

Exercise walk-through

3.7

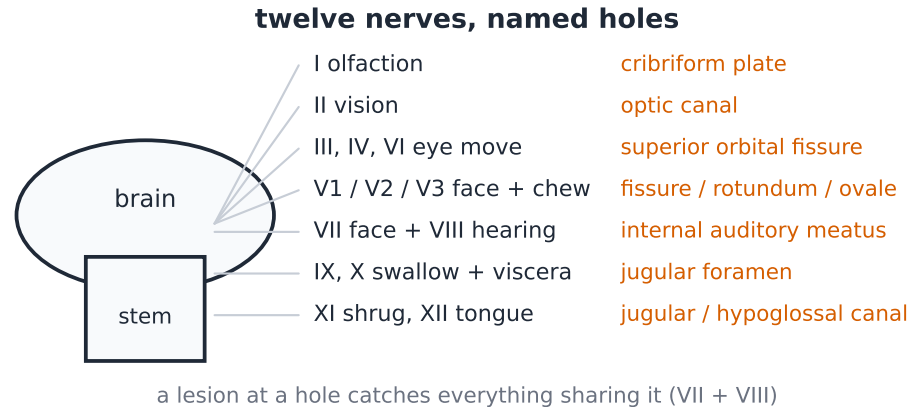
Head and neck

University Medicine

Twelve nerves, named holes

- 1 **Pairs** I smell, II see, III/IV/VI move the eye, V face+chew, VII face+T, VIII hear, IX/X swallow+viscera, XI shrug, XII tongue.
- 2 **Holes** II optic canal; III/IV/VI SOF; V1/V2/V3 fissure/rotundum/ovale; VII+VIII IAM; IX/X jugular; XII hypoglossal.
- 3 **Test** Forehead SPARED = central, INVOLVED = peripheral VII: one muscle test splits emergency from benign.

Twelve nerves with their foramina of exit.



Twelve nerves with their foramina of exit.

Exercises 2.1-2.3

2.1 Which foramen carries IX and X?

[3]

2.2 A patient cannot abduct the eye. Which nerve?

[3]

2.3 Which nerve exits the foramen ovale?

[3]

Exercises 2.1-2.3

2.1 Which foramen carries IX and X? [3]

2.1

- Jugular foramen.
-

2.2 A patient cannot abduct the eye. Which nerve? [3]

2.2

- Abducens (VI).
-

2.3 Which nerve exits the foramen ovale? [3]

2.3

- V3 (mandibular division of trigeminal).

Exercises 3.1-3.2

3.1 Sudden left facial weakness; the patient can raise both eyebrows.

Classify the lesion level with reasoning. State the single muscle test used. List three further peripheral-VII features to seek. [7]

3.2 An apical lung mass (fictional smoker): hand wasting, hoarse voice, droopy left pupil.

Name the three structures compressed. Explain why this corner of anatomy yields the triad. State one further sign of the same triad. [7]

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3.1

- Central (upper motor neuron): forehead has bilateral cortical input, so it survives.
- Test: “raise your eyebrows”.
- Peripheral features to seek: incomplete eye closure, taste loss (anterior two-thirds), hyperacusis, reduced lacrimation.

3.2 An apical lung mass (fictional smoker): hand wasting, hoarse voice, droopy left pupil.

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3.2

- Brachial plexus (C8–T1), left recurrent laryngeal, cervical sympathetic chain.
- The apex crowns the cupola where all three pass within millimetres – one corner, three systems.
- Further: enophthalmos and anhidrosis (Horner’s set).