

CN	Examples of Injury	Clinical Features
<b>I</b>	<ul style="list-style-type: none"> <li>▪ Shearing of olfactory nerve filaments</li> <li>▪ Fracture of cribriform plate</li> <li>▪ Frontal lobe lesion causing compression of olfactory bulb/tract</li> <li>▪ Possible SARS-CoV-2 infection<sup>7</sup></li> </ul>	Anosmia or altered sense of smell and taste
<b>II</b>	Direct nerve trauma	→ Immediate visual loss <sup>5</sup>
	Ischemia, edema, compression of the nerve	→ Delayed visual loss <sup>5</sup>
	Optic chiasm insults	→ Bitemporal hemianopsia
<b>III</b>	<ul style="list-style-type: none"> <li>▪ Basilar skull fracture</li> <li>▪ Uncal herniation or compression</li> <li>▪ Posterior communicating artery aneurysm</li> </ul>	<ul style="list-style-type: none"> <li>▪ Binocular diplopia<sup>5</sup></li> <li>▪ Ptosis</li> <li>▪ Mydriasis (with involvement of parasympathetic fibers)</li> <li>▪ Upward and downward gaze palsy<sup>5</sup></li> </ul>
<b>IV</b>	Fracture of the sphenoid wing Trochlear schwannoma <sup>10</sup>	<ul style="list-style-type: none"> <li>▪ Patients report seeing double images that are vertically or obliquely oriented to each other<sup>5</sup></li> <li>▪ Improved diplopia with head tilted to contralateral side</li> </ul>
<b>V</b>	Cavernous sinus	<ul style="list-style-type: none"> <li>▪ Asymmetry of jaw on opening</li> <li>▪ Weakness with mastication</li> </ul>
<b>VI</b>	Cavernous sinus or skull base injury	<ul style="list-style-type: none"> <li>▪ Extraocular palsy resulting by medial deviation of ipsilateral eye</li> <li>▪ Improved diplopia when the contralateral eye is abducted</li> </ul>
<b>VII</b>	Temporal bone fracture Direct intra-temporal trauma from gunshot wounds <sup>11</sup> Pregnancy <sup>8</sup> HSV	<ul style="list-style-type: none"> <li>▪ Paralysis of facial expression</li> <li>▪ <b>Peripheral lesion</b> involves muscles of both the upper and lower face and can involve loss of taste from the anterior 2/3 of the tongue.</li> <li>▪ <b>Central lesion</b> results in sparing of upper and frontal orbicularis oculi due to crossed innervation.</li> </ul>
	Note: Spared ability to raise eyebrows, wrinkle forehead helps differentiate a peripheral palsy from a central process	
<b>VIII</b>	Temporal bone fracture	Hearing loss, vertigo and nystagmus
<b>IX</b>	Posterior fossa or jugular foramen	<ul style="list-style-type: none"> <li>▪ Numbness of ipsilateral pharynx</li> <li>▪ Dysphagia with absent gag reflex</li> </ul>
<b>X</b>	Skull base injury <sup>11</sup>	<ul style="list-style-type: none"> <li>▪ Ipsilateral drooping of soft-palate with uvular deviation towards the affected side</li> <li>▪ Dysphagia, dysphonia, epiglottic paralysis and decreased gag reflex</li> </ul>
<b>XI</b>	Skull base injury <sup>11</sup>	Ipsilateral paralysis of sternocleidomastoid and trapezius
<b>XII</b>	Skull base injury Nasopharyngeal neoplasms Carotid endarterectomy	Tongue protrusion AWAY from side of lesion