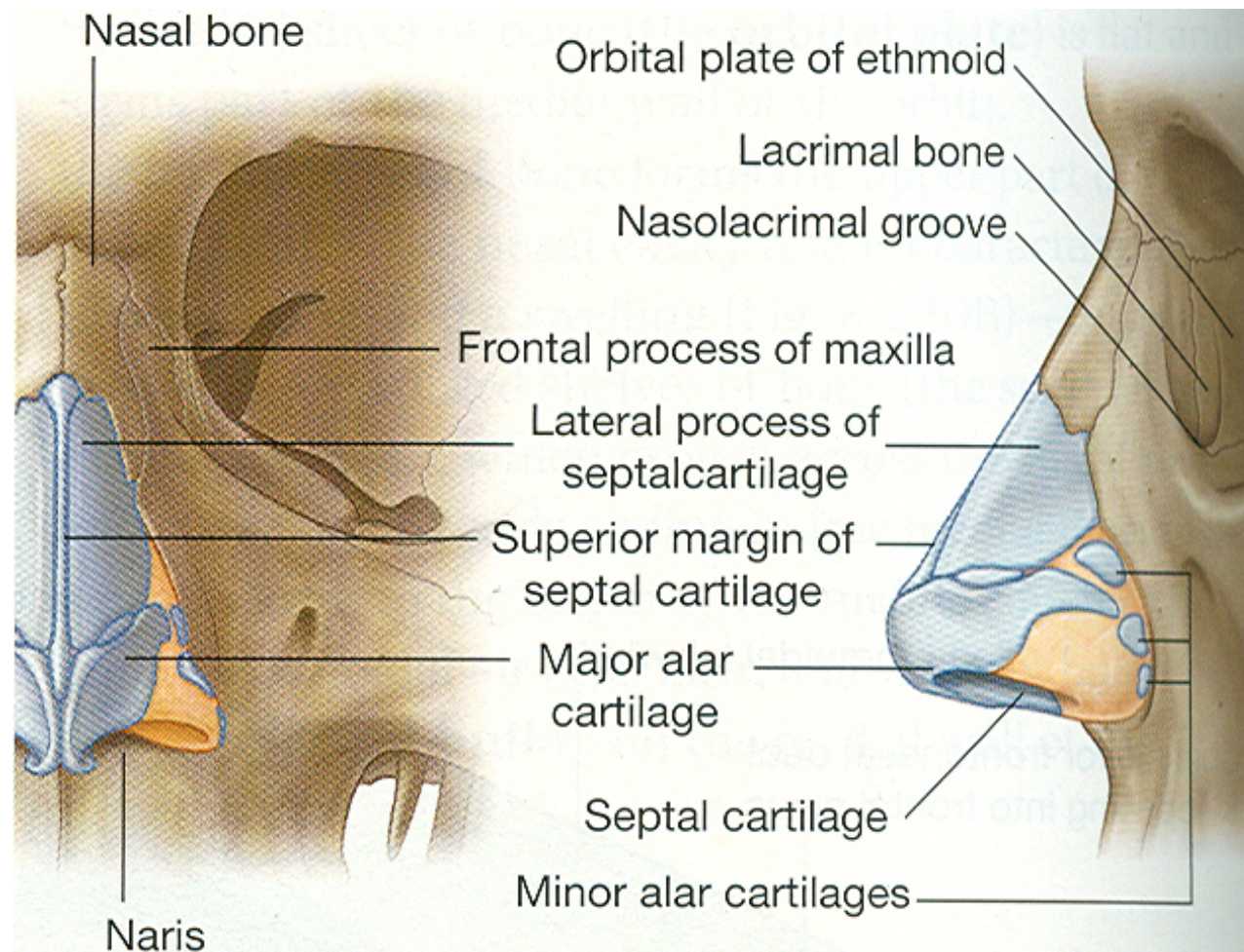
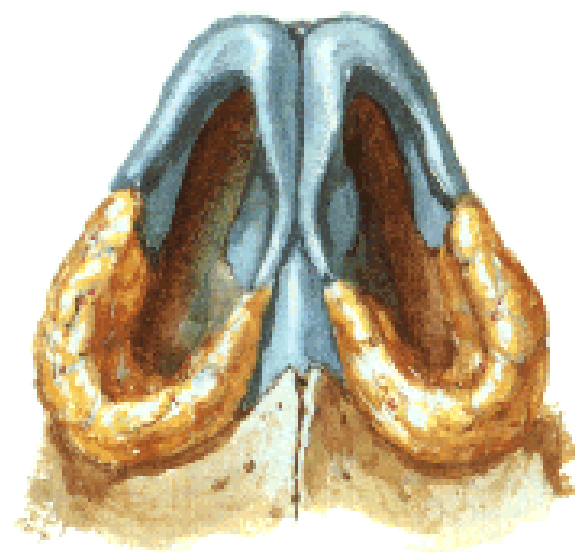
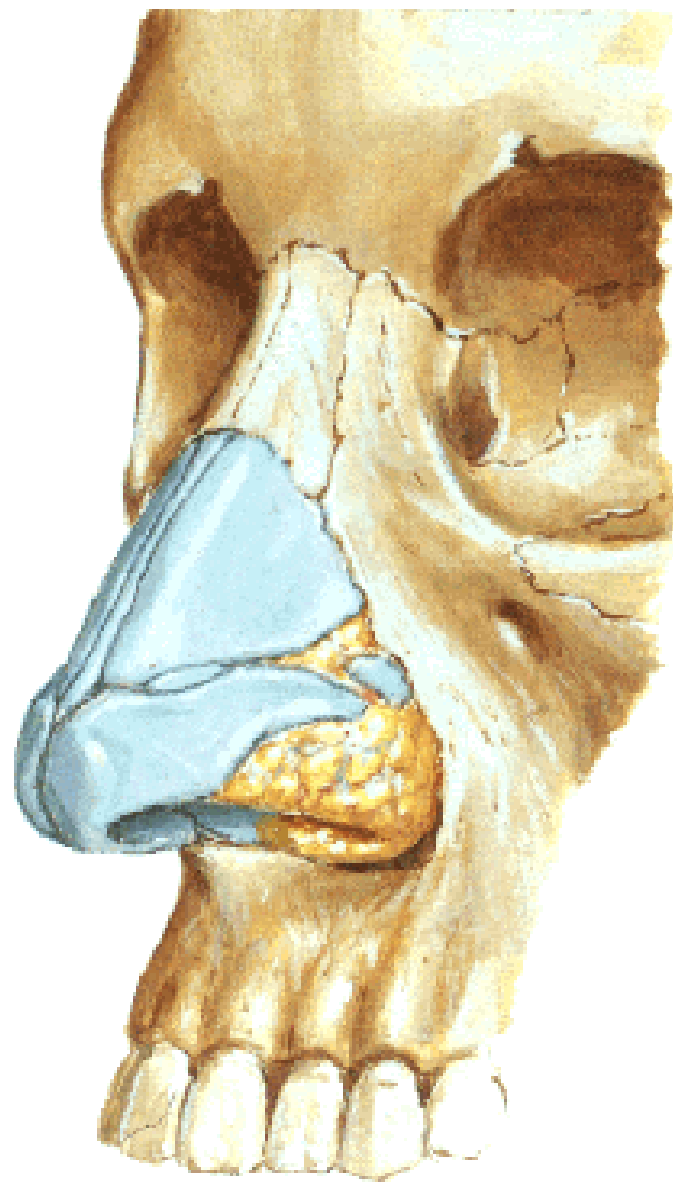
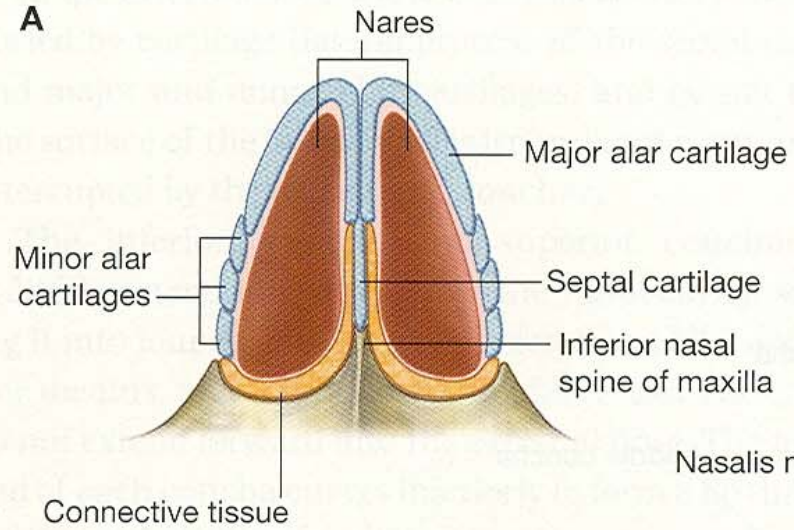
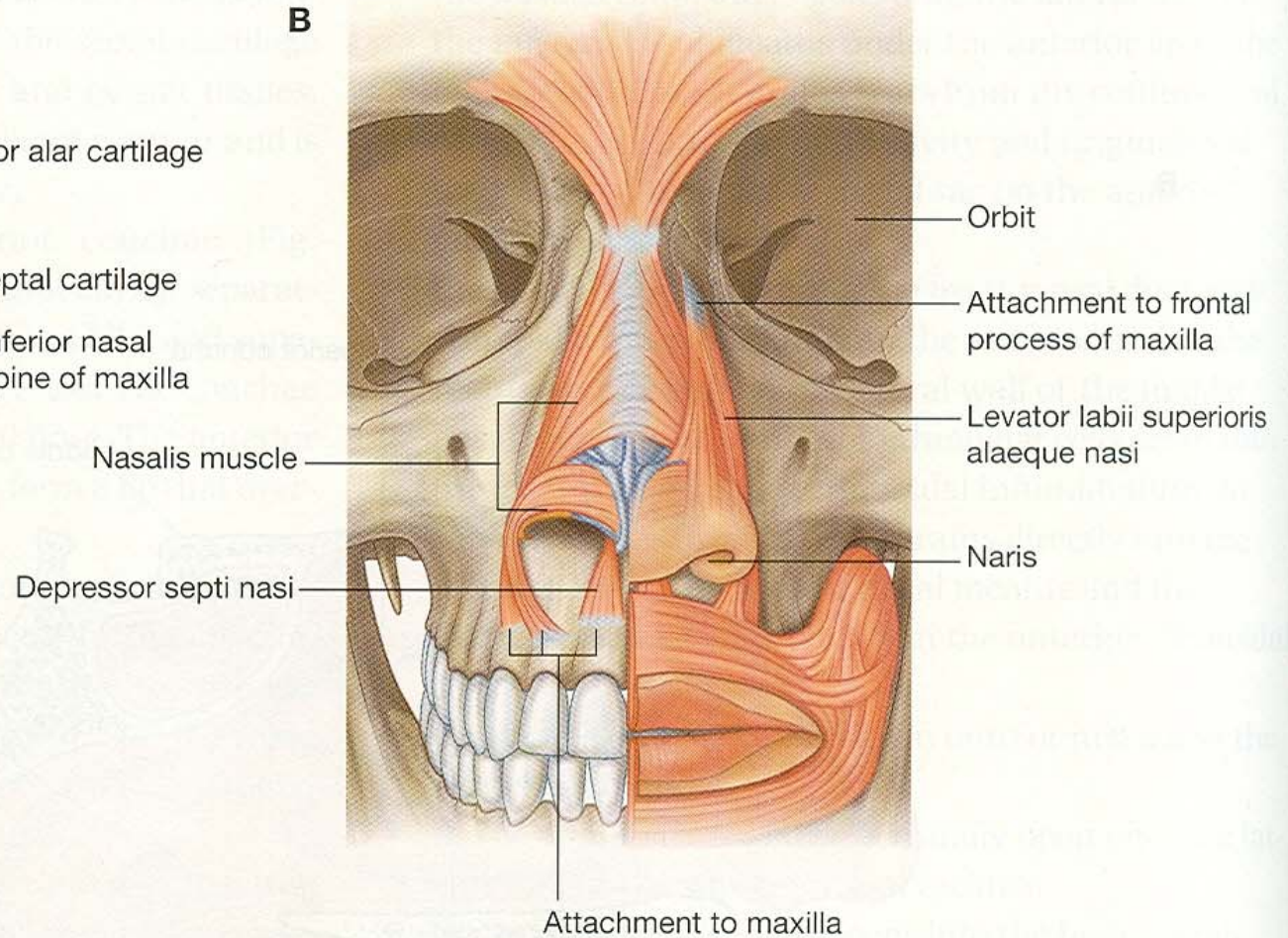






A**B**

NASAL CAVITY

Wedge shaped spaces; 5 cm in height, 5-7 cm in length

Large inferior base- 1-5cm

Narrow superior apex- 1-2 mm

Anterior aperture- External nares- 1.5-2 cm ; 0.5-1 cm (flexible)

posterior nasal apertures (choanae)- 2.5 by 1.3 cm (rigid)

Separated from :
each other- nasal septum
oral cavity-hard palate
cranial cavity-parts of frontal, ethmoid,
sphenoid bones

Lateral to nasal cavity- orbit

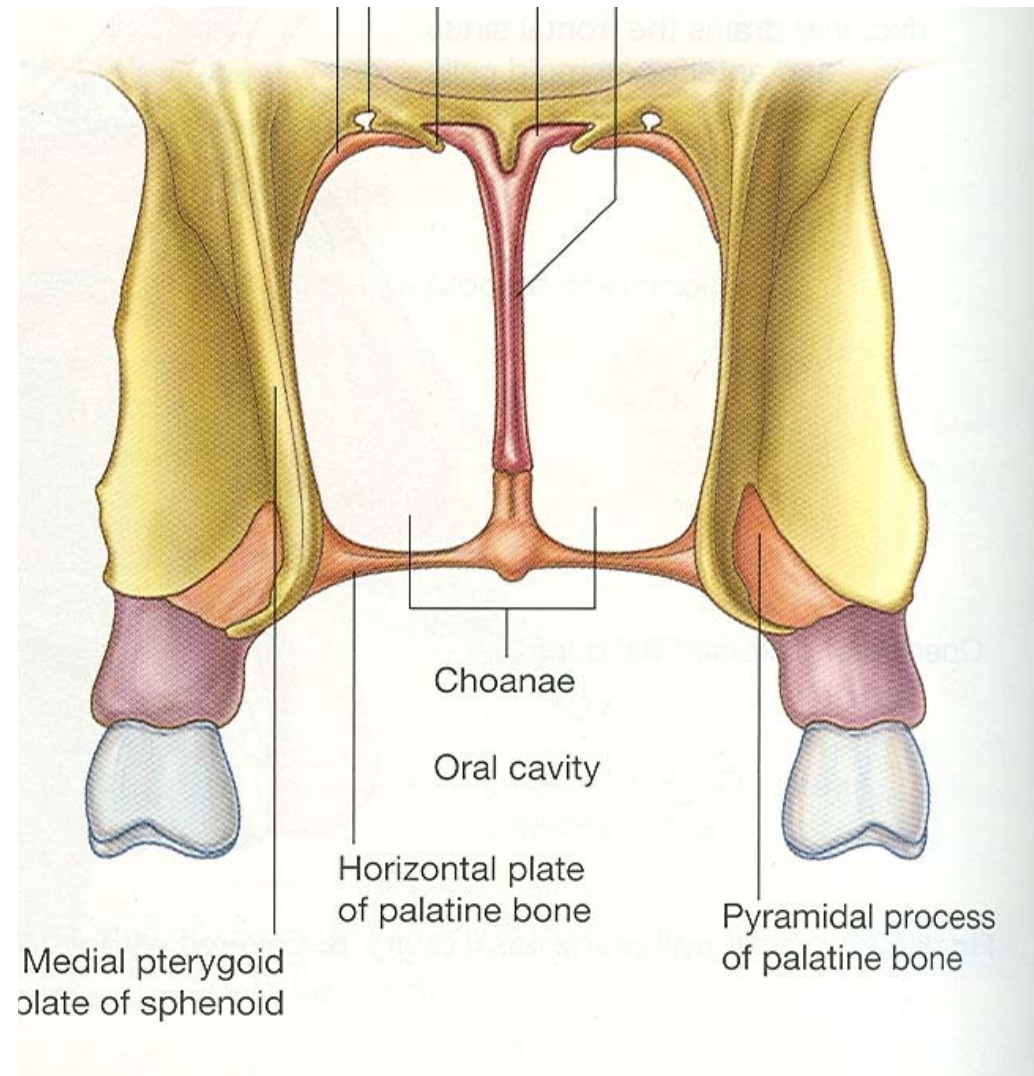
each half- roof , floor

medial wall, lateral wall

three regions- vestibule

respiratory region

olfactory region



Skeletal framework

- **Medial wall** (nasal septum)
 - Anterior - septal cartilage
 - Vomer
 - Perpendicular plate of ethmoid
 - Minor contributions- nasal, frontal, sphenoid, maxilla, palatine bones
- Often deflected
- **Lateral wall** - Maxilla- anteroinferiorly
 - Perpendicular plate of palatine
 - Ethmoid labyrinth- superiorly & uncinate process
 - Other bones- nasal, frontal process of maxilla, lacrimal
 - Irregular projections- three conchae
 - Superior concha- shortest, shallowest
 - Middle concha- large, articulates with palatine
 - Inferior concha- independent bone, articulates with maxilla

Skeletal framework-contd.

- Floor:

Smooth, concave, wider than roof

Palatine process of maxilla

Horizontal plate of palatine (hard palate)

Soft tissue

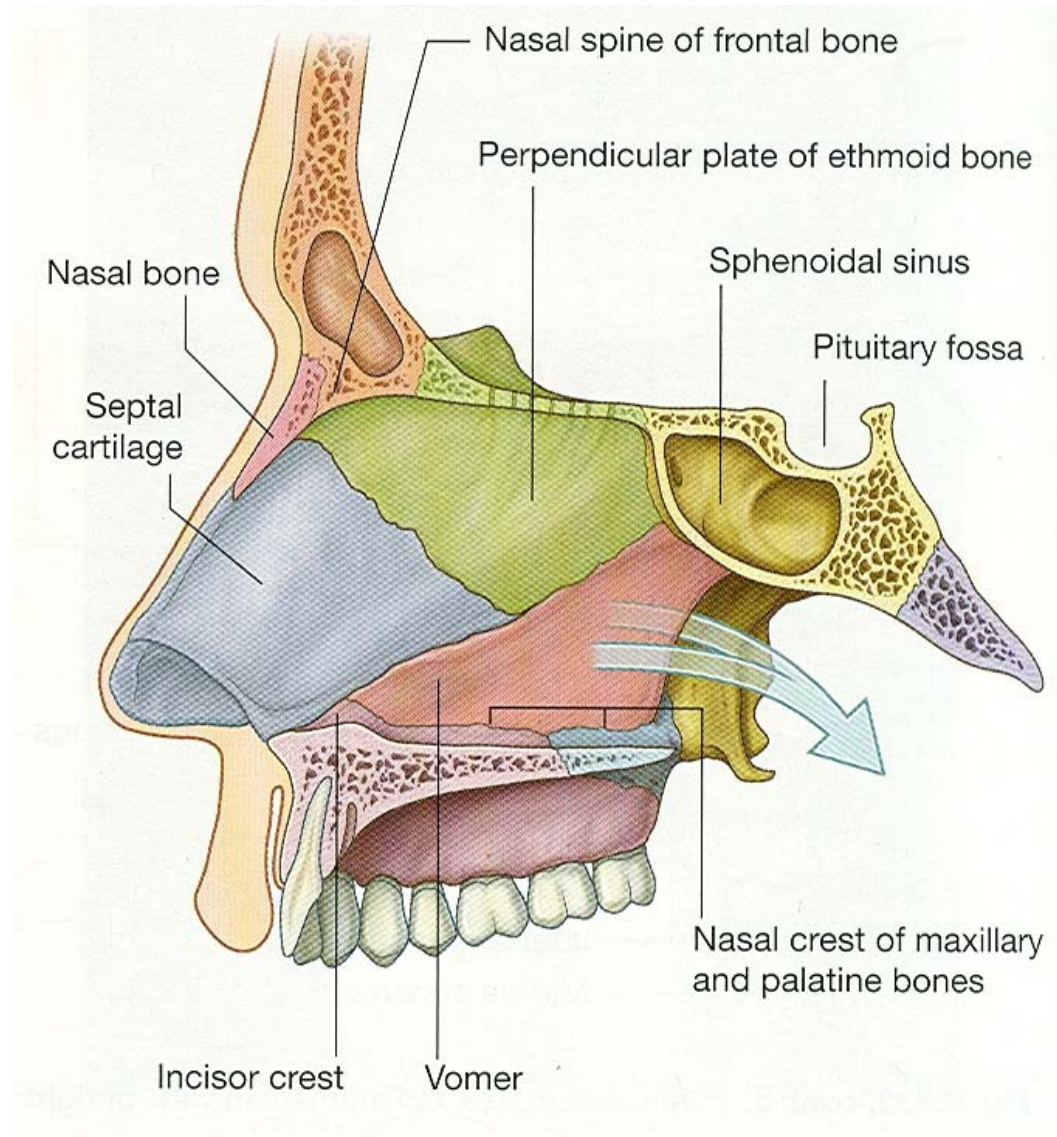
- Roof: narrow, highest in the center

Cribriform plate of ethmoid

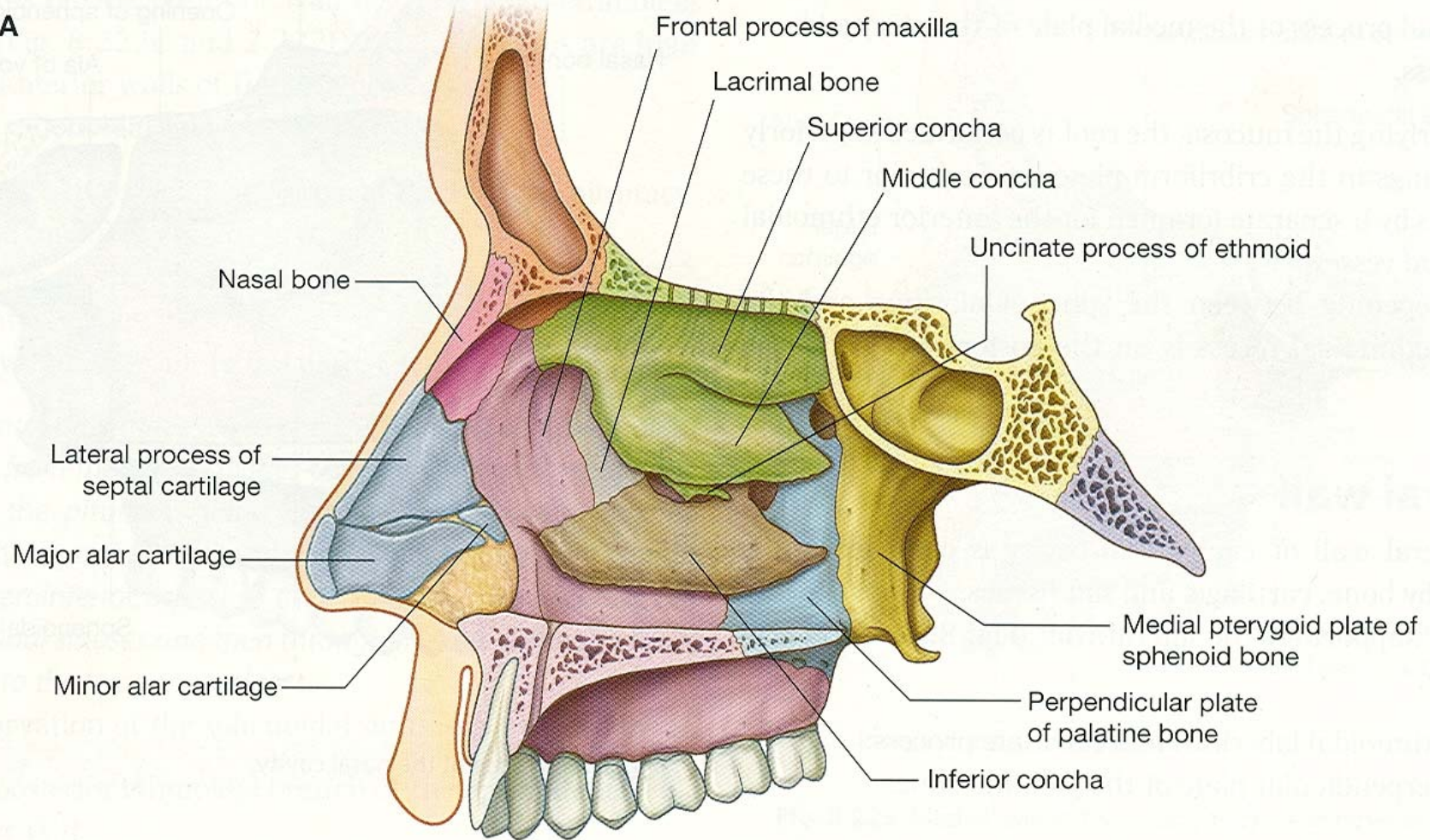
Anteriorly- nasal spine of frontal, nasal bones, septal cartilage, major alar cartilage

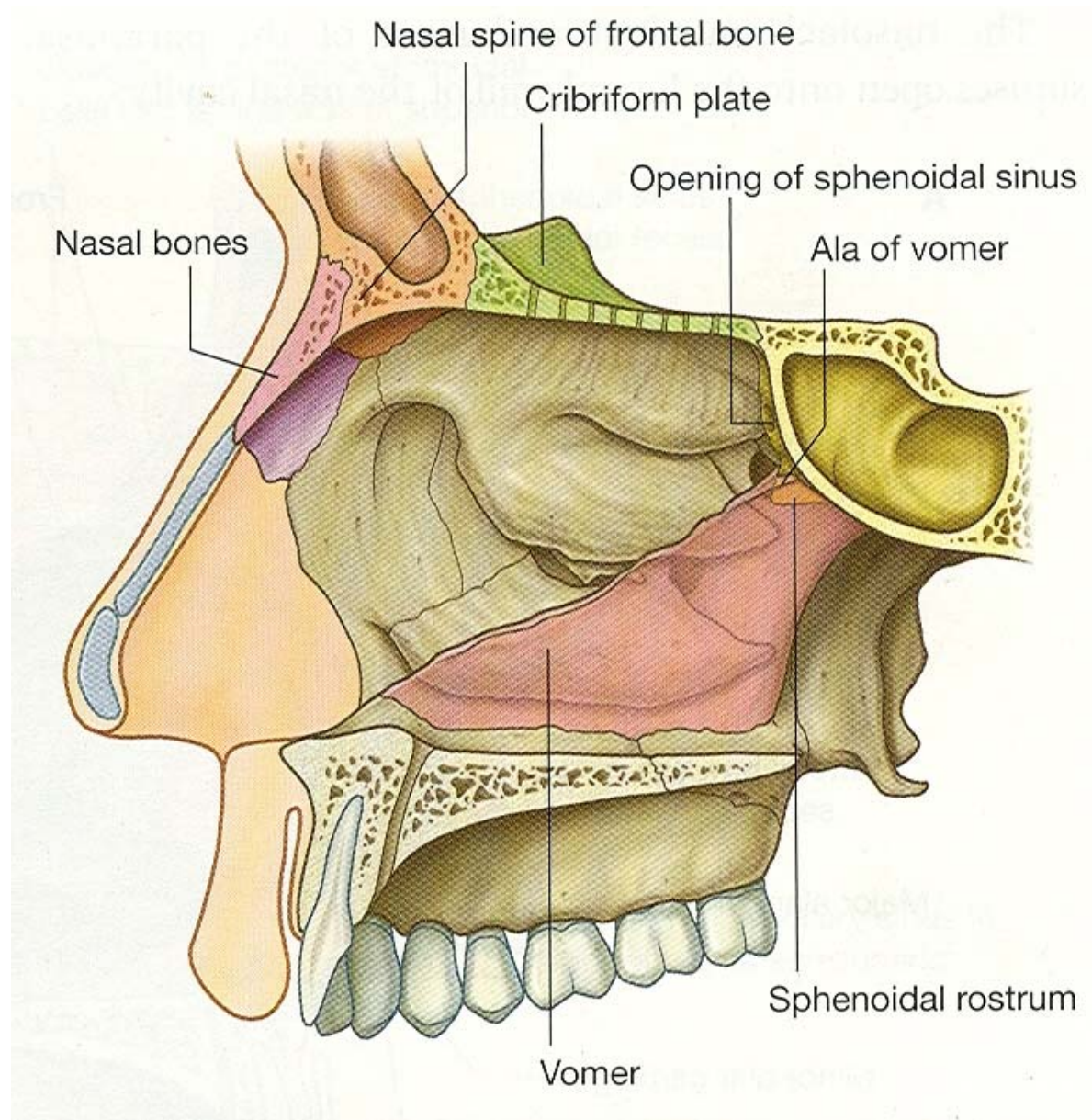
Posteriorly: sphenoid, ala of vomer, palatine, medial pterygoid plate

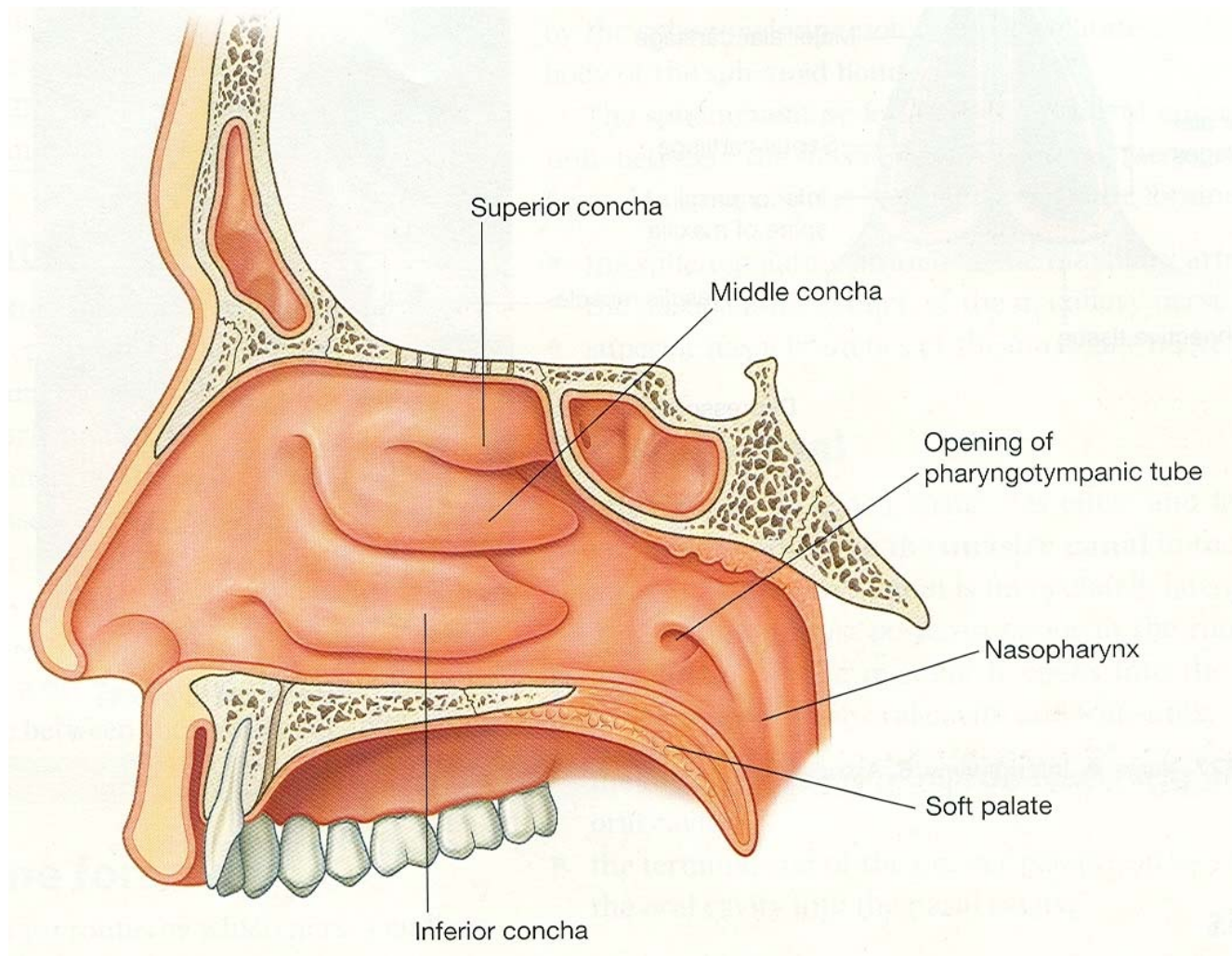
Roof is perforated by openings in the cribriform plate and a separate foramen for anterior ethmoidal Ns & Vs.



A







Lateral wall

- Corresponding meatuses
- Sphenoethmoidal recess
- Superior meatus- posterior ethmoidal cells
- Middle meatus- continues atrium of middle meatus,

Features- bulla ethmoidalis, hiatus semilunaris, ethmoidal infundibulum

Openings of sinuses- anterior and middle ethmoidal, frontal, maxillary

- Inferior meatus- nasolacrimal duct

C

Infundibulum opening of frontonasal duct that drains the frontal sinus and anterior ethmoid cells

Opening of middle ethmoidal cells onto bulla ethmoidalis

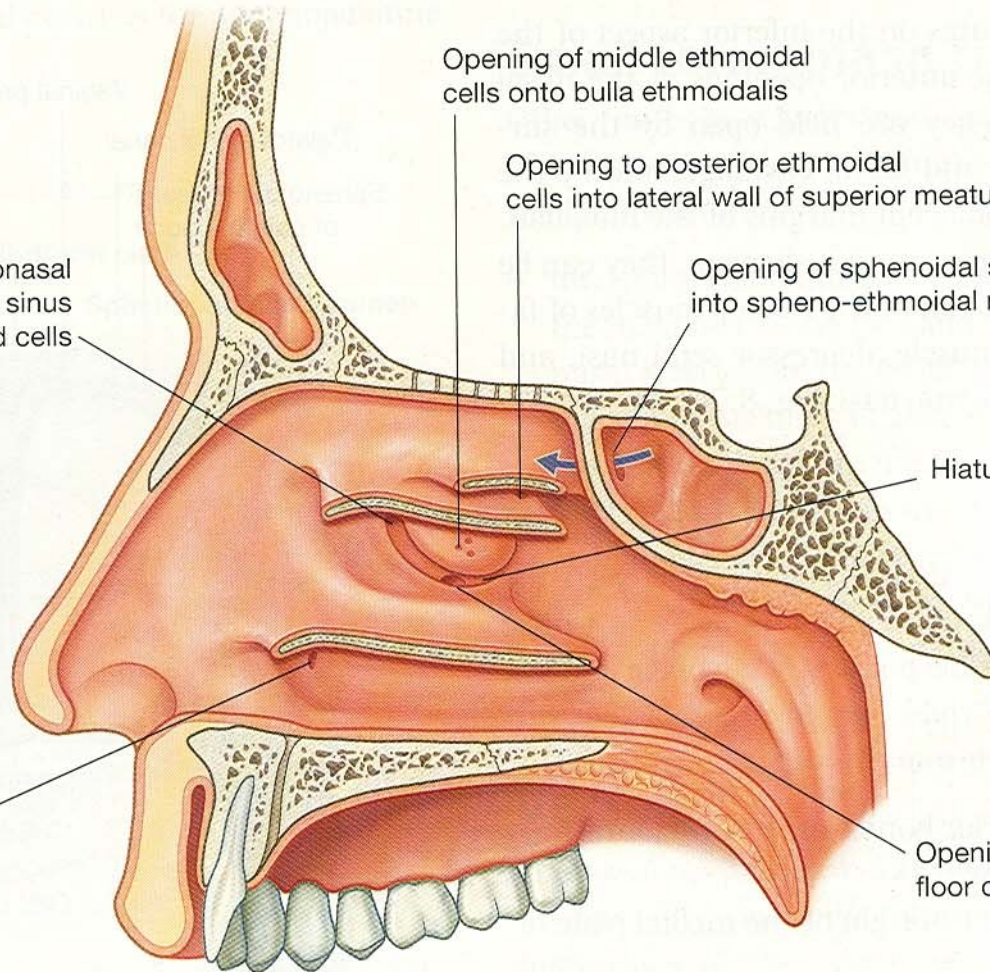
Opening to posterior ethmoidal cells into lateral wall of superior meatus

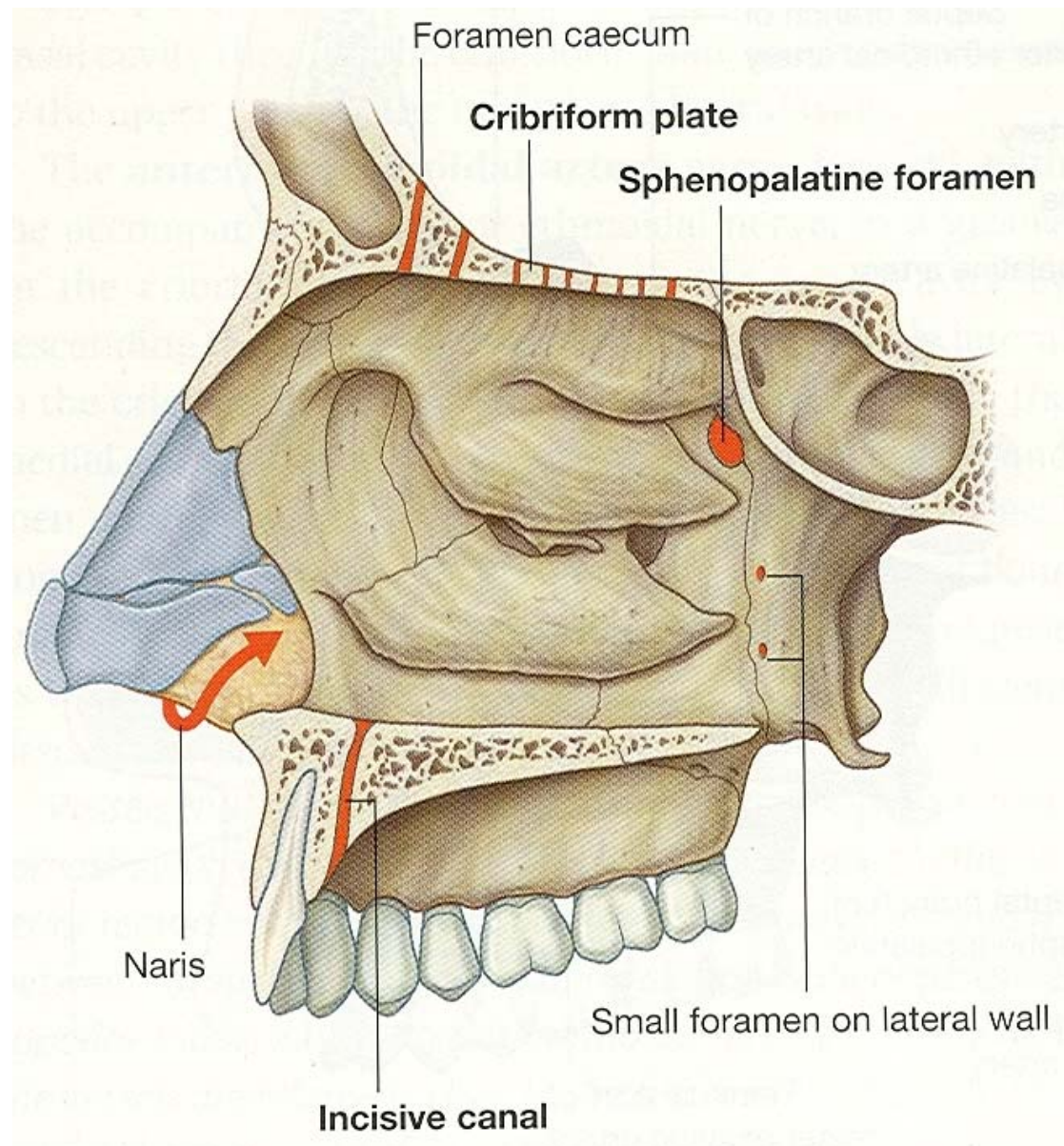
Opening of sphenoidal sinus into spheno-ethmoidal recess

Hiatus semilunaris

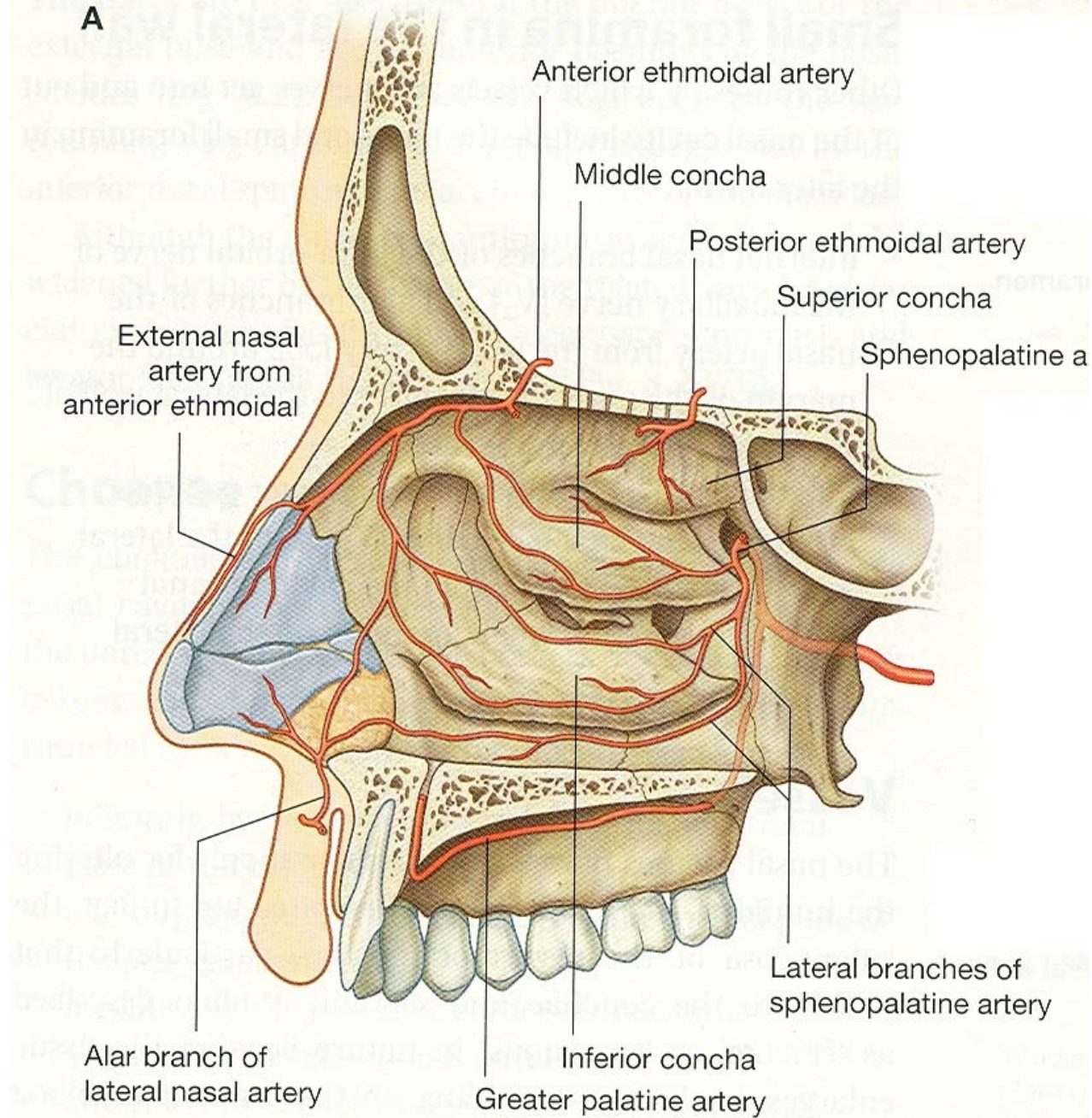
Opening of nasolacrimal duct

Opening of maxillary sinus in floor of hiatus semilunaris

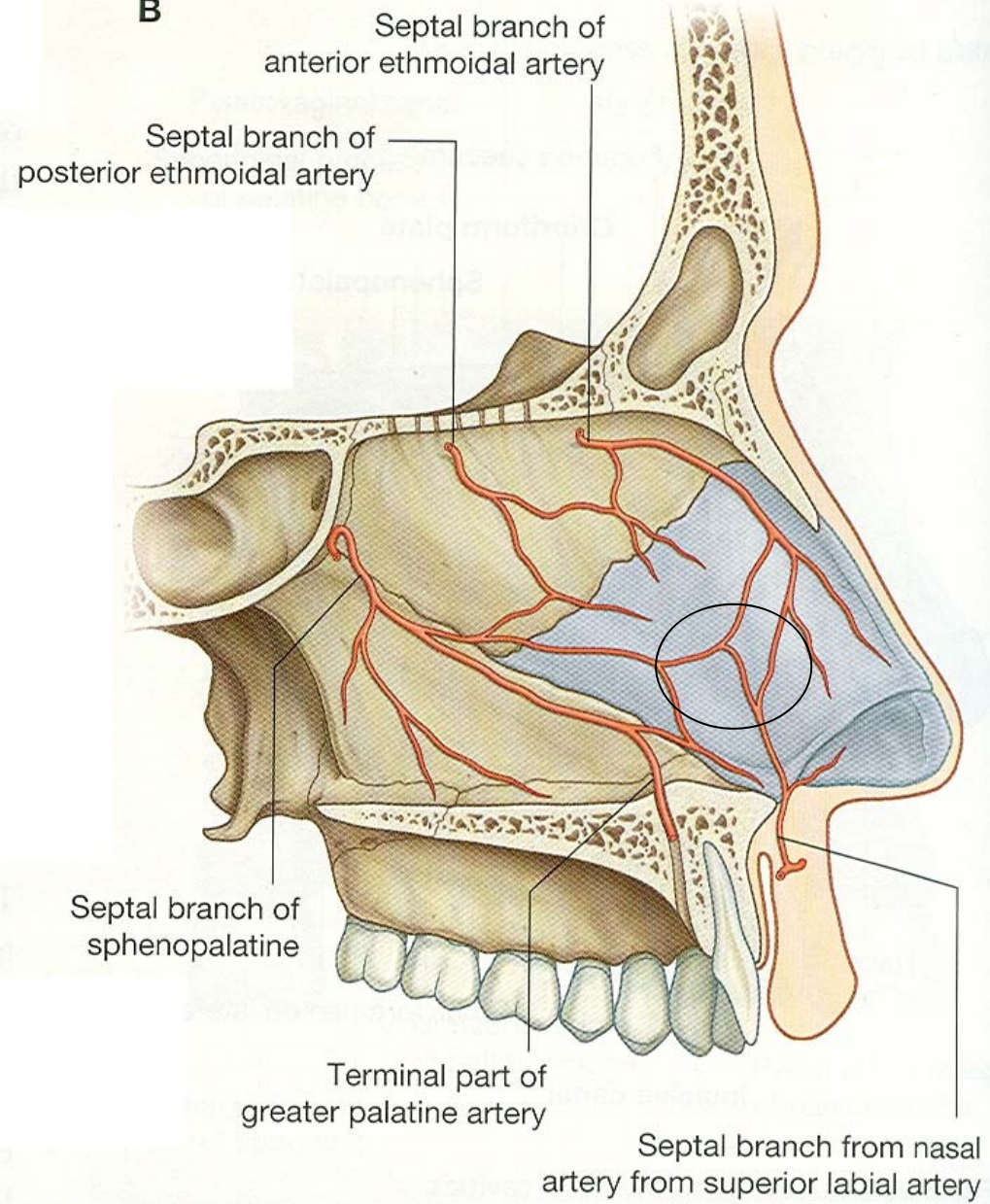


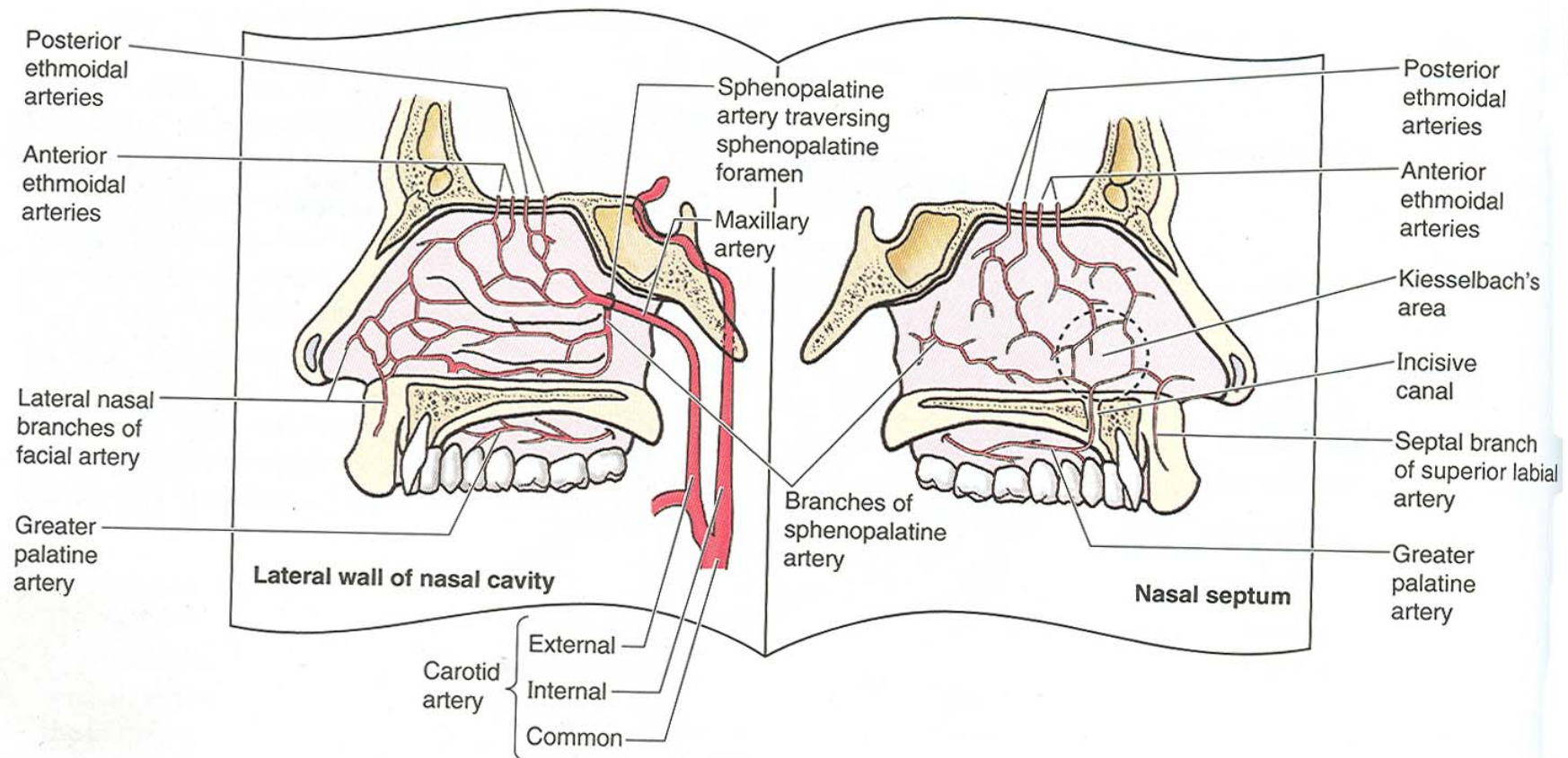


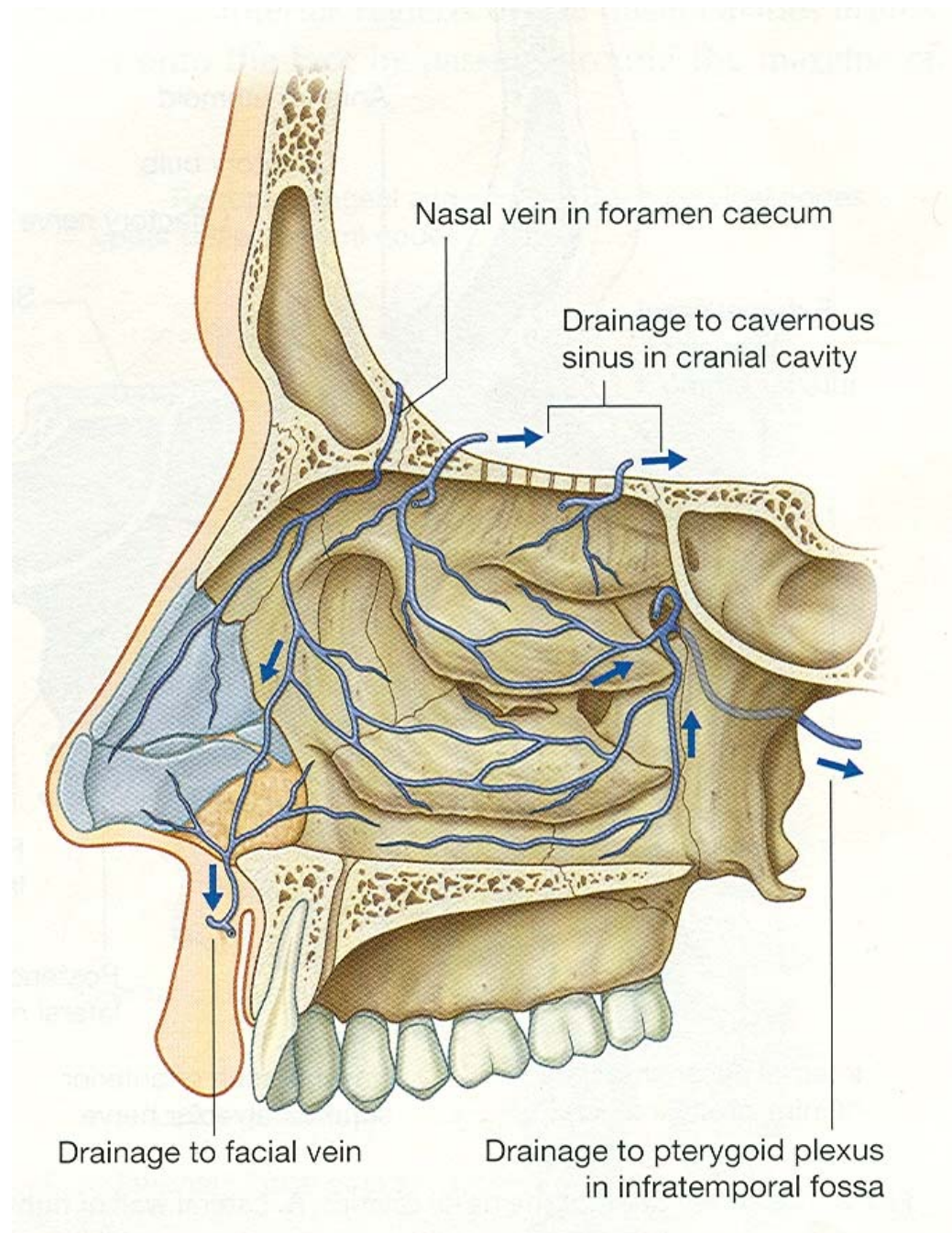
A

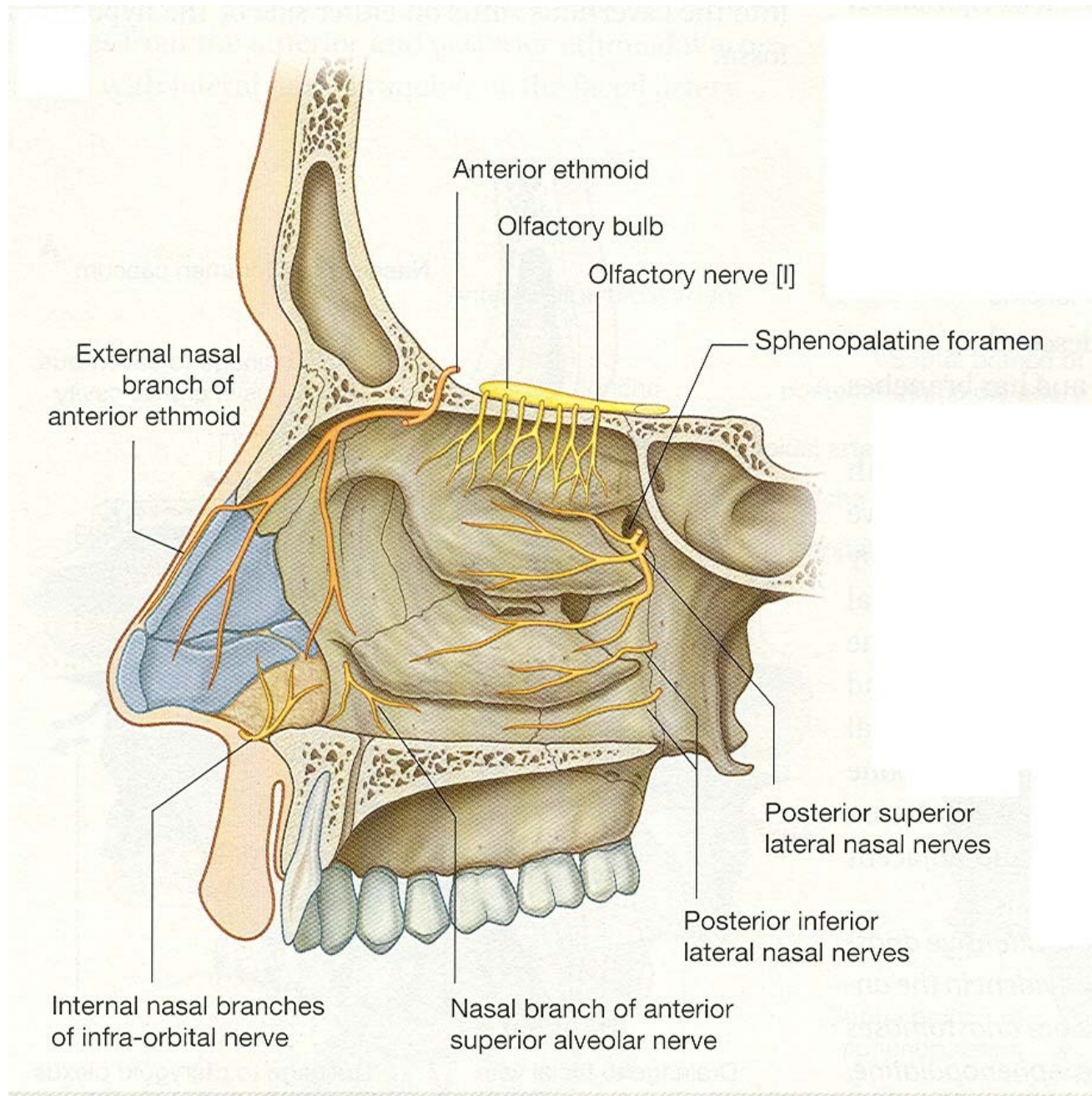


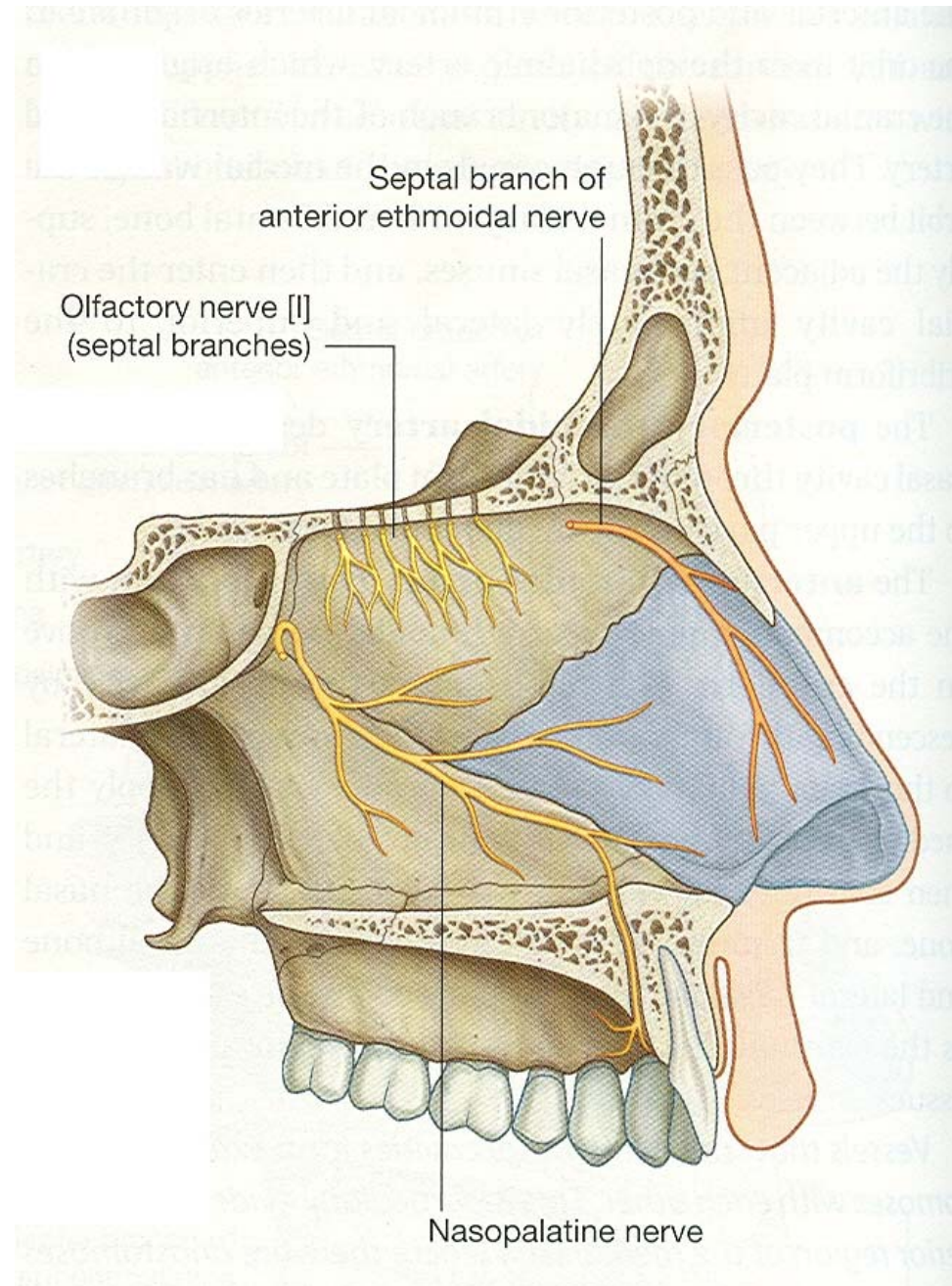
B



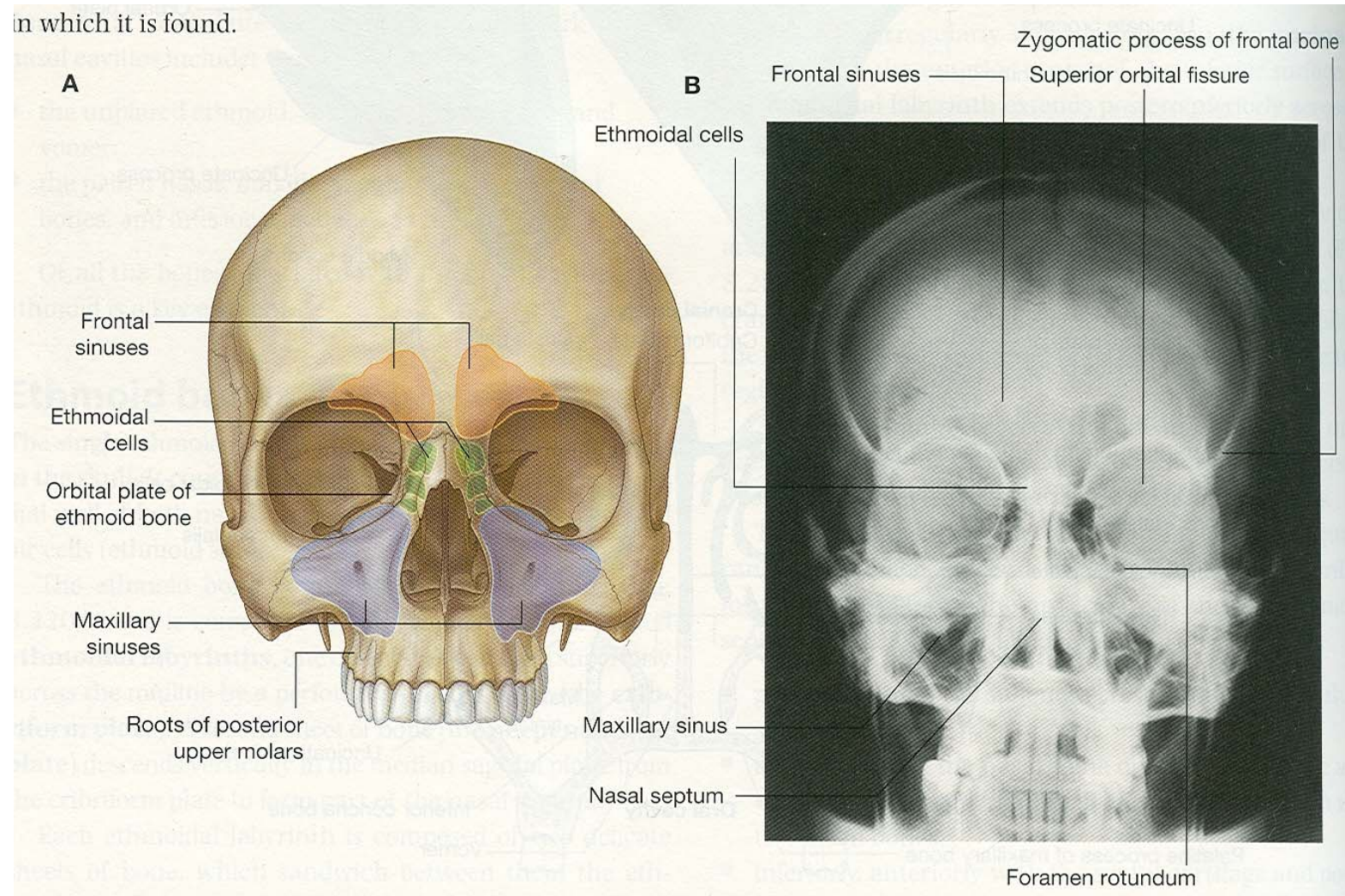


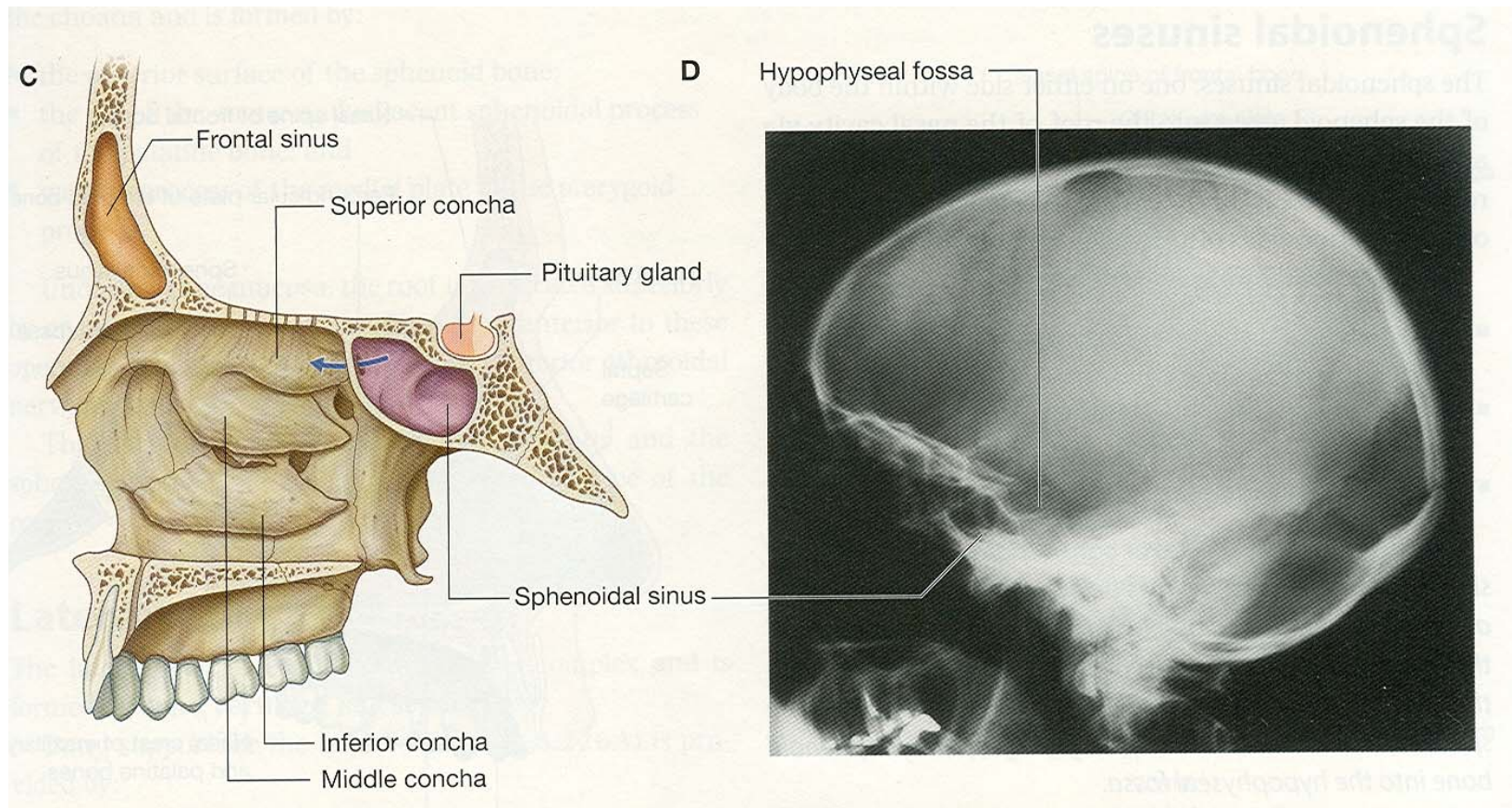


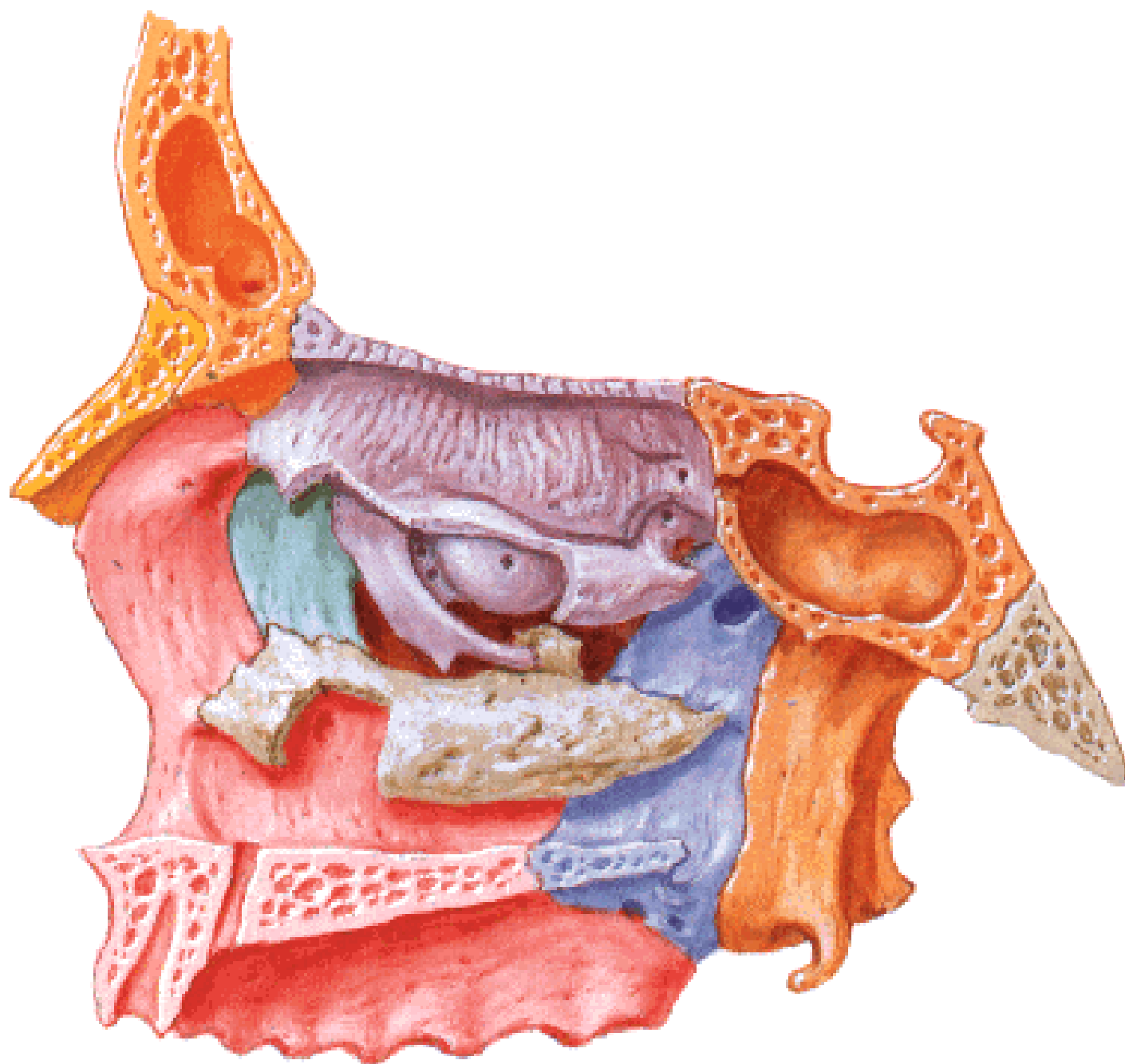




n which it is found.







Paranasal Sinuses

- **Allow equilibration of air and movement of mucous**
- **All open in to nasal cavity**
- **Rudimentary/ absent at birth; Variable size, usually asymmetrical**
- **FRONTAL: posterior to supercilliary arches, 3 cms above nasion**

**junction of medial 1/3 and lateral 2/3 of
supra orbital margin**

3.2x2.6x1.8 cm

opening- ethmoidal infundibulum

**arterial supply- supraorbital & anterior
ethmoidal**

nerve supply- supraorbital nerve

ETHMOIDAL: 3-18 in number

anterior (infundibular)-11; middle (bullar)- 3

posterior – 1-7

arterial supply- sphenopalatine & anterior & posterior ethmoidal

nerve supply- anterior & posterior ethmoidal

orbital branch of pterygopalatine ganglion

SPHENOIDAL: Posterior to upper part of nasal cavity

above- optic chiasma & pituitary gland

sides- ICA, cavernous sinus

2x 1.8x2.2 cm

opening- sphenoidal recess

arterial & nerve supply- posterior ethmoidal A & nerve

MAXILLARY: Largest, pyramidal

Base- lateral wall of nasal cavity

Apex- zygomatic process of maxilla

Roof- floor of orbit

Floor- alveolar process of maxilla (1.5cm below nasal floor)

3.5x2.5x3.2 cm

Full size- after eruption of permanent teeth

Opening- hiatus semilunaris

A. supply- facial, supraorbital, greater palatine

N. supply- Infraorbital, anterior, middle & post. Sup. alveolar

Clinical anatomy

- Sinusitis
- Spread of infection
- Drainage
- Diagnosis- touch, transillumination, radiography
- Nasal cavity: Rhinitis
 - Impaction of foreign body
 - Epistaxis (Little's area)
 - Deflected nasal septum
 - Cleft palate