Cranial Nerves

- Facial nerve (VII)
- Vestibulocochlear nerve (VIII)
- Glossopharyngeal nerve (IX)
- Vagus nerve (X)
-Accessory nerve (XI)
-Hypoglossal nerve (XII)
-Filaments of olfactory nerve (I)
-Optic nerve (II)
-Oculomotor nerve (III)
-Trochlear nerve (IV)
-Trigeminal nerve (V)
-Abducens nerve (VI)
<table>
<thead>
<tr>
<th>Cranial nerves</th>
<th>Sensory function</th>
<th>Motor function</th>
<th>PS* fibers</th>
</tr>
</thead>
<tbody>
<tr>
<td>I – VI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I Olfactory</td>
<td>Yes (smell)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>II Optic</td>
<td>Yes (vision)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>III Oculomotor</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>IV Trochlear</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>V Trigeminal</td>
<td>Yes (general sensation)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>VI Abducens</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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</table>

<table>
<thead>
<tr>
<th>Cranial nerves</th>
<th>Sensory function</th>
<th>Motor function</th>
<th>PS* fibers</th>
</tr>
</thead>
<tbody>
<tr>
<td>VII – XII</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>VII Facial</td>
<td>Yes (taste)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>VIII Vestibulocochlear</td>
<td>Yes (hearing and balance)</td>
<td>Some</td>
<td>No</td>
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<tr>
<td>IX Glossopharyngeal</td>
<td>Yes (taste)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>X Vagus</td>
<td>Yes (taste)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>XI Accessory</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>XII Hypoglossal</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Old</td>
<td>Some</td>
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<td></td>
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<tr>
<td>--------------</td>
<td>-------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opie</td>
<td>Say</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasionally</td>
<td>Marry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tries</td>
<td>Money</td>
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<td></td>
</tr>
<tr>
<td>Trigonometry</td>
<td>But</td>
<td></td>
<td></td>
</tr>
<tr>
<td>And</td>
<td>My</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feels</td>
<td>Brother</td>
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</tr>
<tr>
<td>Very</td>
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<tr>
<td>Gloomy</td>
<td>Big</td>
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<tr>
<td>Vague</td>
<td>Brains</td>
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</tr>
<tr>
<td>And</td>
<td>Matter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypoactive</td>
<td>More</td>
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</tbody>
</table>
CN I – Olfactory Nerves

- Sensory
- Location
- Foramina
- Cribriform plate
- Olfactory bulb/tract
CN II – Optic Nerves

- Sensory
- Location
- Foramina
- Optic tract
- Optic chiasm
- Contralateral
CN III – Oculomotor Nerves

- Motor

- Location

- Muscles
Distance

Ciliary muscle fibers relaxed
Suspensory ligaments taut
Lens thin

Close-up

Ciliary muscle fibers contracted
Suspensory ligaments relaxed
Lens thick
CN IV – Trochlear Nerves

• Motor

• Location

• Muscle
CN V – Trigeminal Nerves

• Mixed

• Location

• Muscles

• Sensation
(b) Distribution of sensory fibers of each division

Anterior trunk of mandibular division \((V_3)\)
Temporalis muscle
Lateral pterygoid muscle
Medial pterygoid muscle
Masseter muscle
Anterior belly of digastric muscle

(c) Motor branches of the mandibular division \((V_3)\)
CN VI – Abducens Nerves

- Motor

- Location

- Muscles
CN VII – Facial Nerves

• Mixed

• Location

• Muscles

• Sensation

(a) Parasympathetic efferents and sensory afferents
CN VIII – Vestibulocochlear Nerves

• Sensory

• Location
CN IX – Glossopharyngeal Nerves

- Mixed
- Location
CN X – Vagus Nerves

- Mixed
- Location
CN XI – Accessory Nerves

• Motor

• Location

• Muscles
CN XII – Hypoglossal Nerves

- Motor
- Location
- Muscles