

## CN VII

CN VII is also known as the facial nerve and it has both motor and sensory functions. The nerve provides taste sensation from the anterior 2/3 of the tongue. Motor functions of the nerve include control of the muscles of facial expression, the stapedius muscle in the middle ear, and closing of the eyelid.



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### Facial Nerve

#### Face-lotion

The nucleus of the facial nerve is located in the brainstem between the pons and medulla. It is named the facial nerve because of its motor and sensory functions in the face. The nerve passes through the internal auditory meatus and then the parotid gland in the face. It can be damaged during surgery for head and neck cancers.

### Lacrimation

#### Crying

CN VII provides parasympathetic innervation to the lacrimal gland which secretes tears.

### Salivation

#### Drooling

The chorda tympani branch of CN VII provides parasympathetic innervation to the submandibular and sublingual glands which are responsible for salivation.

### Sensory

#### Sensor

Along with CN IX, CN VII is most responsible sensing taste.

### Taste from Anterior 2/3 of Tongue

#### Anterior 2/3 of Tongue with Taste-sensors

The chorda tympani branch of CN VII is responsible for taste sensation for the anterior 2/3 of the tongue via the fungiform and foliate papillae.

### Motor

#### Motor

CN VII is responsible for various motor functions of the face, such as facial expression and secretion of tears and saliva.

### Facial Movement

#### Facial Massage

When testing for CN VII damage, facial movement is assessed by asking the patient to smile (and show teeth), frown, puff out his/her cheeks against the examiner's pressure. Bell's palsy is an idiopathic facial nerve paralysis which manifests as ipsilateral facial paralysis and inability to close the ipsilateral eye.

### Stapedius Muscle

#### Stapler

CN VII innervates the stapedius muscle in the middle ear which stabilizes the stapes and prevents sounds from being too loud.

### Eyelid Closing

#### Eyelid Closed

When testing for CN VII damage the patient is asked to close his/her eyes as the examiner exerts opposing pressure to open them. Note: CN III is responsible for eyelid opening.