Motor Systems: Autonomic NS

LO:

- Describe the organisation of the autonomic nervous system
- Describe the action of neurotransmitters
- Outline the roles of sympathetic and parasympathetic divisions
- Explain central nervous control of autonomic activity

Know how to draw the divisions of the nervous system:

- Part of PNS
- Regulates activity of visceral tissue
- Motor system; delivers info via efferent neurons
- Involuntary/autonomic
- Role; homeostasis

Homeostatic regulation:

- Have dual innervation; by the sympathetic and parasympathetic NS
- The sympathetic and parasympathetic are antagonistic to each other, if one is dominant over the other it will cause the effect
- Basal tone - AP varies

Divisions of ANS:

1. Sympathetic NS - prepares body for emergencies, results in increased metabolism and alertness, “fight or flight”
2. Parasympathetic NS - conservation of energy, replenishment of nutrient stores, “rest and digest”

(Sympathetic is taking over when you are nervous, when you are in a fight or scary situation).

Organisation of the ANS:

- There are many synapses,
- Preganglionic fibre – project from CNS to ganglion
- Autonomic ganglia - located outside CNS
- Postganglionic fibre - connect ganglia to target organ

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<thead>
<tr>
<th>Sympathetic</th>
<th>Parasympathetic</th>
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<tr>
<td>Prepares body for activity</td>
<td>Discrete actions, promotes ‘restorative’ functions</td>
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<tr>
<td>Fight or flight</td>
<td>Rest and digest</td>
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<tr>
<td>Innervates body wall structures and internal viscera via sequential pathway of pre- and post-ganglionic fibres</td>
<td>Innervates viscera of body cavities via sequential-pathway of pre- and post-ganglionic fibres</td>
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