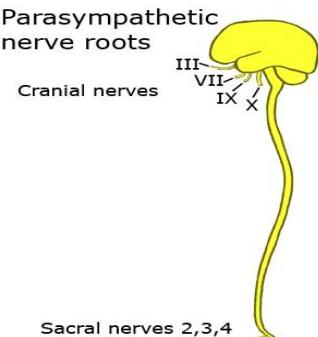
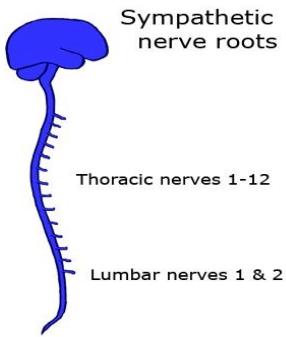
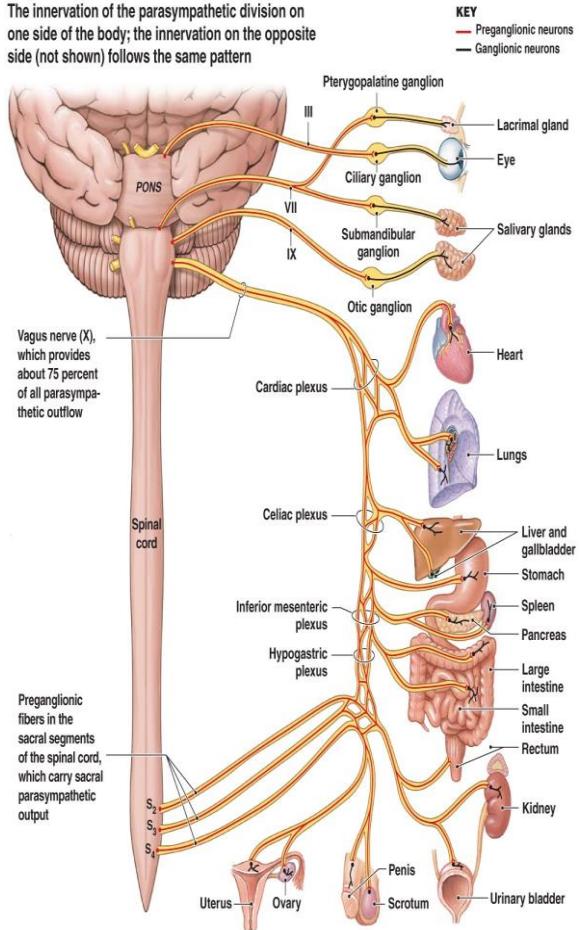
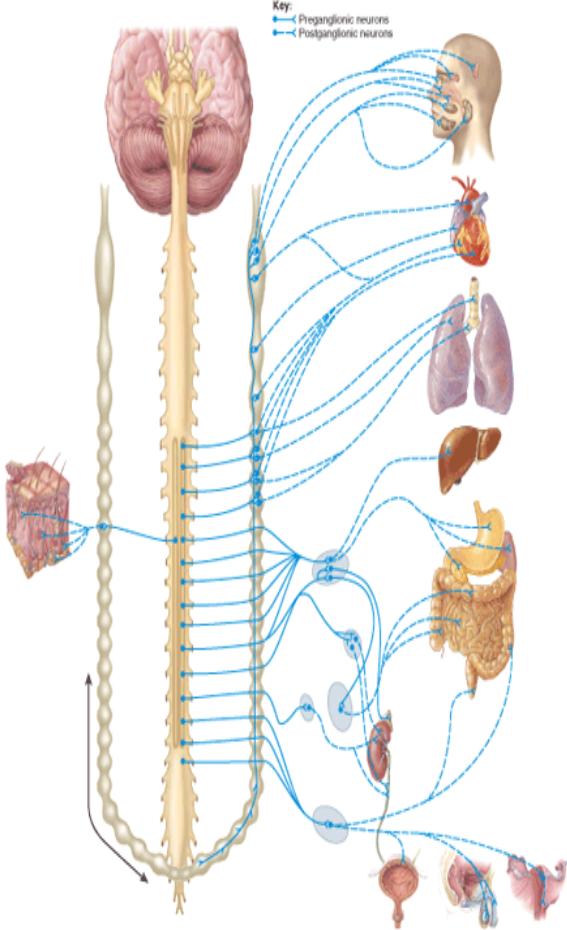
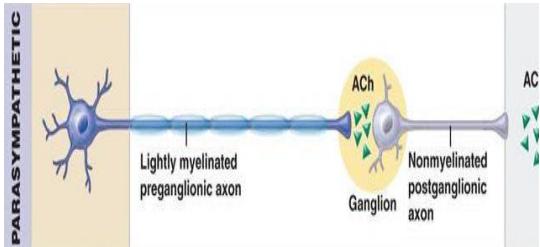


DIFFERENCES BETWEEN PARASYMPATHETIC SYSTEM AND SYMPATHETIC SYSTEM

PARASYMPATHETIC SYSTEM	SYMPATHETIC SYSTEM
<p> Cranio-Sacral Outflow</p> <p>III, VII, IX, X - Cranial nerves II, III, IV - Sacral nerves</p> 	<p> Thoraco-Lumbar outflow</p> <p>I to VII - Thoracic nerves I to III - Lumbar nerves</p> 
<p> Rest and Digest Response</p> <p>This system activates at rest after eating and gives a chance to the body to digest the food.</p> <ul style="list-style-type: none"> • Decreased heart rate • Slow breathing • Increased salivation <p>Rest-and-digest</p> 	<p> Fight or Flight Response</p> <p>This system prepares our body for action, when sudden fatal or dangerous situations.</p> <ul style="list-style-type: none"> • Increased heart rate • Narrow vision (Pin point vision) • Accurate hearing <p>Fight-or-flight</p> 

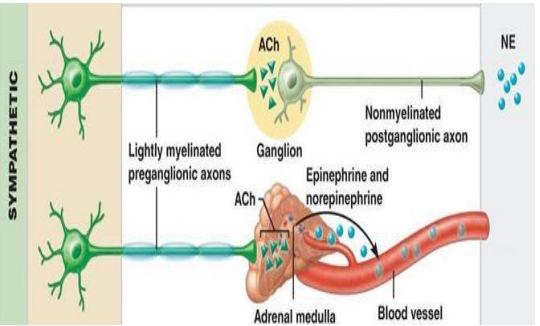
PARASYMPATHETIC SYSTEM	SYMPATHETIC SYSTEM
<p> D - division</p> <ul style="list-style-type: none"> • Digestion • Defecation • Dieresis 	<p> E division</p> <ul style="list-style-type: none"> • Exercise • Excitement • Emergency • Embarrassment
<p> Autonomic ganglia present at the visceral organs (target organs).</p> <p>The innervation of the parasympathetic division on one side of the body; the innervation on the opposite side (not shown) follows the same pattern</p>  <p>© 2011 Pearson Education, Inc.</p>	<p> Para vertebral ganglion or Lateral chain runs on either side of vertebrae from cervical to sacral regions.</p> 

PARASYMPATHETIC SYSTEM			SYMPATHETIC SYSTEM		
✚ Neurotransmitter			✚ Neurotransmitter		
	At ganglion	At organ		At ganglion	At organ
Cholinergic system	Ach	Ach	Adrenergic system	Ach	NA
			Cholinergic system (sweat glands, blood vessels)	Ach	Ach
			Splanchnic system	Ach (Adrenal medulla)	A, NA (blood)



PARASYMPATHETIC

Lightly myelinated preganglionic axon → Ganglion → Nonmyelinated postganglionic axon → AC (At organ)



SYMPATHETIC

Lightly myelinated preganglionic axons → Ganglion → Nonmyelinated postganglionic axon → NE (At organ)

Lightly myelinated preganglionic axons → Ganglion → Nonmyelinated postganglionic axon → ACh (At organ)

Epinephrine and norepinephrine (from Adrenal medulla) → Blood vessel

✚ Distribution

To limited regions mainly to head and to viscera of thorax, abdomen, and pelvis; some blood vessels.

✚ Distribution

Wide regions of the body include skin, sweat glands, adipose tissue, smooth muscles of the blood vessels....

PARASYMPATHETIC SYSTEM	SYMPATHETIC SYSTEM
<p> Functions</p> <ul style="list-style-type: none"> • Pupillary constriction • Thickening of eye lens • Increased salivary secretions • Increases gastric secretions • Increases peristalsis • Vasodilatation • Decreases BP • Decreases pulse rate • Constriction of bronchioles • Contraction of urinary bladder 	<p> Functions</p> <ul style="list-style-type: none"> • Pupillary dilation • Flattening of eye lens • Decreases salivary secretions • Decreases gastric secretions • Decreases peristalsis • Vasoconstriction • Increases BP • Increases pulse rate • Relaxation of bronchioles • Relaxation of urinary bladder