CNS

Descending info.

PNS

Ascending info.

Somatic sensory system: receives info from skin, joints, fascia, muscles.

Visceral sensory system: receives info organs.

Special sensory system: receives on temp, pressure, touch.

Voluntary Motor responses

Controls movement of skeletal (voluntary) muscles

All voluntary motor movement involves **ACh** neurotransmitter binding to **Nicotinic cholinergic** receptors.

Involuntary Motor responses

Controls movement of smooth & cardiac (involuntary) muscles, and glands.

Parasympathetic Motor responses

Vagus nerves
heart rate ↓
BP ↓
bronchioles **bronchoconstrict**
GI peristalsis ↑
GI secretions ↑
GI arterioles **vasodilate**

Sacral nerves
urination ↑
defecation ↑

All parasympathetic motor responses work by **ACh** neurotransmitter binding to **Muscarinic cholinergic** receptors.

Sympathetic Motor responses

Thoracic nerves
heart rate ↑
BP ↑
bronchioles **bronchodilate**
GI peristalsis ↓
GI secretions ↓
GI arterioles **vasoconstrict**
skeletal muscle arterioles **vasodilate**

Lumbar nerves
urination ↓
defecation ↓

All sympathetic motor responses work by **epinephrine** neurotransmitter binding to what 3 types of adrenergic receptors?

B1 adrenergic - which controls what? ↑ **Heart rate**

B2 adrenergic - which controls what? → **bronchodilation & skeletal muscle vasodilation**

α adrenergic - which controls what? ↓ **GI activity**