

## On Old Olympic Towering Tops A Finn and German Viewed Some Hops.

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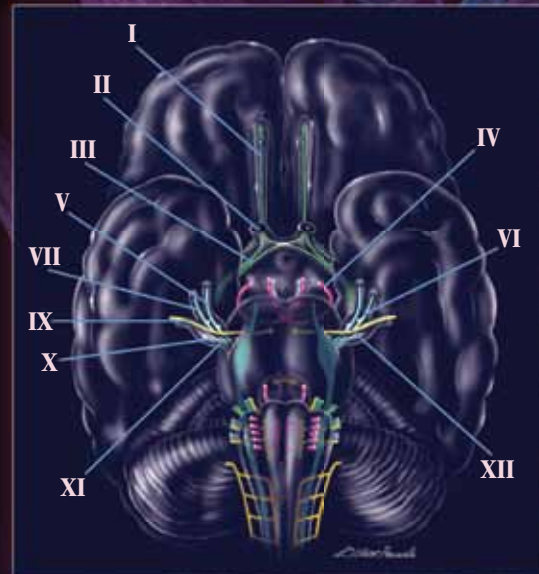
# “On Old Olympic Towering Tops A Finn And German Viewed Some Hops”

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## Assessing Cranial Nerves in the Presence of Schwannoma

### Objectives:

1. Detail the anatomy and physiology of each cranial nerve
2. Review the elements and techniques utilized when assessing each cranial nerve.
3. Discuss a case study of a patient with an acoustic Schwannoma and how assessment of the cranial nerves alerted nurses to intervene to lower intracranial pressure, protect ocular function, and guard the patients' airway.



Cranial Nerve	Major Function	Abnormal Assessment
<b>I. Olfactory</b>	Smell	Anosmia
<b>II. Optic</b>	Vision	Blind one/both eyes Field cut
<b>III. Oculomotor</b>	Eyelid and eyeball movement	Ptosis Abnormal light reflex Eye deviated laterally Unable to look medially
<b>IV. Trochlear</b>	Innervates superior oblique Turns eye down and lateral	Unable to look medially and down
<b>V. Trigeminal</b>	Chewing Touch/pain of face/mouth	Impaired sensation Trigger zone produces pain Weak masseter muscle
<b>VI. Abducens</b>	Turns eye lateral	Eye deviated medially Unable to look laterally
<b>VII. Facial</b>	Controls most facial expressions Secretion of tears/saliva Taste	Facial muscle weakness Dry mouth Lack of appropriate taste
<b>VIII. Vestibulocochlear (auditory)</b>	Hearing Equilibrium sensation	Hearing loss Nystagmus No oculovestibular reflex
<b>IX. Glossopharyngeal</b>	Taste Motor control larynx/palate/pharynx Senses carotid pressure	Depressed/absent gag Poor elevation of soft palate Variations in BP control
<b>X. Vagus</b>	Senses aortic blood pressure Slows heart rate Motor control larynx/palate/pharynx	Depressed/absent gag Poor elevation of soft palate Variations in BP control
<b>XI. Spinal Accessory</b>	Controls trapezius/sternocleidomastoid Controls swallow	Depressed/absent gag Unable to shrug shoulders
<b>XII. Hypoglossal</b>	Controls tongue movements	Tongue deviation

### 40 Year-Old Male with Acoustic Schwannoma

- Suboccipital crani for debulking
- Aqueductoplasty with stent placement for isolated 4th ventricle syndrome
- Bilateral VP shunts
- Ventriculostomy
- Ommaya reservoir placement
- Cranial nerves impacted IV, V, VI, VII, IX, XII



Pre-op Scan



Post-op Scan

### Patient's Cranial Nerve Symptom

Trigeminal Nerve S/S—Absent Corneal	..... Patch eye for protection
Abducens Nerve S/S—Diplopia	..... Patch eye
Facial Nerve S/S—Bells Palsy	..... Gold Eyelid Weight implant
Vagus Nerve S/S—Hiccups	..... Shunt overdrain—HOB ↓
Glossopharyngeal Nerve S/S—Poor swallow/gag	..... Shunt underdrain—Open ventric Aspirate Ommaya
Hypoglossal Nerve S/S — Tongue deviation	..... Shunt underdrain—Open ventric Aspirate Ommaya

### Take Home Points About Cranial Nerves

- Patch eye for protection
- Weight eyelids to promote blink
- Hiccups—May indicate ICP abnormality
- Bells palsy—May indicate ICP abnormality
- Poor swallow—May indicate shunt drainage abnormalities
- Tongue deviation—May indicate and ICP abnormality