



# EAR, NOSE AND THROAT

## **Facial Nerve History and Examination**

**Leader: Maha Allhaidan**

**Done by: Lama AlTawil & Amal Al sinan**

**Revised by: Amal Al sinan & Lulu Alobaid**

# History of Facial Palsy

## Facial nerve fibers:

1. **Motor fibers:**
  - To the stapedius and facial muscles
2. **Secreto-motor fibers (parasympathetic):**
  - To the lacrimal gland and the submandibular and sublingual salivary glands.
3. **Taste fibers:**
  - From the anterior two third of the tongue and palate.
4. **Sensory fibers:**
  - From the external auditory meatus.

## Branches of the facial nerve:

### Temporal:

Most superior >> supplies the frontalis muscle.

### Zygomatic:

Supplies orbicularis oculi muscle.

### Buccal:

Supplies buccinators muscle.

### Mandibular:

Supplies the muscles of the angle of the mouth.

### Cervical:

“long but thin branch” >> supplies platysma muscle.

## Lower motor neuron lesion:

Lower motor lesions affect **all the ipsilateral** facial muscles.

## Upper motor neuron lesion:

Upper motor lesions spare the upper facial muscles and affect the **contralateral lower face**.

Facial Palsy

Introduction [Name + Medical student]

Privacy and permission \_\_\_\_\_

	✓	X	Comments	Notes
<b>Personal Data</b>				
Name				
Age				
Marital Status				
Occupation				
<b>Chief Complaint</b>				
Route of admission			(ER / Elective)	Together indicate the severity of symptoms and patient's nervousness
Time of admission			Morning / evening / late at night	
Onset and duration			Onset; sudden or progressive Duration; hours, days months	
<b>History of Presenting Illness</b>				
Start			Trauma / infection(vesicles/fever) / facial pain / fainting	
Site			Mouth only or the whole face?	
Timing			Intermittent or continuous	
Character / Description			Which side of the mouth is drooping? Did you notice any twitching? Is it obvious when you close your mouth? Who noticed the problem? how?	
Frequency			1st time? Pervious episodes?	<b>if not the 1st time:</b> How many episodes? Progress with each episode? Time between each episode? How does each episode resolve?
Severity			0 -10 (How bad is it?) Did you go to work/mosque? Were you able to put on makeup? Did anyone else noticed it? Do others understand what you say?	
Relieving Factors			Anything that makes it better? Is closing your mouth makes it less obvious? Is it better when you're relaxed?	
Aggravating Factors			Anything that makes it worse? Is talking/yawning makes it more obvious? Is it worse when you're nervous?	
Medications / Pervious visits			Did you take anything for this problem? Have you seen a doctor for this before?	
<b>Risk Factors (Medical conditions that precipitate to the main complaint)</b>				
Previous episode				
Viral infection (Fever)				
Stroke				
Recent middle ear surgery				
Pregnancy			3rd trimester/1st week post delivery	
Family history				Possible in recurrent case
<b>Associated Symptoms</b>				
Eye			Difficulty in eye closure? Excessive tearing? Dryness and itchiness?	Lacrimal glands Orbicularis oculi

	✓	X	Comments	Notes
Mouth			Changes in saliva production-less Decreased /loss of taste sensation	Sublingual + submandibular Chorda Tympani (2/3 of tongue)
Ear			Pain in or behind the ear? Irritation from everyday noises or finding them louder than usual?	Stapedius muscle / Facial canal
Neurological symptoms			Limb weakness Speech difficulty Loss of consciousness Changes in sensation	Stroke
Vestibulocochlear system			Vertigo and imbalance	Ramsy-Hunt syndrome
Skin			Vesicles Erythema migrans	Varicella Zoster Lym disease
Flu-like Symptoms				Viral infections
<b>Constitutional Symptoms</b>				
Fever			Sweating Time (Night/ morning)	Hemangioma of tympanium Facial nerve tumor (cylinderoma)
Weight loss				
Loss of appetite				
<b>Past Medical History</b>				
Chronic Diseases Syndromes			Diabetes, hypertension, hypelipidemia, pervious thromboembolisms (Stroke) Neurological conditions? Ear condition? otitis media/ cholesteatoma	
Medications and control			For chronic conditions	
Allergies			Food or medication	
<b>Past Surgical History</b>				
Previous hospital admissions				
Previous surgical procedures			Especially ear, facial or parotid procedures	+ Ask about dental procedures
Blood Transfusion				
Trauma and RTA				
<b>Past Family History</b>				
Family members with similar complaints				+ Neurofibromatosis II
Chronic diseases				
<b>Social History</b>				
Smoking			+ Passive smoking	
Alcohol consumption				
Coffee consumption				
Travel			Lym disease and other viral infections	Lym disease = North America + Europe
<b>Menstrual History</b>				
<b>Systemic Review</b>				
<b>Summary</b>				
Personal Data				
Chief Complaint and duration of cc				
Important +ves				
Important -ves				

# Examination template

Pre-Exam			
Wash hands!		Bring your own disinfectant	
Introduction		Name + medical student	
Permission		Explain the procedure + patient consent	Also don't forget to explain to the patient what you're going to do before you go ahead and do it
Privacy		Mention if not applicable	
Position of physician		In front of the patient	
Position of patient		Sitting up right	
Exposure		Head and face	Mention that a chaperone should be present if examining the opposite sex.
General appearance			
Appearance		Age /consciousness /alertness /distress	
Body built		Normal / thin / obese	
Connections		IV lines / mask /monitors / chest tube	
Color		Pallor / jaundice / cyanosis	
Vital Signs			
(Tell the doctor that you leave it to the end for the sake of time if you don't think you'll have time to finish)			
Pulse Rate		Rate - Rhythm - Volume - Character	Character and volume better assessed at the carotid
Respiratory Rate		Rate, regularity and depth of breaths	While measuring the pulse
Blood Pressure		Must be mentioned	Even if you don't do it
Temperature		Must be mentioned	IMP to R/O infections
Inspection			
1. General		Signs of trauma or infection (vesicles) Masses (parotid) and lymph nodes Surgical scars (Ear)	NB: The patient's voice; hearing;
2. Facial Symmetry		Unilateral drooping of the mouth corner Smoothing of the wrinkled forehead and the nasolabial folds.	In bilateral facial nerve palsies symmetry can be maintained.
3. Excessive Tearing			
3. Involuntary movements:			
a. Twitching			
a. Blinking			
Muscle Power			
1. Frontalis Muscle		- Ask the patient to look up without moving his/her head - Tell the patient to keep looking up then push down against the corrugation	This movement is relatively preserved on the side of UMNL due to the bilateral representation of these muscle
2. Orbicularis Oculi		- Ask the patient to close his/her eyes as strong as they could. - Warn your patient that you'll try to open his eyes and tell him to stop you - "Shut your eyes tightly and stop me opening them"	- Look for Bell's phenomenon - Compare how deeply the lashes are buried on the 2 sides - Try to force open each eye separately
3. Buccinator		- Ask the patient to puff out his/her cheeks - Warn the patient and then try to push them and ask him/her to stop you.	
4. Orbicularis Oris		- Ask the patient to grin and show his/her teeth. (make sure the patient's teeth are not in a container beside the bed)	Compare the nasolabial grooves, which are smooth on the weak side
Taste (Just mention it)			
Examination of the anterior 2/3 of the tongue is not usually required.			

	✓	X	Notes	Comments
<b>Peripheral Examination</b>				
Please mention that you'd like to perform a complete ENT and neurological exams at the end -IMP				
1. Limbs			Weakness, paresthesia (stroke) Erythema Margins (lyme disease)	
2. Trunk			Lesions or vesicles (signs of infections)	
3. Ear			By otoscope look for OM	
4. Face			Parotid gland	
5. Gait and balance			Vertigo and balance of the patient	
<b>Post-Exam</b>				
Thank the patient				
Cover up the patient			And ask if has any concerns	
Wash your hands				
Summarize findings				

\*Bell's Phenomenon:

Present in everyone, although not usually visible unless a person has a VII nerve palsy. In this case, when the patient attempts to shut the eye on the side of a lower motor neuron VII nerve palsy this is upward movement of the eyeball and incomplete closure of the eye

you may need this information for a bonus (i don't think its mandatory):

house-breckman grading of facial palsy ( for prognosis and response to treatment)

1. normal

2. slight mouth asymmetry and complete eye closure with minimal effort (mild)

3. clear mouth asymmetry and complete eye closure with effort (moderate)

4. clear mouth asymmetry and incomplete eye closure (moderately severe)

5. asymmetry at rest (severe)

6. total paralysis

or at least know that grade 4 and above associated with incomplete eye closure

- For the theory check 432 team work on facial nerve
- Useful videos:
- ✓ <https://www.youtube.com/watch?v=-x-ZPNVDstE>
- ✓ <https://www.youtube.com/watch?v=syXSUYf94>

**For mistakes or feedback**

**ENTteam432@gmail.com**