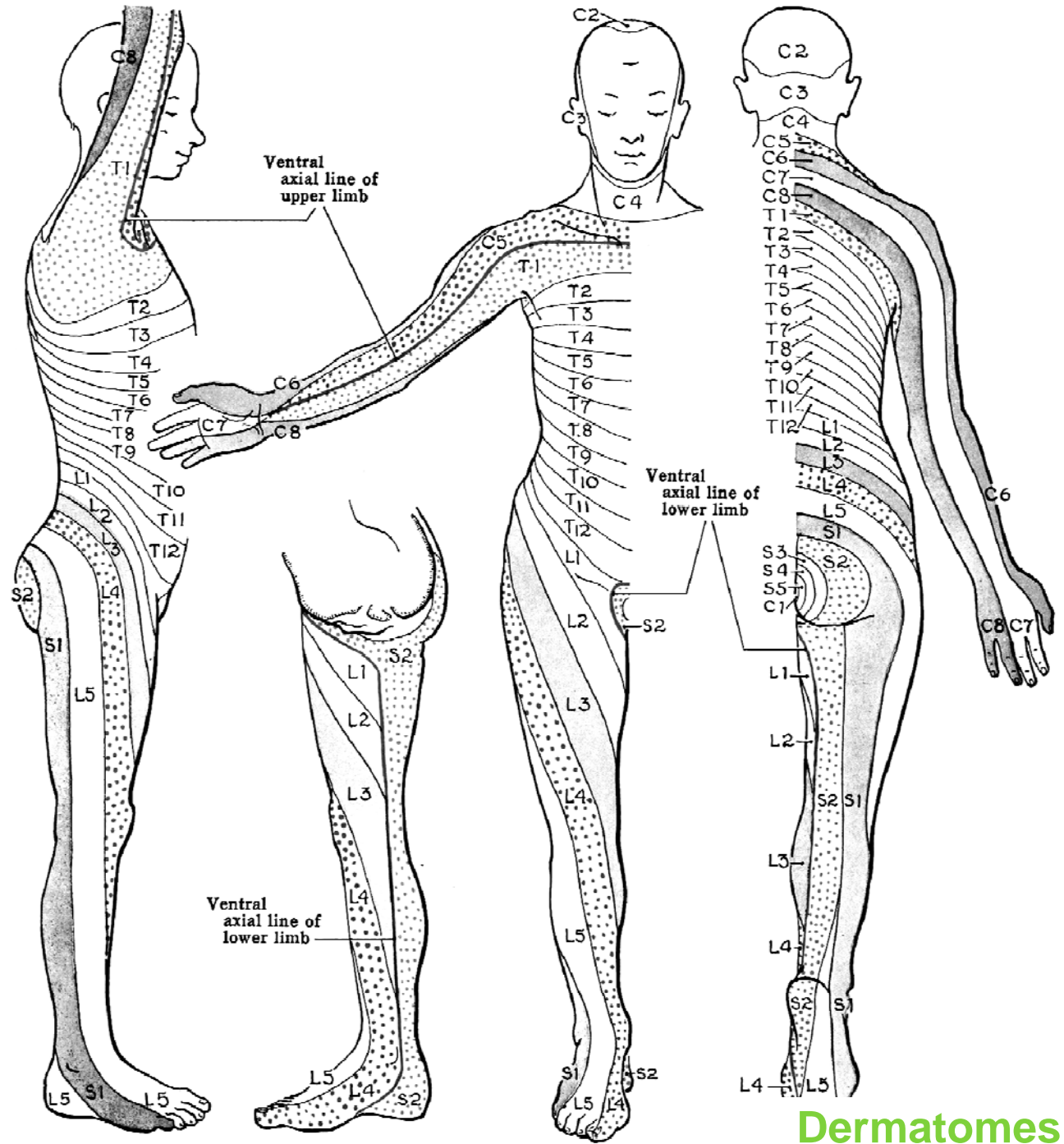


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# SPINAL CORD

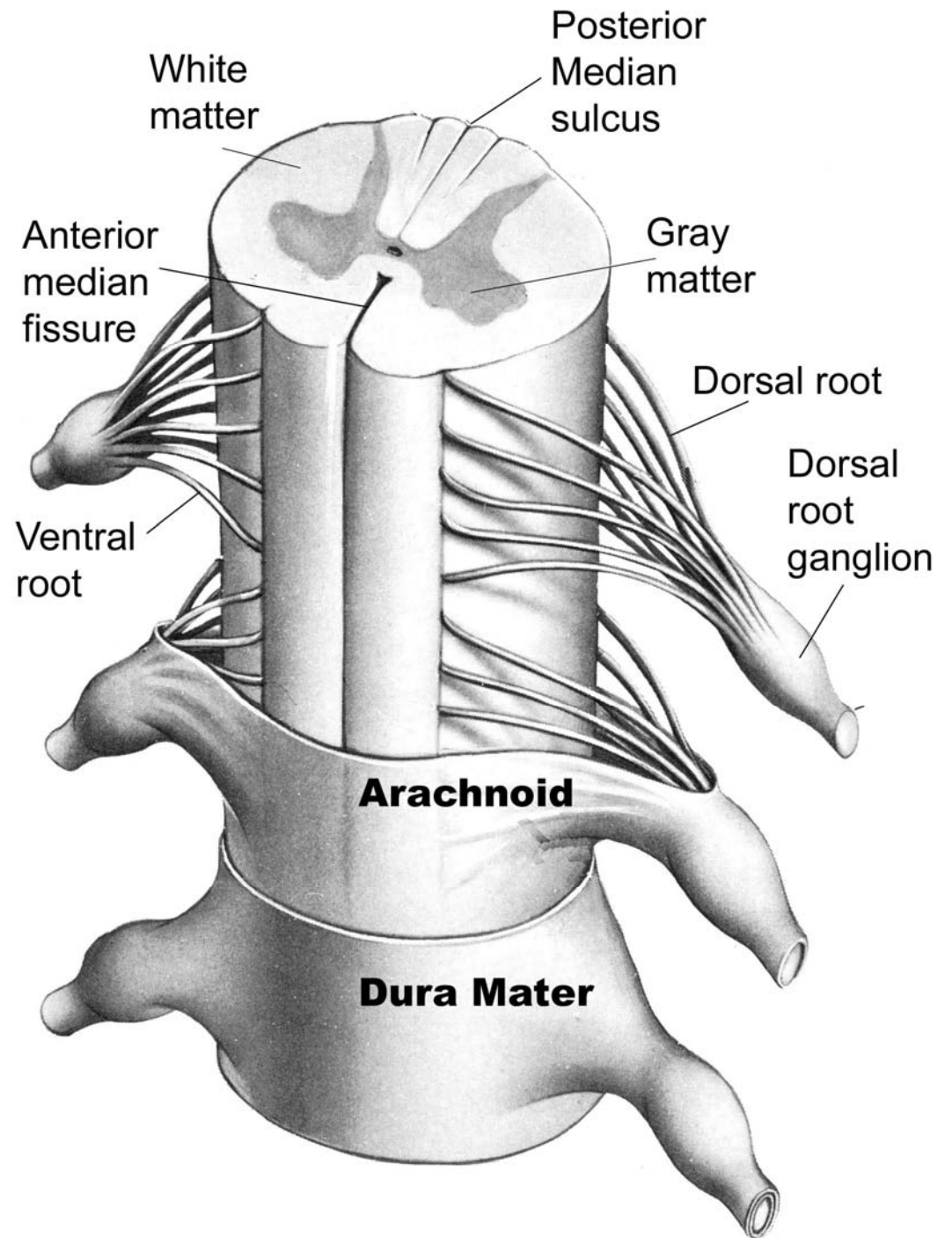


# Spinal Nerves

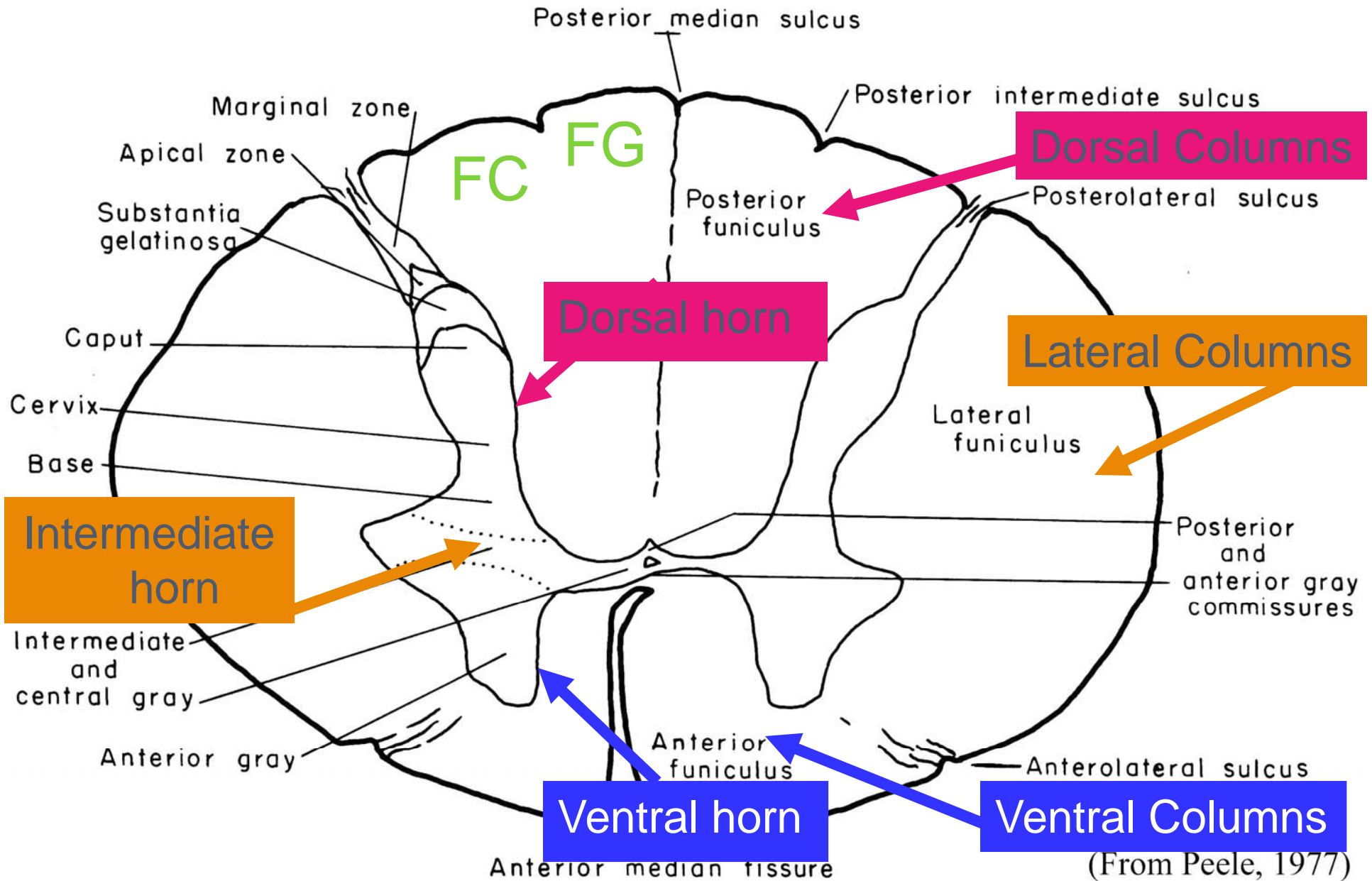


# Dermatomes

# Gross Spinal Cord

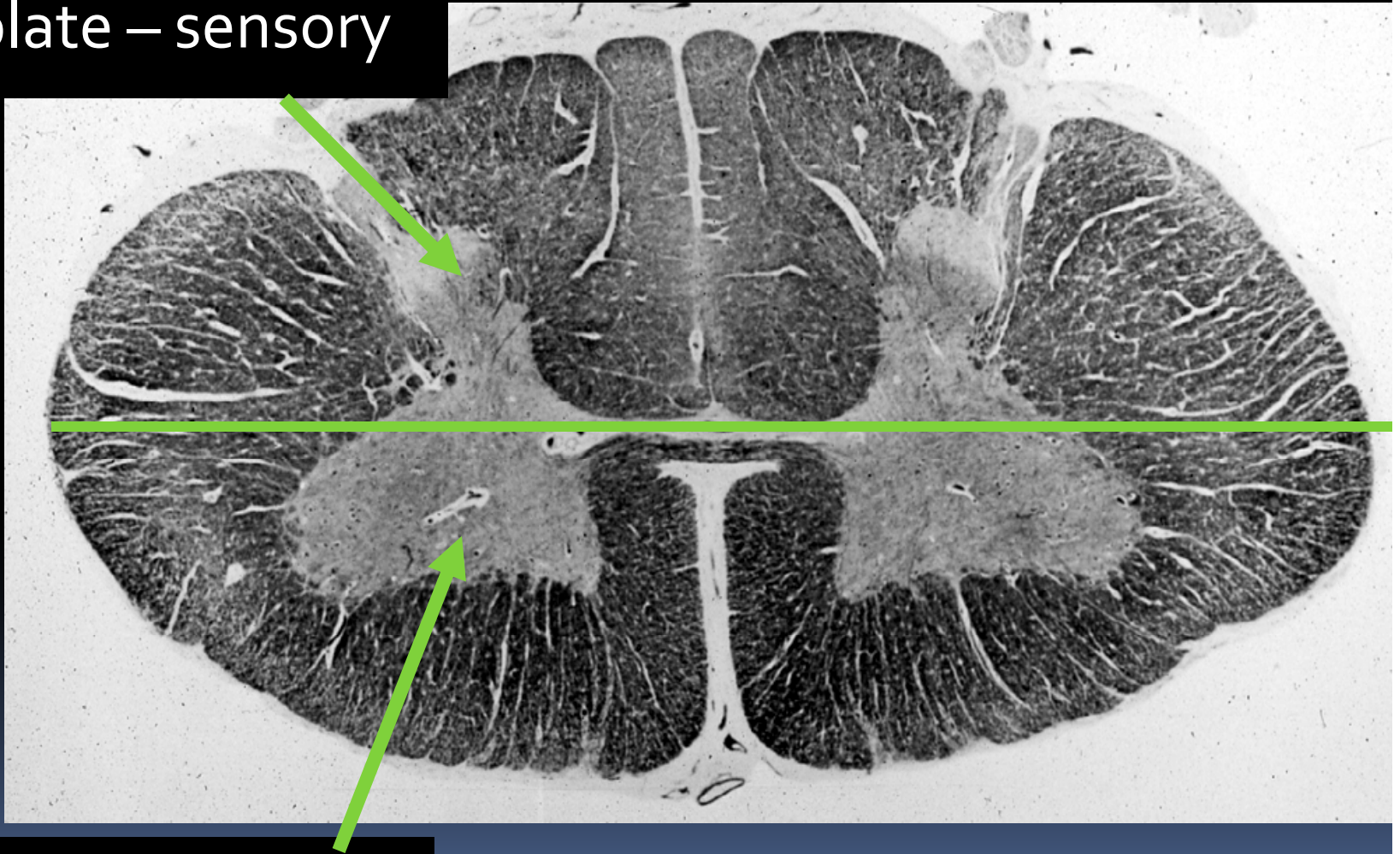


# Gross Structure



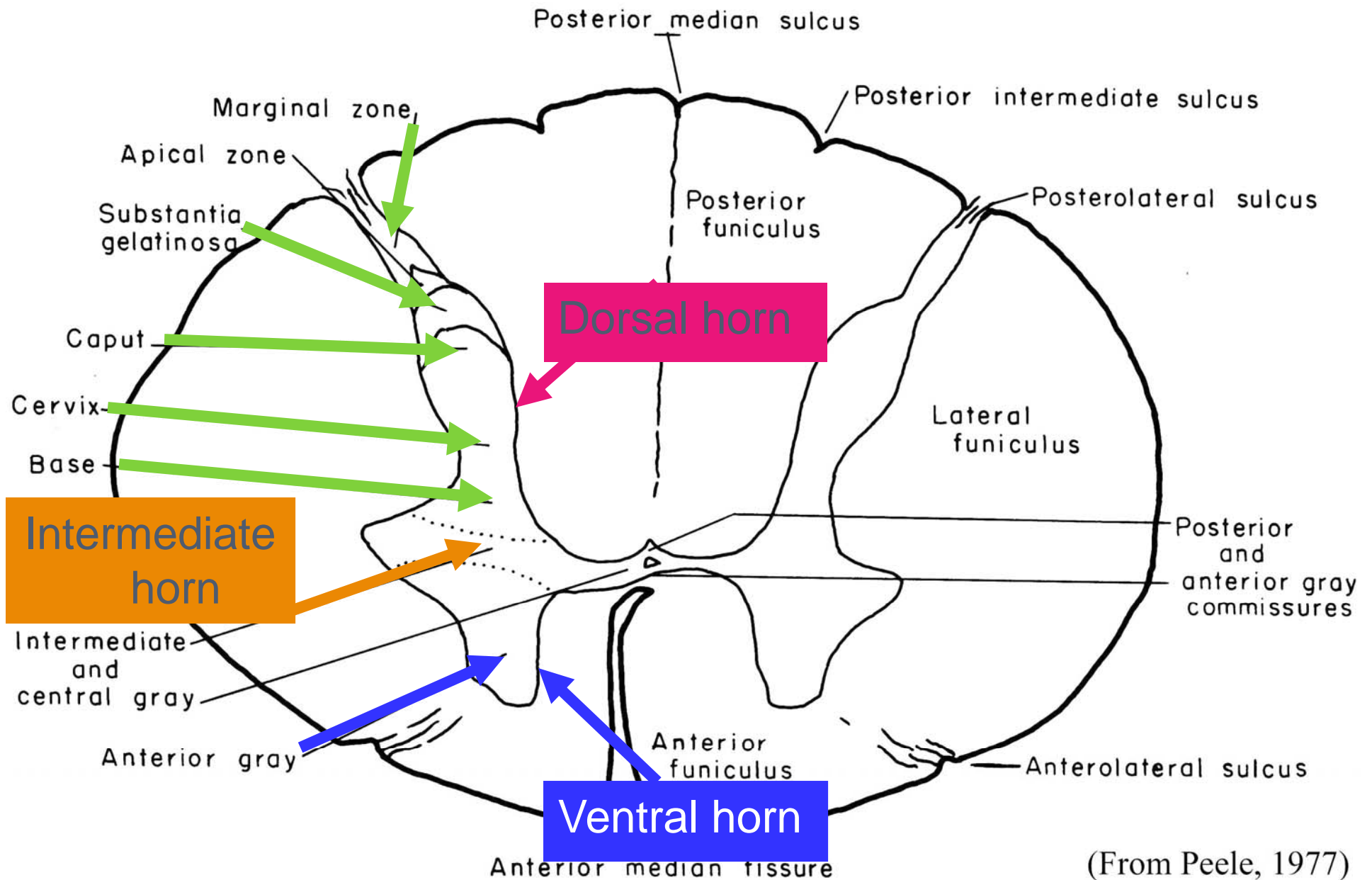
# Where are the sensory and motor nuclei?

- Alar plate – sensory



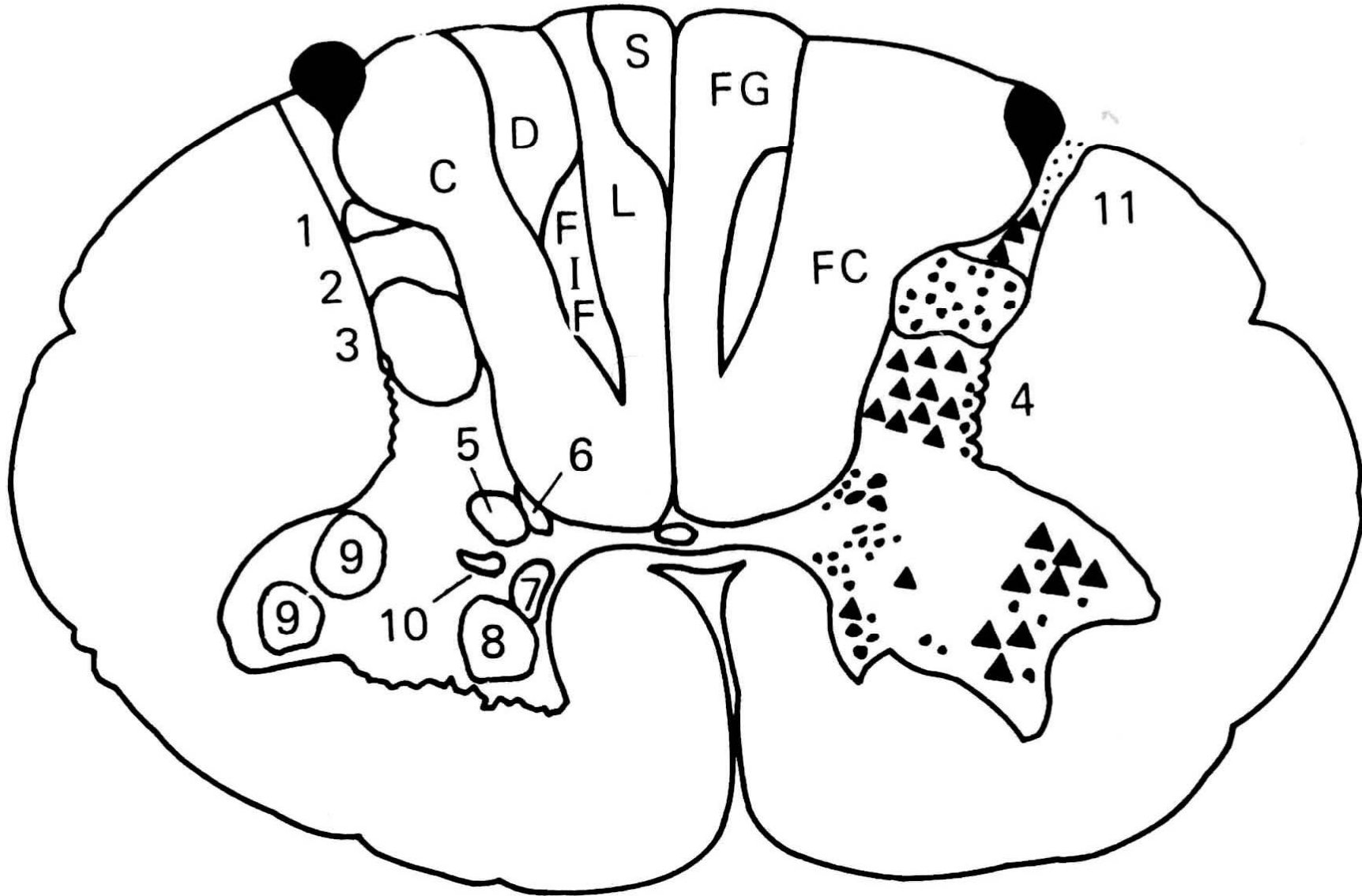
- Basal plate – motor

# Gross Structure



(From Peele, 1977)

# Gray Matter & Nuclear Structure



# Dorsal/Sensory Organization

## A. GENERAL SOMATIC AFFERENT

Proprioceptive receptor from:

- Skeletal muscle
- Tendon
- Joint capsule

Exteroceptive receptors for:

- Touch
- Pressure
- Heat
- Cold
- Pain

## B. GENERAL SOMATIC EFFERENT

Effectors as:

- Motor endplates of gamma efferent axons on small intrafusal fibers of muscle spindle
- Motor endplates of alpha efferent axons on large extrafusal muscle fibers

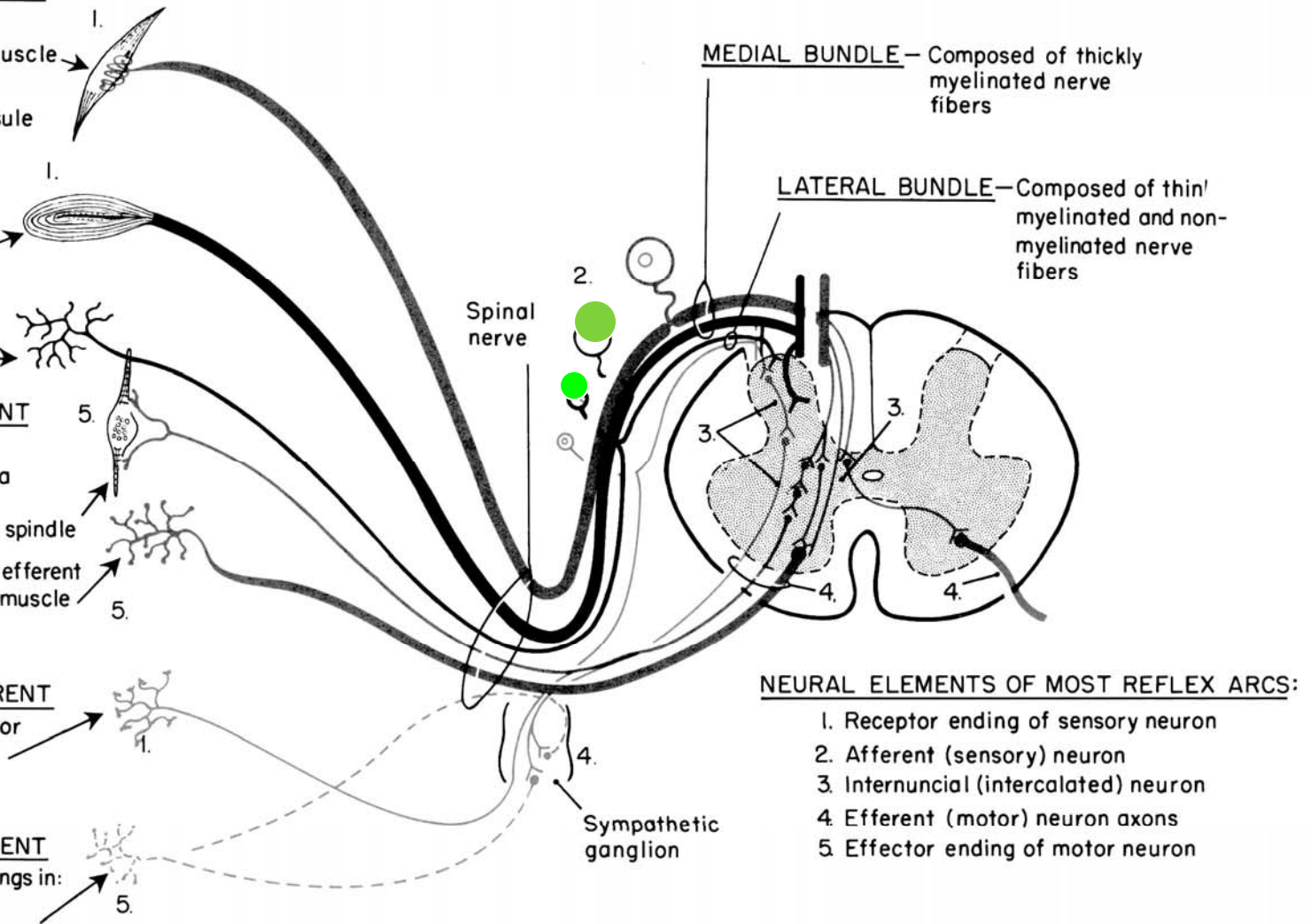
## C. GENERAL VISCERAL AFFERENT

Visceroceptive receptors for distension and spasm of smooth muscle

## D. GENERAL VISCERAL EFFERENT

Effectors as simple nerve endings in:

- Glandular epithelium
- Smooth muscle
- Cardiac muscle





# Ventral/Motor Organization

## A. GENERAL SOMATIC AFFERENT

Proprioceptive receptor from:

- Skeletal muscle
- Tendon
- Joint capsule

Exteroceptive receptors for:

- Touch
- Pressure
- Heat
- Cold
- Pain

## B. GENERAL SOMATIC EFFERENT

Effectors as:

- Motor endplates of gamma efferent axons on small intrafusal fibers of muscle spindle
- Motor endplates of alpha efferent axons on large extrafusal muscle fibers

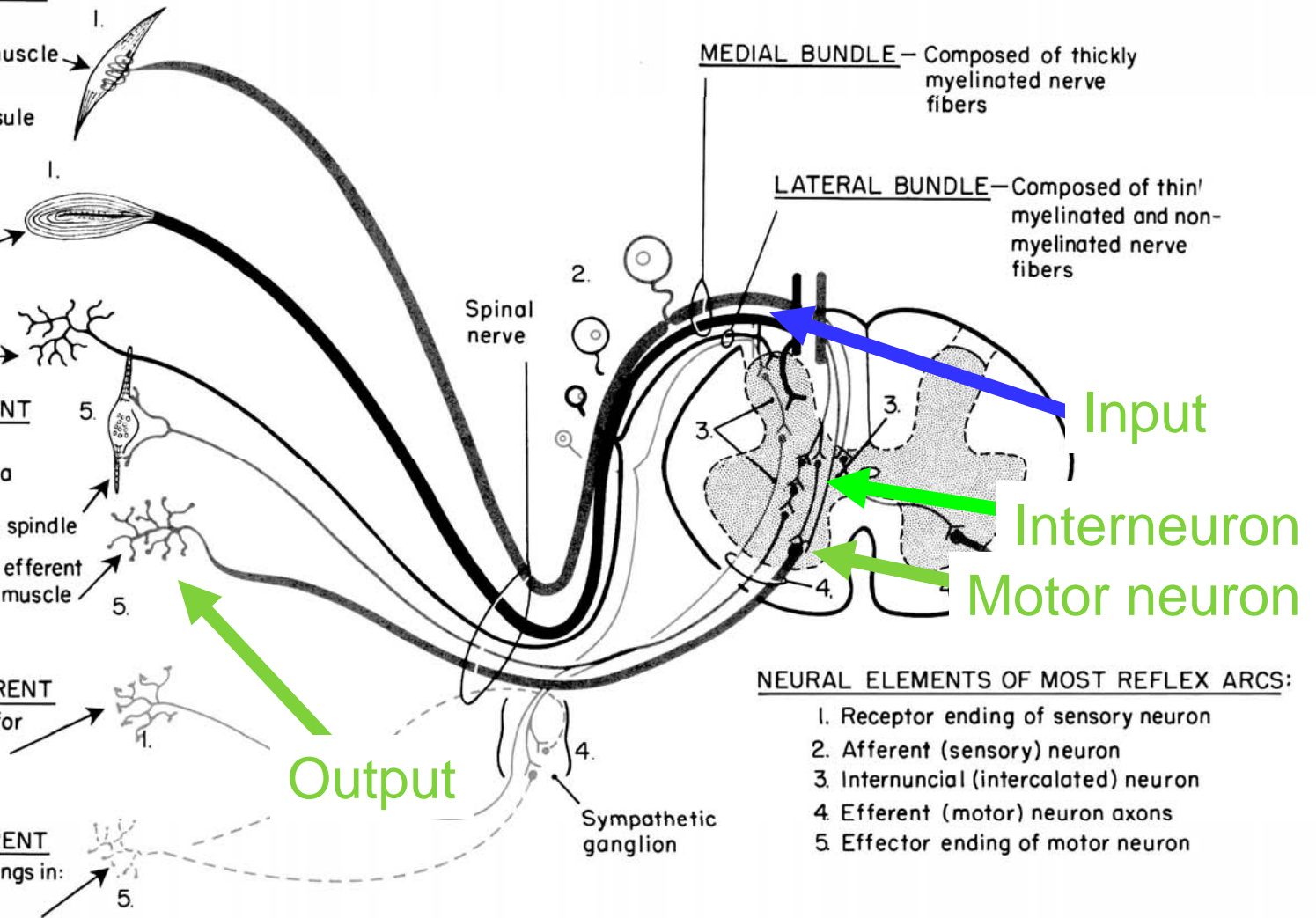
## C. GENERAL VISCERAL AFFERENT

Visceroceptive receptors for distension and spasm of smooth muscle

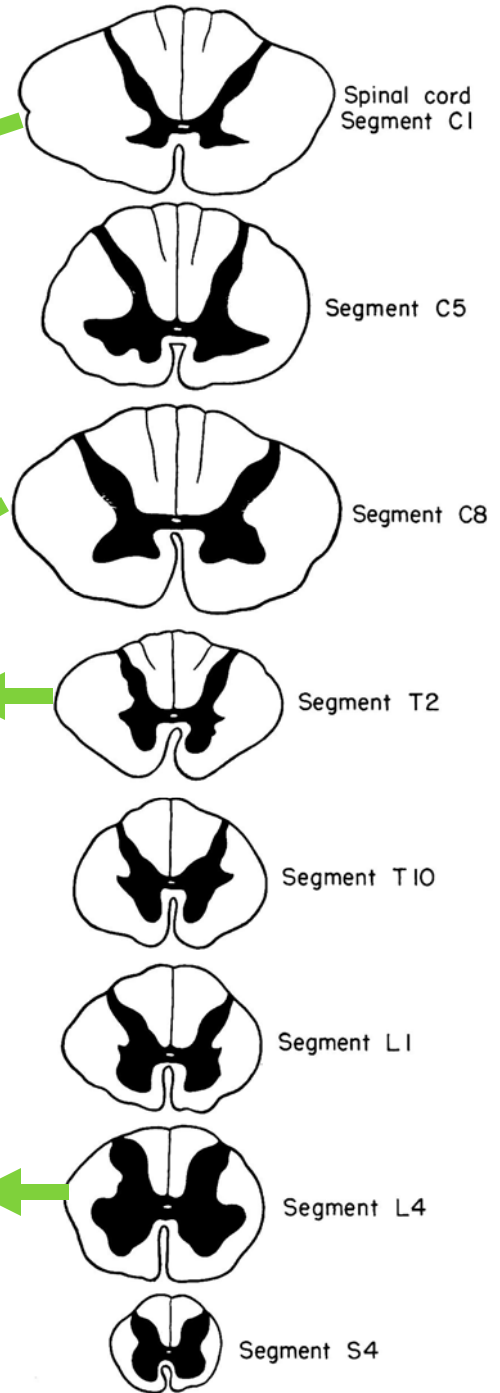
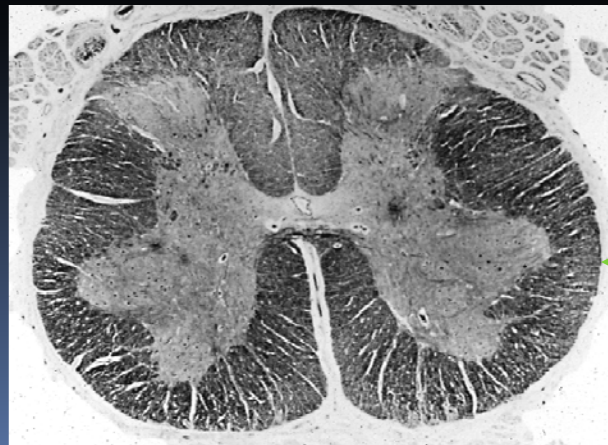
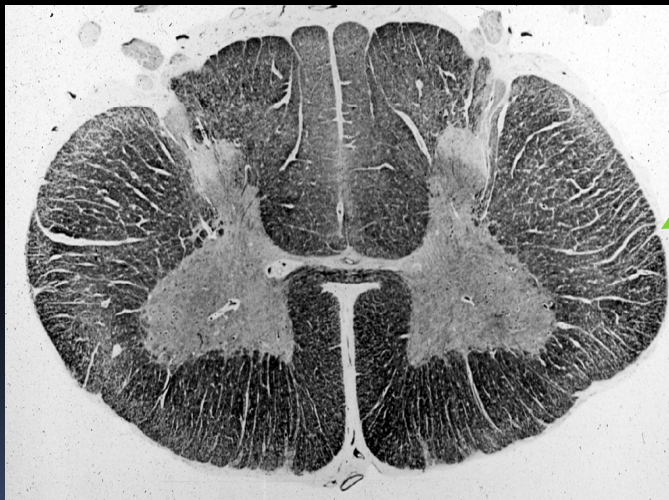
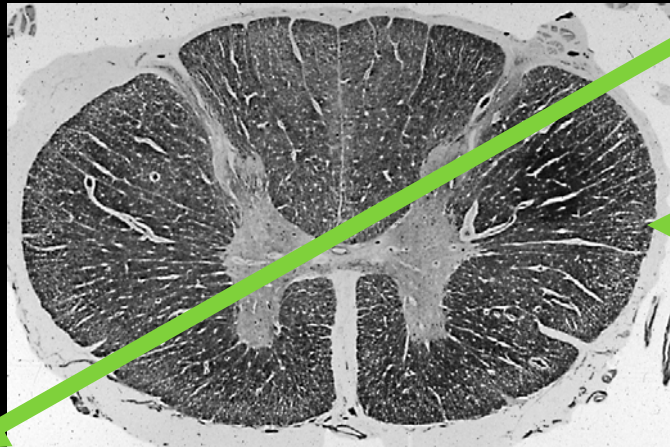
## D. GENERAL VISCERAL EFFERENT

Effectors as simple nerve endings in:

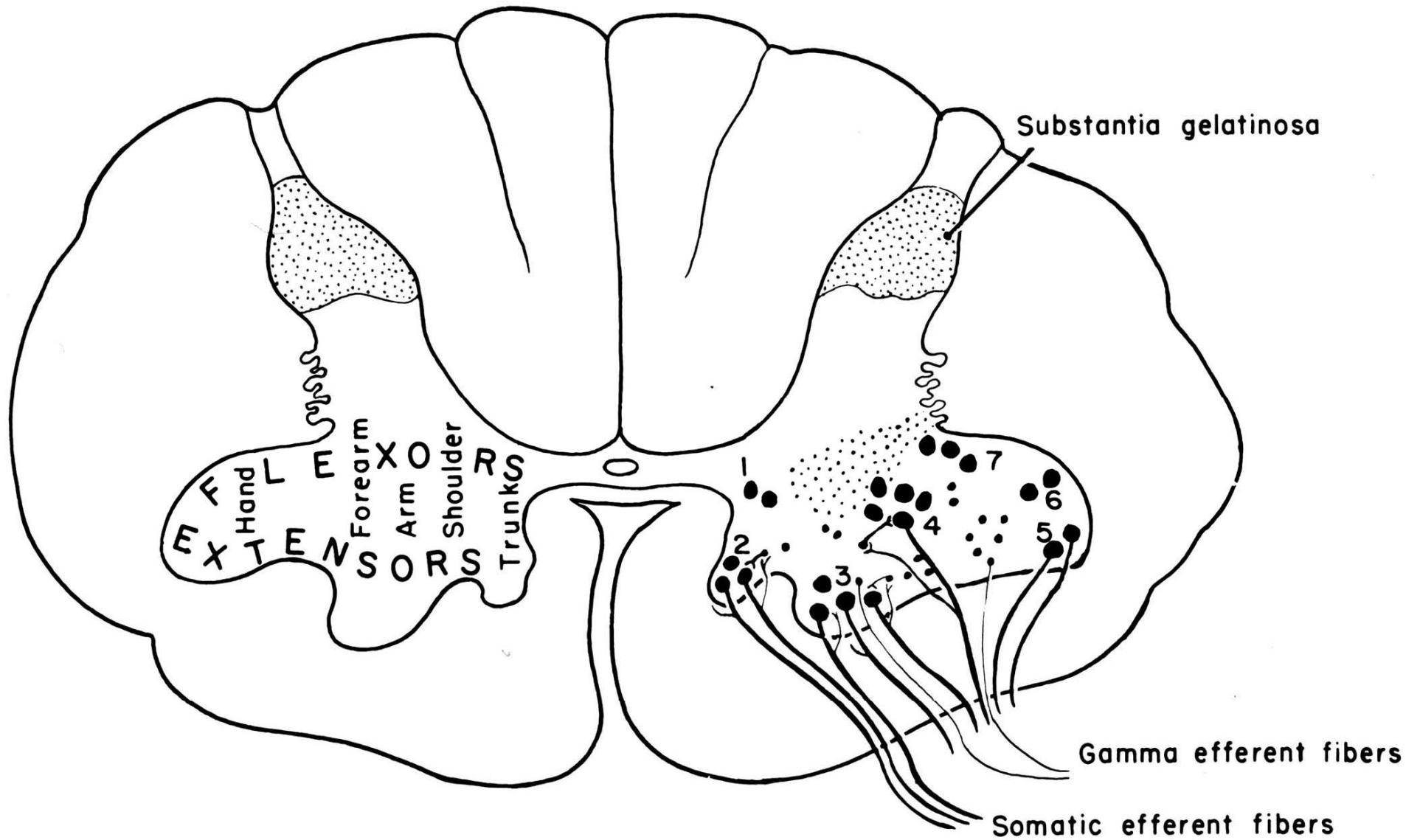
- Glandular epithelium
- Smooth muscle
- Cardiac muscle



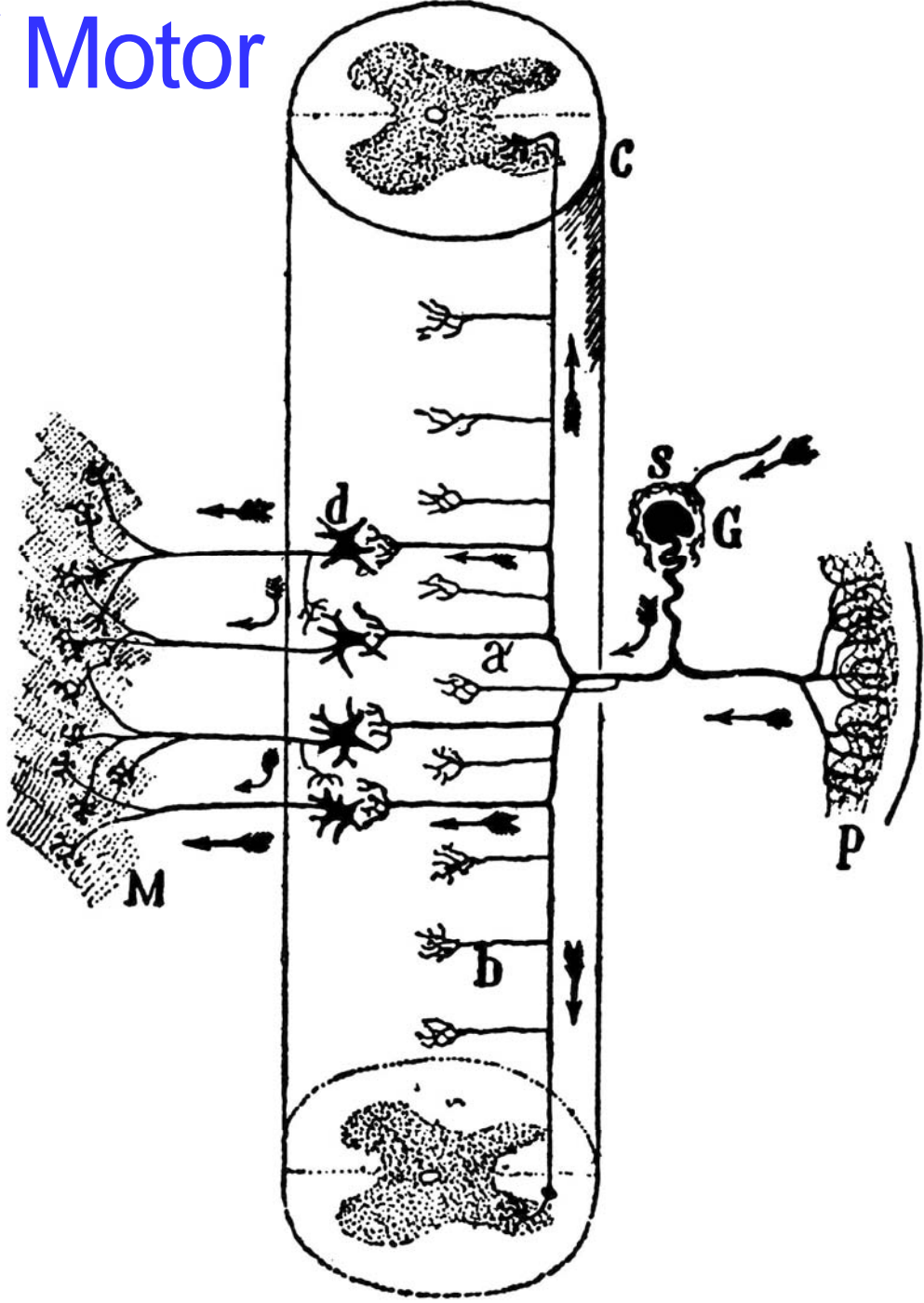
# Spinal Cord Levels



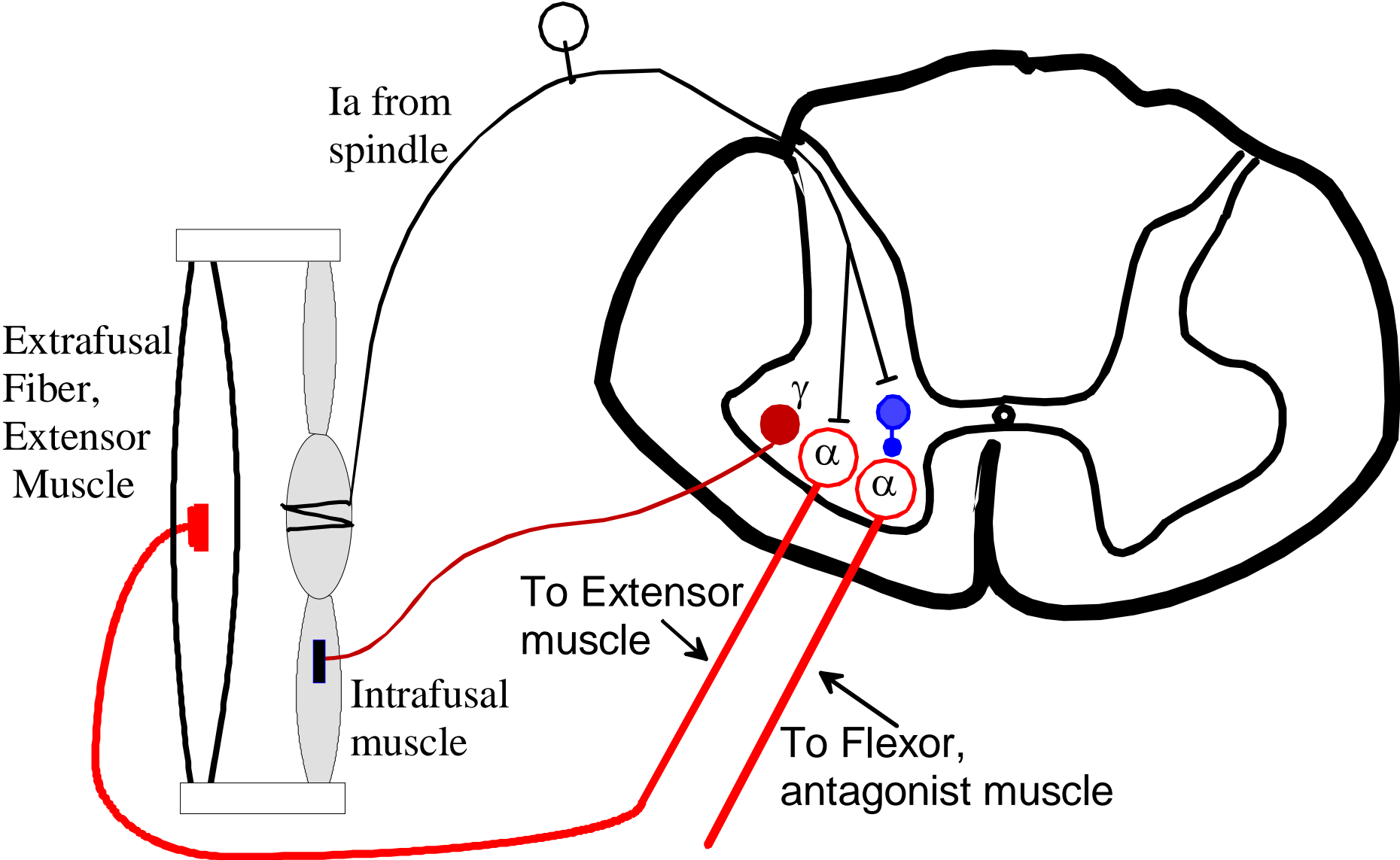
# Ventral Horn / Motor Organization



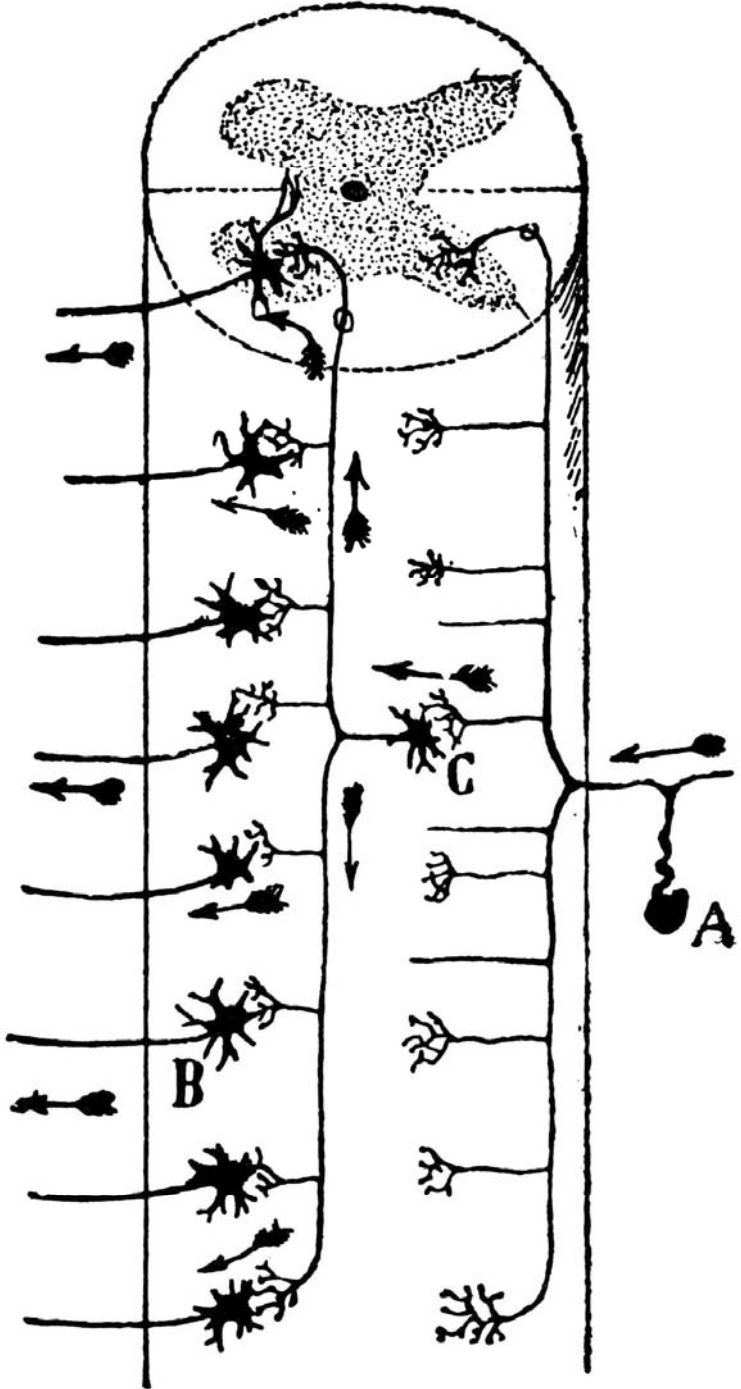
# Ventral Horn / Motor Organization



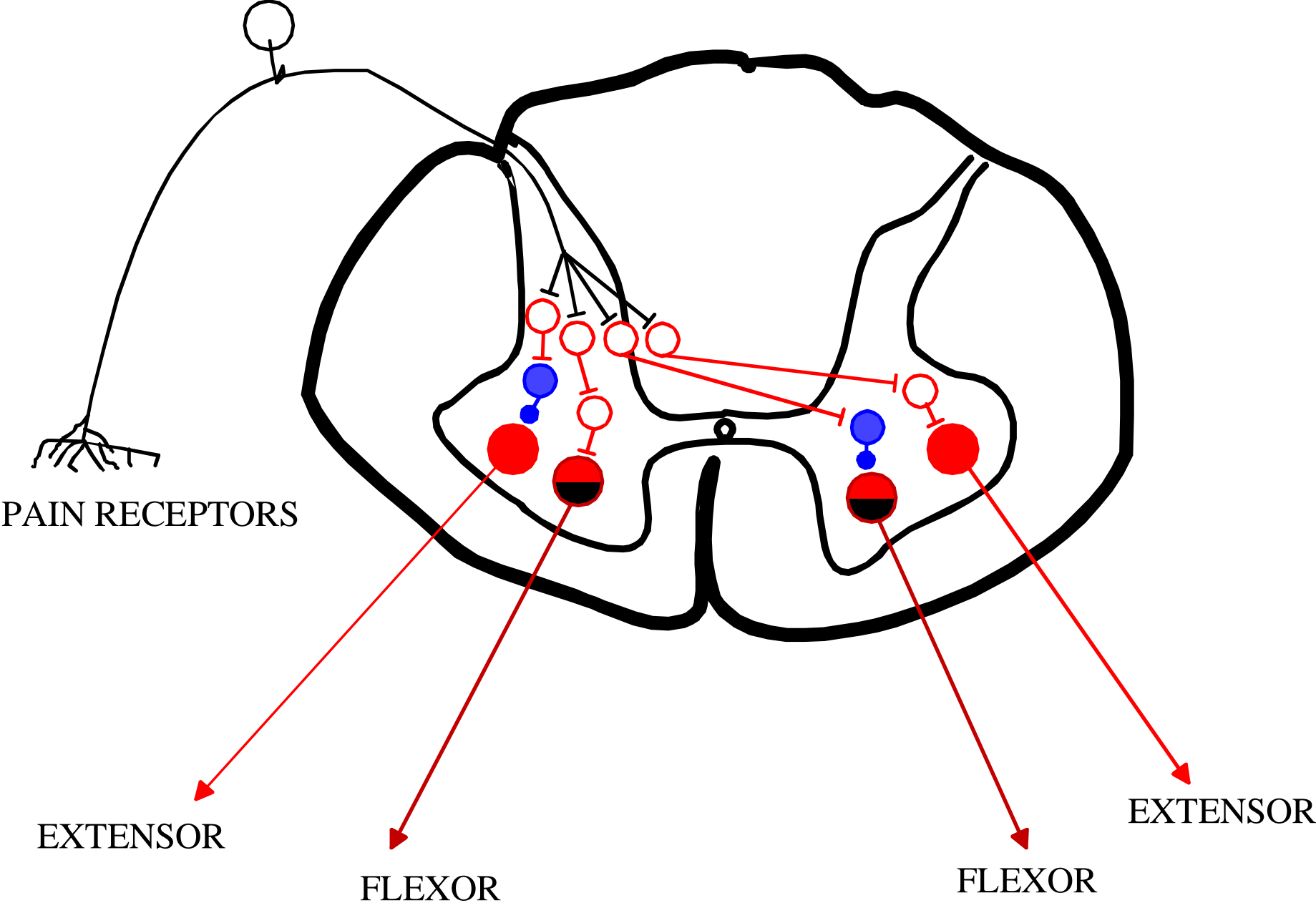
# Stretch Reflex



# Cutaneous Reflex



# Cutaneous Reflex



# Renshaw Cell

