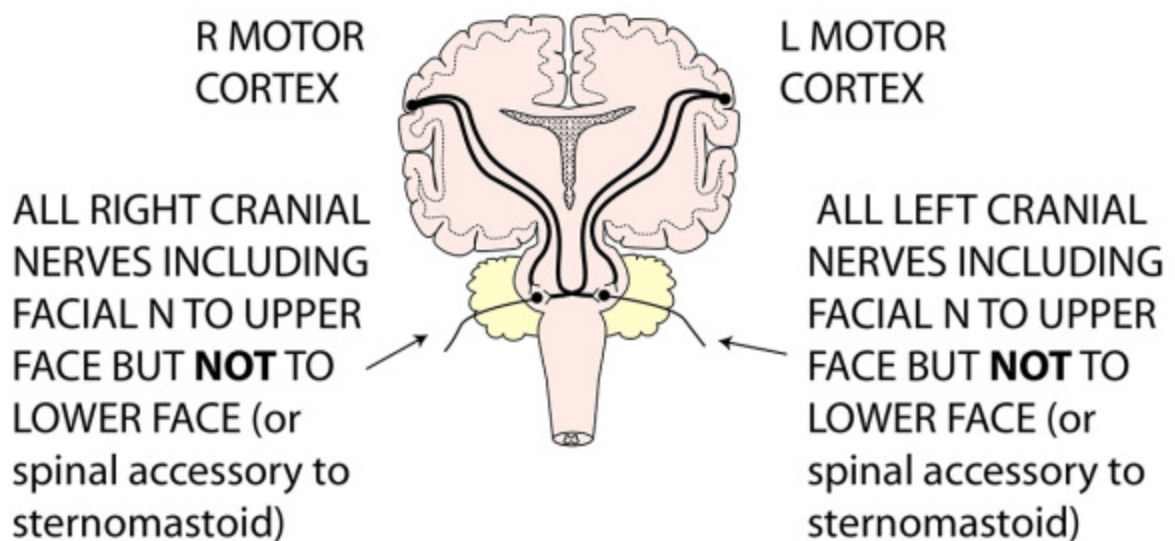


RULES FOR CORTICAL CONTROL OF CRANIAL NERVES

RULES FOR CORTICAL CONTROL OF CRANIAL NERVES

GENERAL RULE FOR CRANIAL NERVES

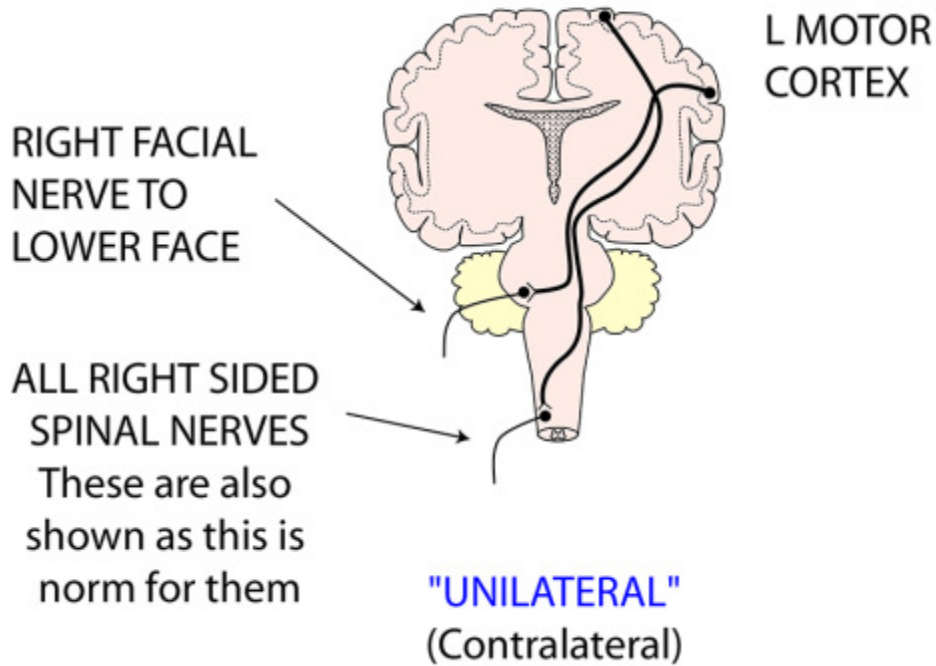


"BILATERAL"

(Contralateral & ipsilateral)

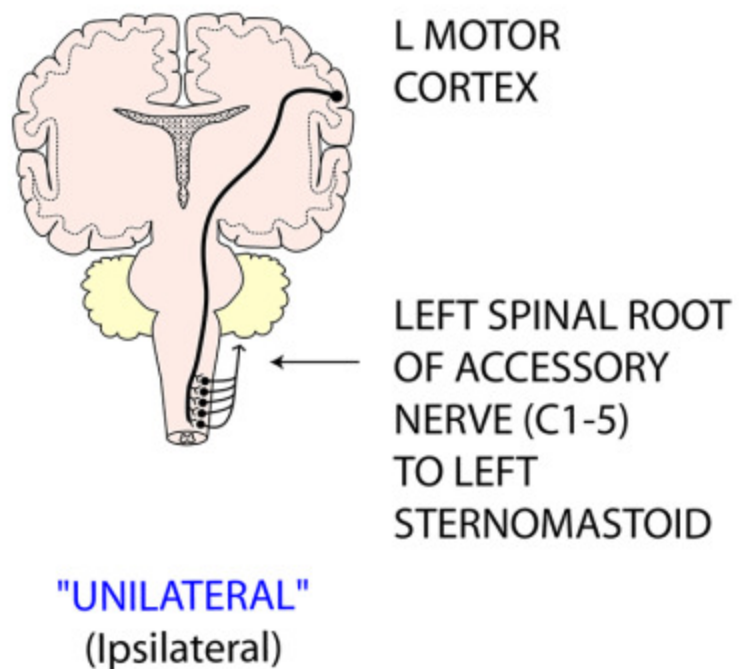
RULES FOR CORTICAL CONTROL OF CRANIAL NERVES

1st EXCEPTION - LOWER FACE



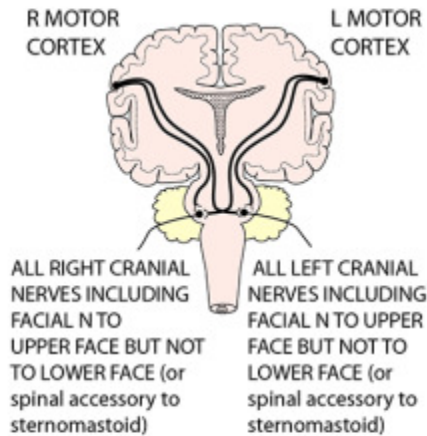
RULES FOR CORTICAL CONTROL OF CRANIAL NERVES

2nd EXCEPTION - SPINAL ROOT OF ACCESSORY N
(Sternomastoid)



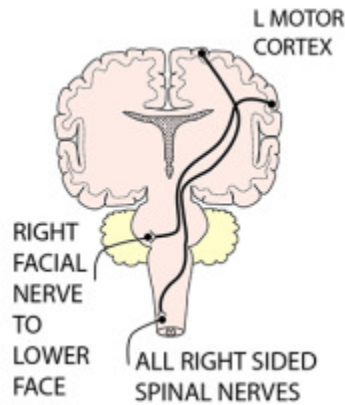
RULES FOR CORTICAL CONTROL OF CRANIAL NERVES

GENERAL RULE FOR CRANIAL NERVES



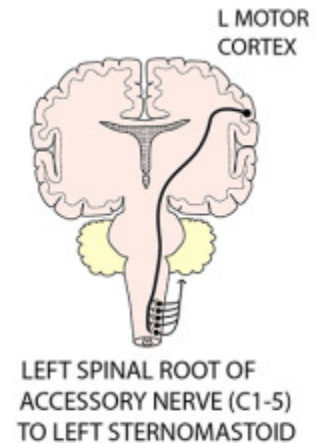
"BILATERAL"
(CONTRALATERAL &
IPILATERAL)

1st EXCEPTION -
LOWER FACE
(spinal nerves also shown
as this is norm for them)



"UNILATERAL"
(CONTRALATERAL)

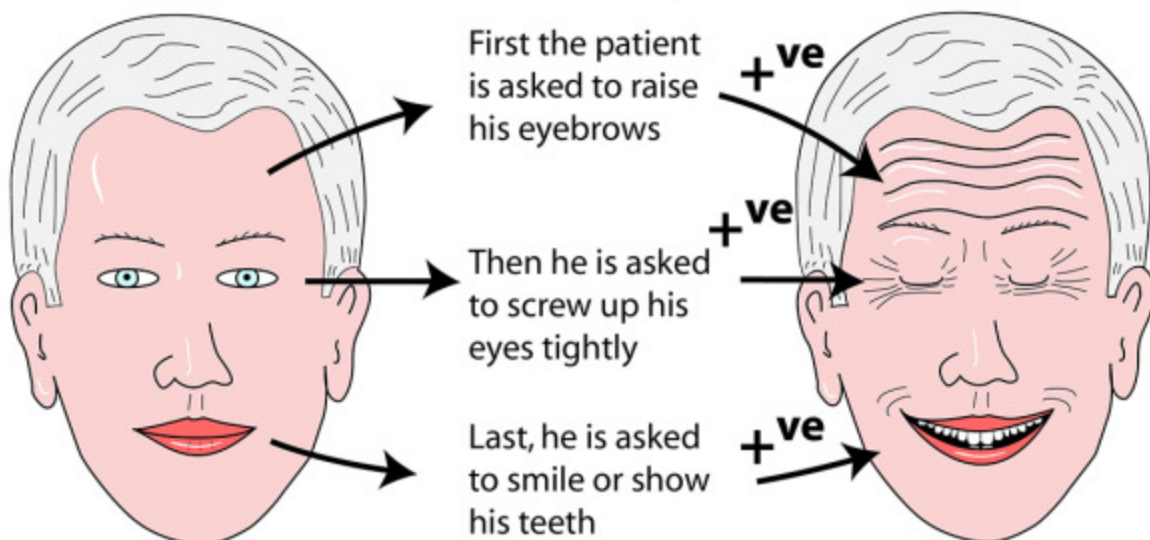
2nd EXCEPTION -
SPINAL ROOT
OF ACCESSORY N
(to sternomastoid)



"UNILATERAL"
(IPILATERAL)

TESTING FOR FACIAL NERVE ACTION IN A NORMAL PATIENT

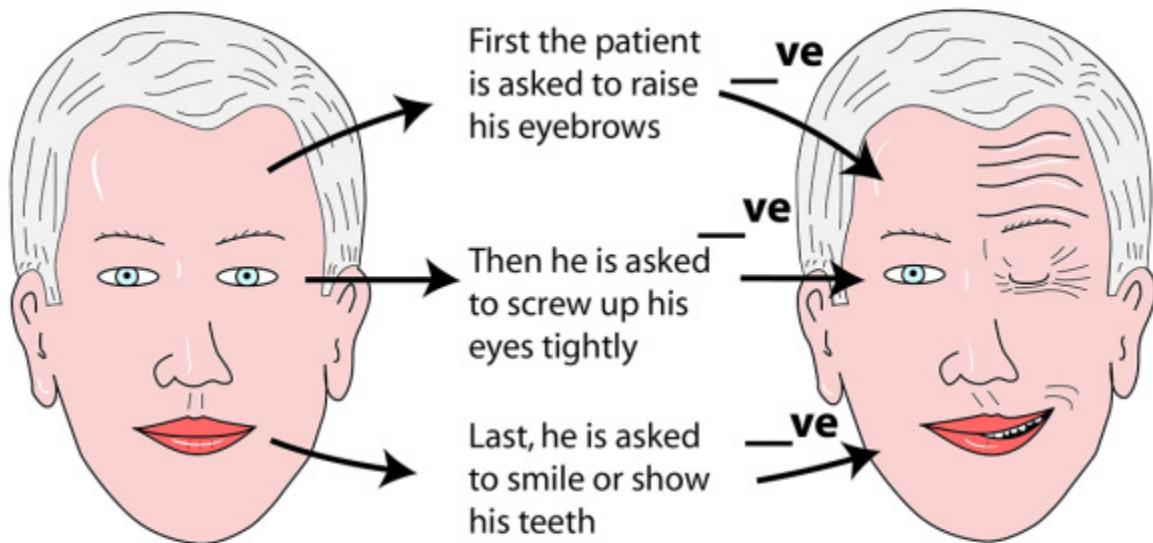
3 functions are tested separately in turn:



ALL MOVEMENTS ARE NORMAL AND SYMMETRICAL

TESTING FOR FACIAL NERVE ACTION IN AN **ABNORMAL** PATIENT

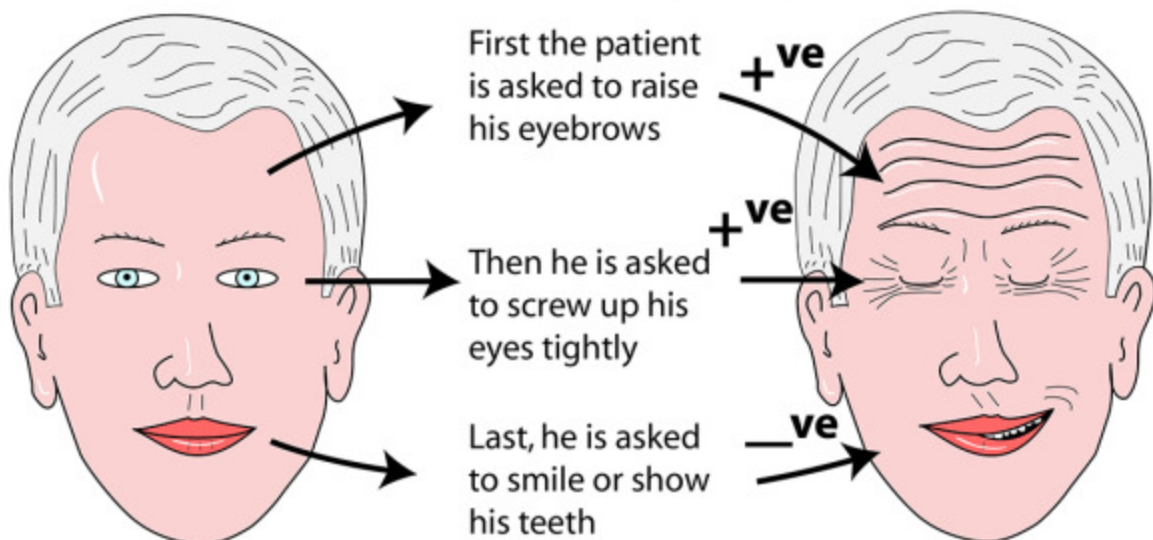
3 functions are tested separately in turn:



ALL MOVEMENTS ARE MISSING IN THE RIGHT SIDE OF THE FACE INDICATING A "LOWER MOTOR LESION"

TESTING FOR FACIAL NERVE ACTION IN AN **ABNORMAL** PATIENT

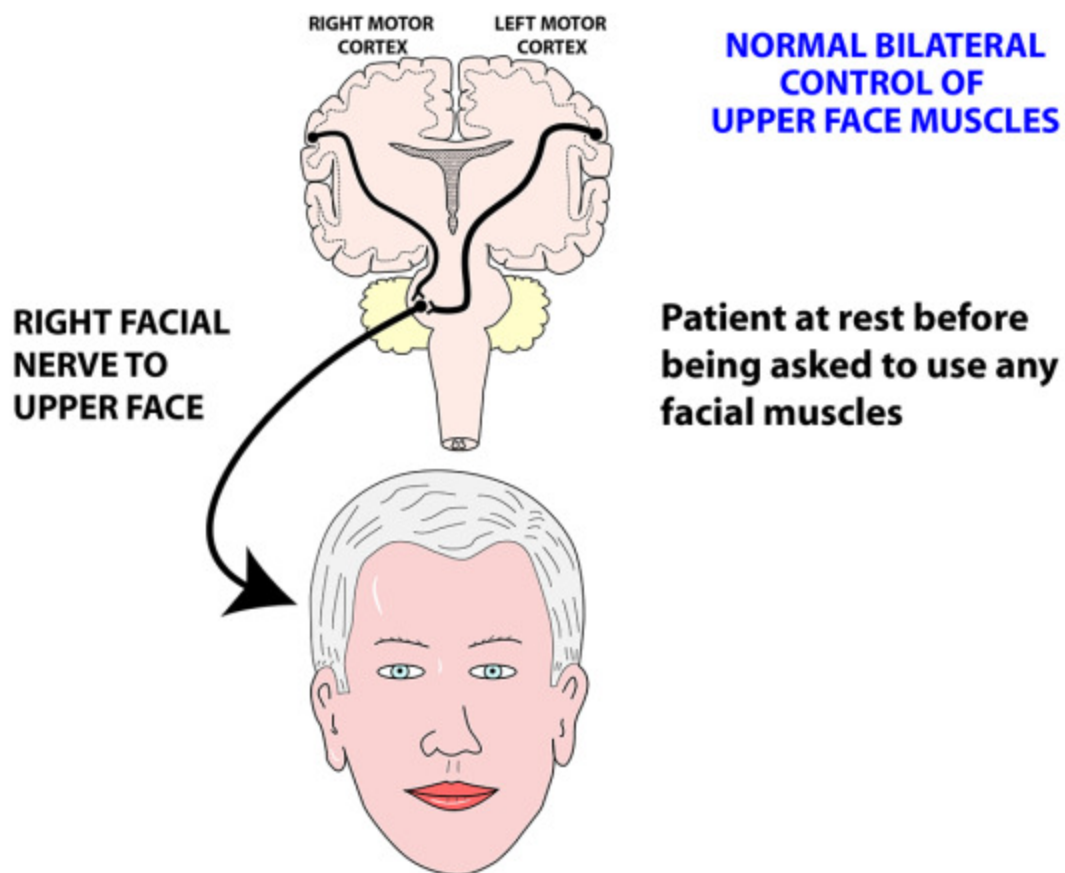
3 functions are tested separately in turn:

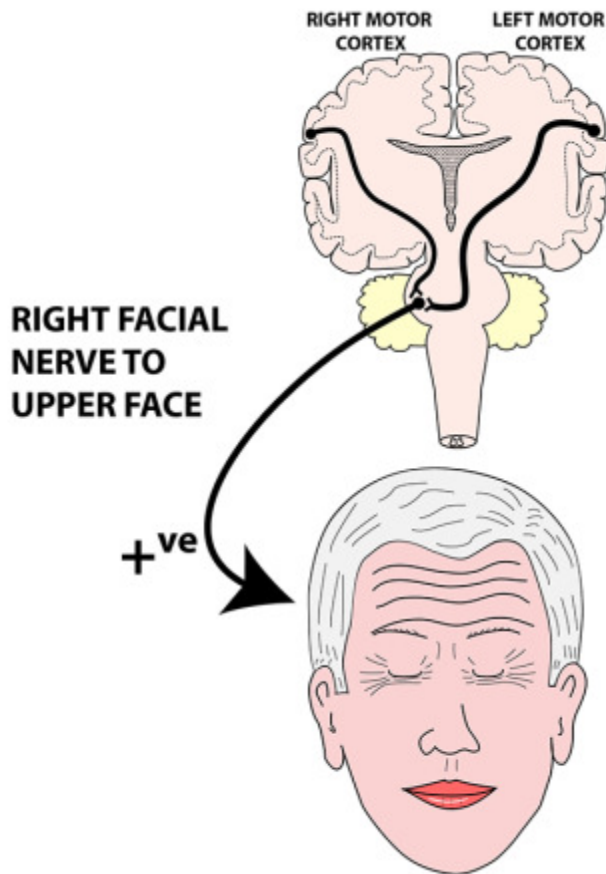


MOVEMENTS OF UPPER FACE ARE NORMAL & SYMMETRICAL BUT NO MOVEMENT IN LOWER FACE INDICATES A "UPPER MOTOR LESION"

VII

WHY IS ONLY THE LOWER FACE AFFECTED IN A "STROKE"? (upper motor neurone lesion)



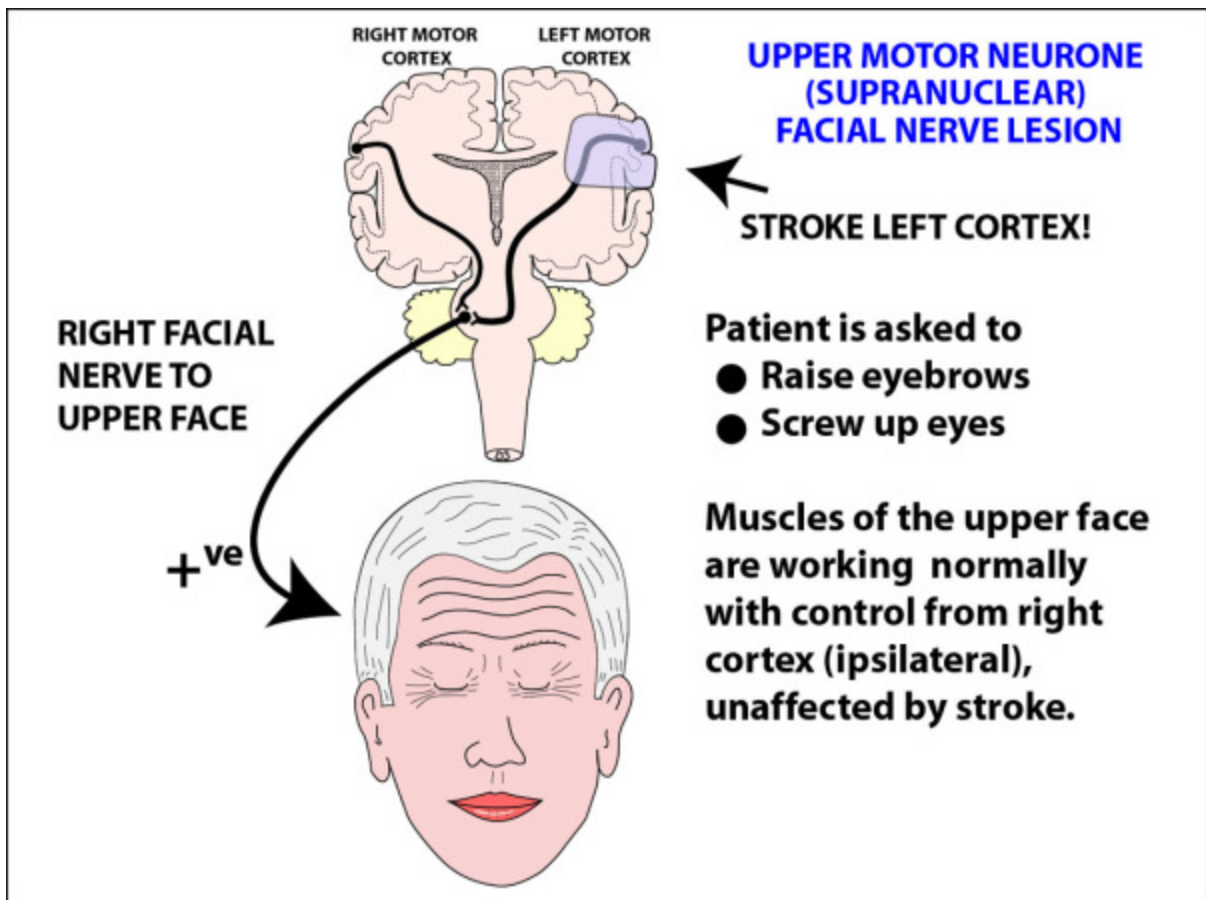


NORMAL BILATERAL CONTROL OF UPPER FACE MUSCLES

Patient is asked to

- Raise eyebrows
- Screw up eyes

Muscles of the upper face are working normally with control from both sides of the cortex (bilateral - ipsilateral and contralateral).



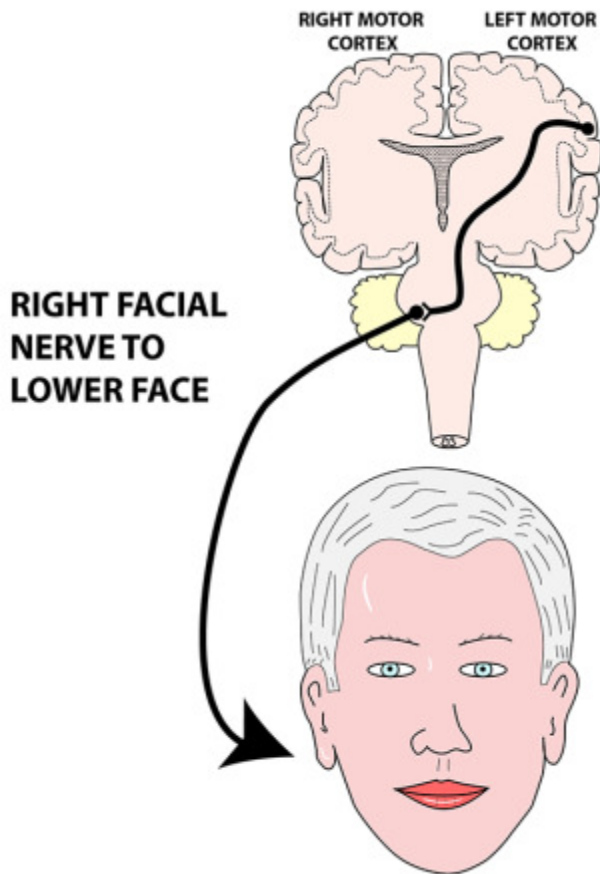
UPPER MOTOR NEURONE (SUPRANUCLEAR) FACIAL NERVE LESION

← STROKE LEFT CORTEX!

Patient is asked to

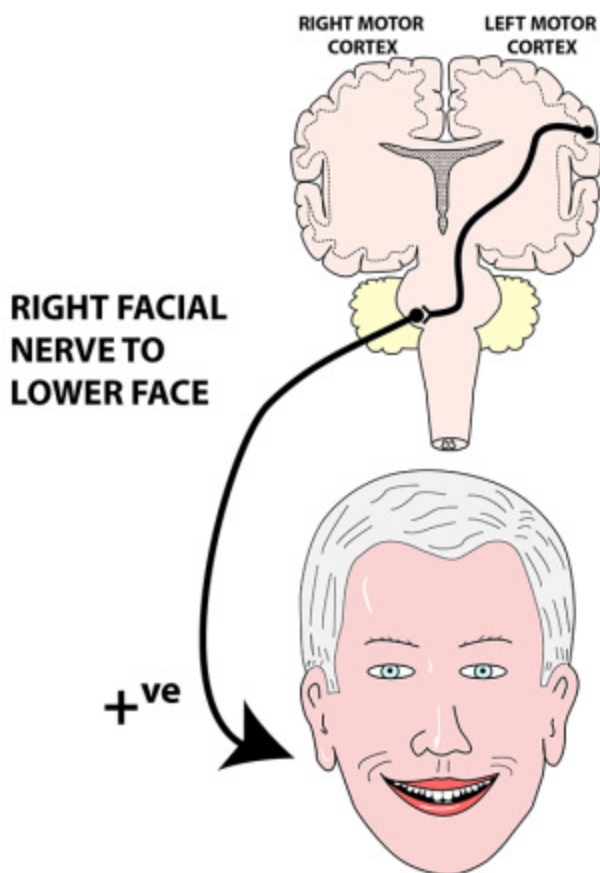
- Raise eyebrows
- Screw up eyes

Muscles of the upper face are working normally with control from right cortex (ipsilateral), unaffected by stroke.



NORMAL UNILATERAL CONTROL OF LOWER FACE MUSCLES

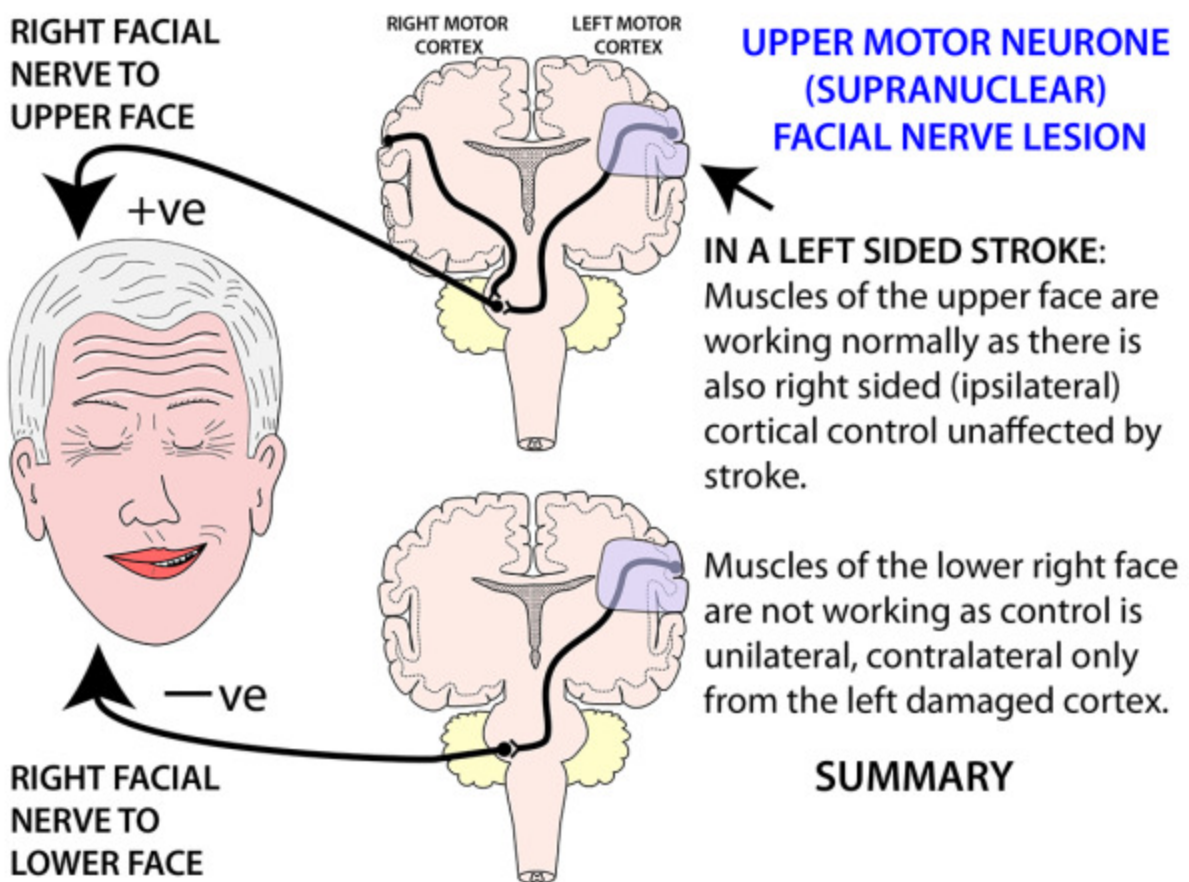
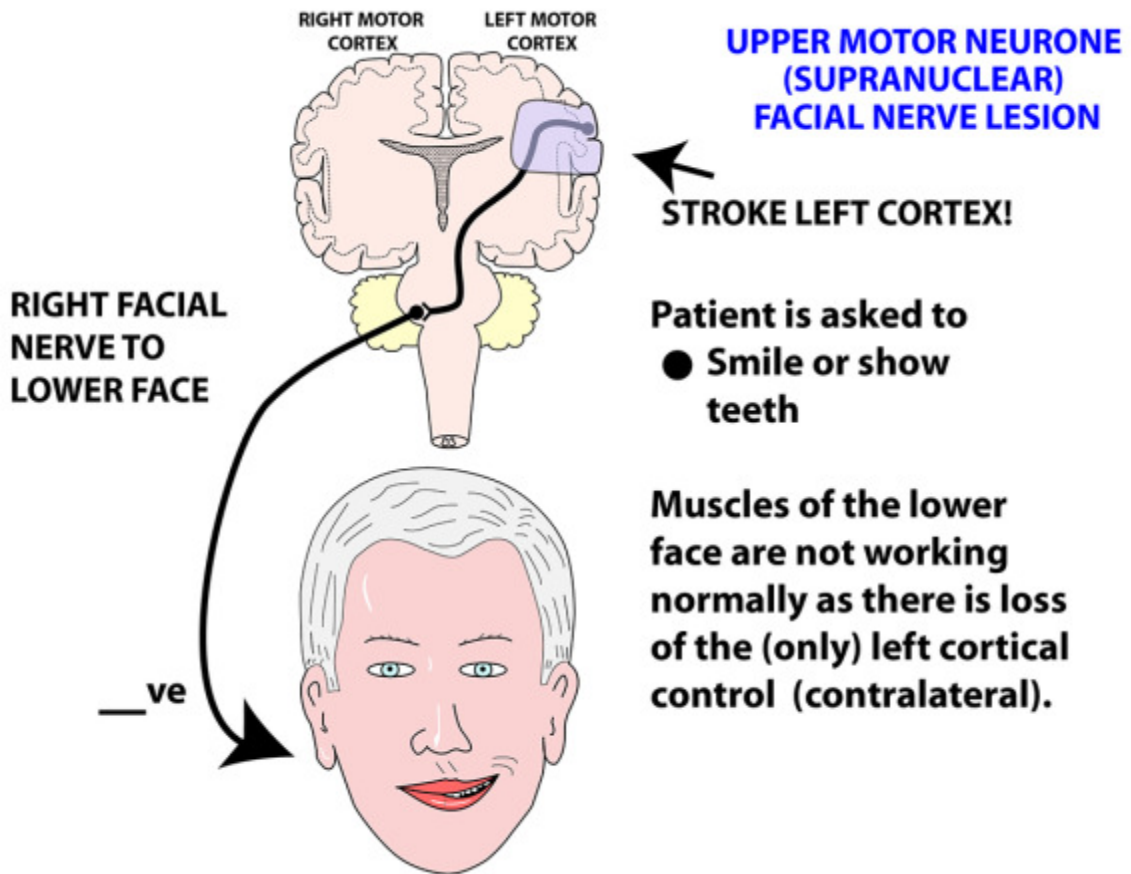
Patient at rest before being asked to use any facial muscles



NORMAL UNILATERAL CONTROL OF LOWER FACE MUSCLES

Patient is asked to
● Smile or show teeth

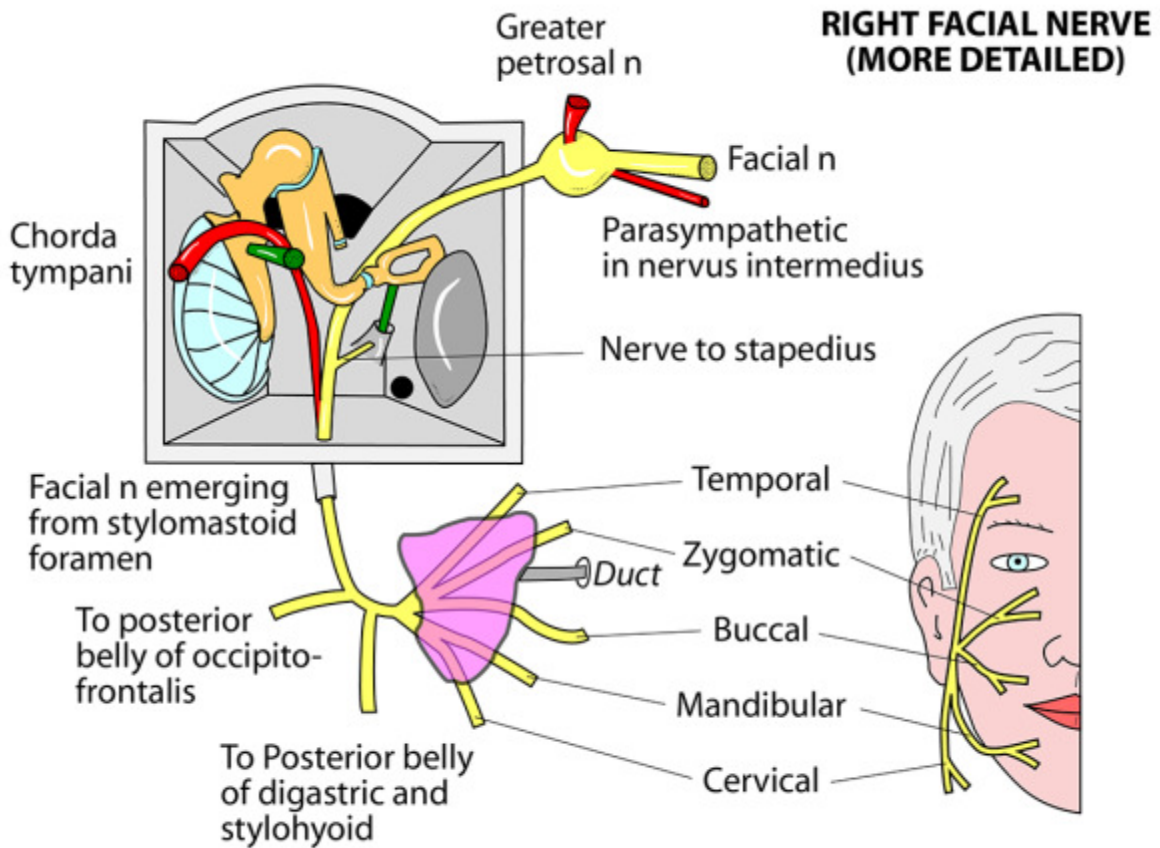
Muscles of the lower face are working normally as there is left cortical control (contralateral).



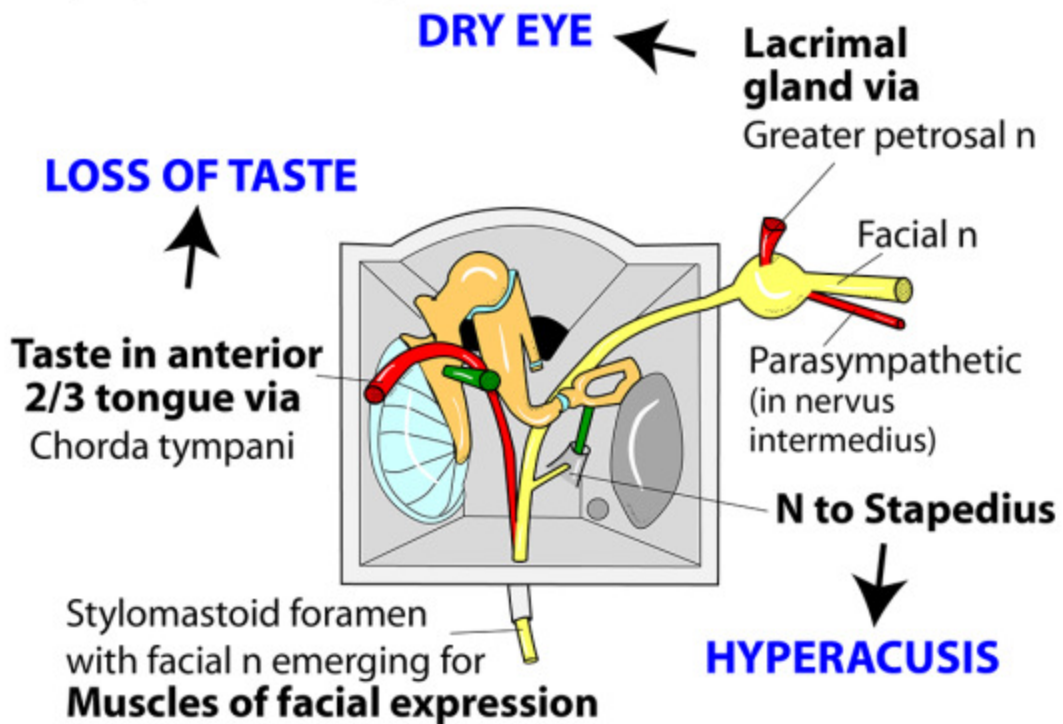
**IDENTIFYING THE SITE
OF THE PROBLEM WHEN
THERE ARE SIGNS OF
A FACIAL NERVE LESION**

**VII
FACIAL NERVE**

- **MUSCLES OF FACIAL EXPRESSION**
 - **CARRIES PARASYMPATHETIC**
 - **QUITE A LOT OF TASTE**
 - **TINY BIT OF SENSATION**
(Ramsay-Hunt Syndrome)



Symptoms and signs related to site of lesion in VII



Symptoms and signs related to site of lesion in VII

A

- Loss of action of all muscles of facial expression
- Loss of taste in half of anterior 2/3 of tongue
- Hyperacusis - loss of stapedius
- Dry eye - lacrimal gland
- i.e. Loss of all fibres

