




MAXILLA

Upper jaw



- 
- **Anatomy**
 - **Clinical notes**
 - **Dentoalveolar topography**
 - **Nerve and blood supply**



- **CORPUS MAXILLAE**
MARGO
INFRAORBITALIS

FOR. INFRAORBITALE

FOSSA CANINA

FOSSA INCISIVA

INCISURA NASALIS

- **PR. ALVEOLARIS**
JUGA ALVEOLARIA

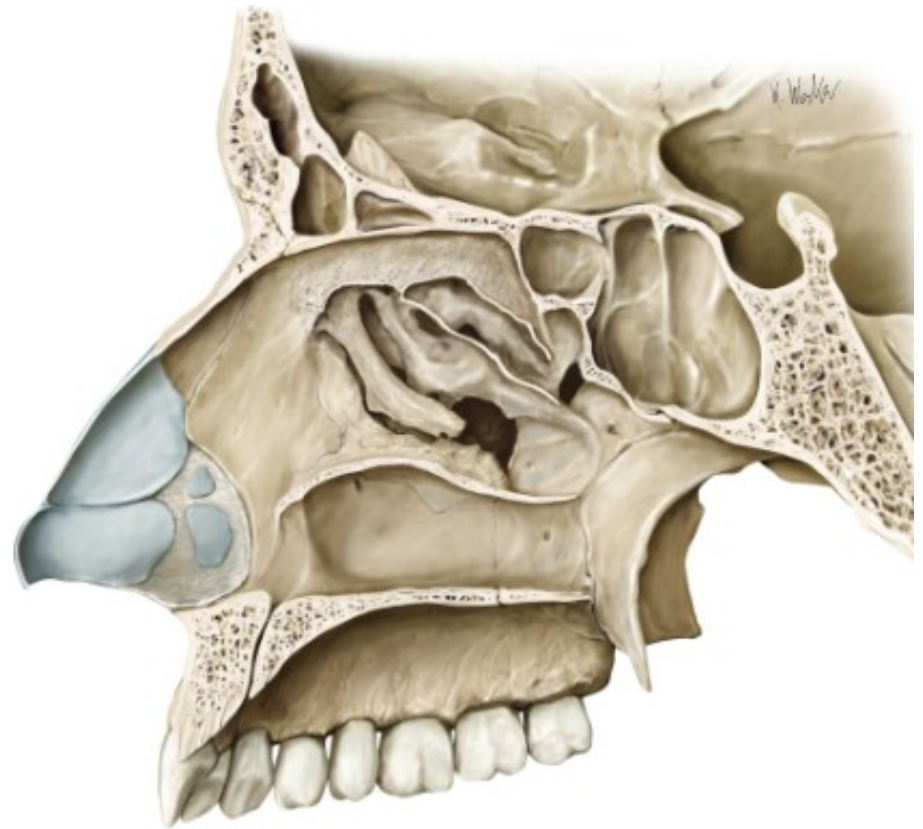
- **PR. FRONTALIS**

CRISTA LACRIMALIS
ANT.

SULCUS LACRIMALIS

- **PR. ZYGOMATICUS**

Sinus maxillaris - foramina accessoria



Below pr. uncinatus from the medial wall of sinus the collagenous tissue = **fontanella ant. et post.** in which **for. accessoria** may be occur

25-30%



- Solitary or multiple
- Congenital or secondary to disease process

Sinus maxillaris – decrease of floor



The toothed jaw

Variable layer of spongy bone between sinus and roots of teeth



The edentulous jaw

CAVE!

Opening of sinus
maxillaris

Sinus maxillaris - septa

Primary:

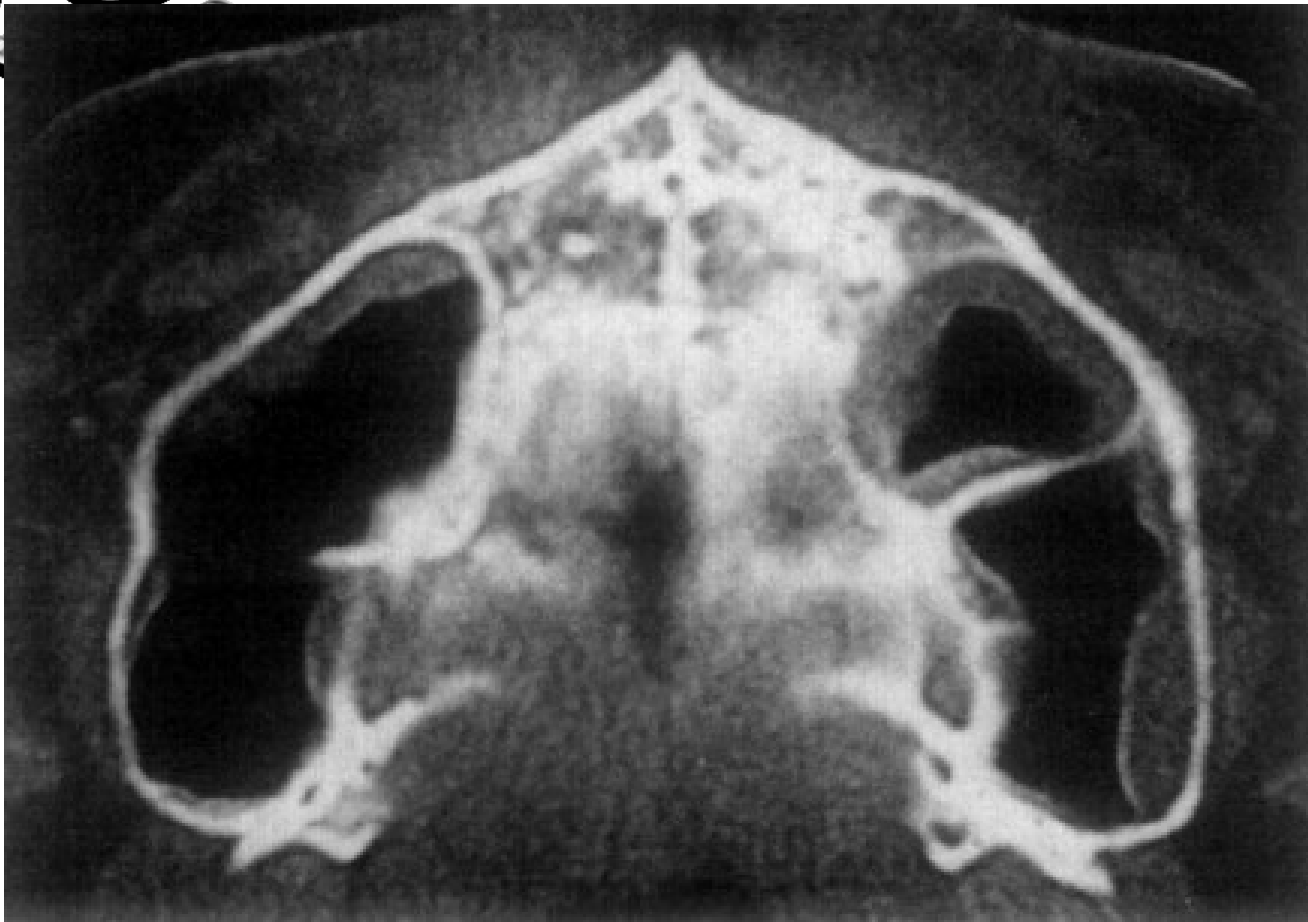
arising from the development of the maxilla

Secondary:

arising from the pneumatization of the sinus floor following tooth septa



25% - 35%



CAVE!

- The separately maxillary sinus puncture
- Dental implants

Corpus maxillae - facies ant. (fossa canina)



Caldwell-Luc antrostomy



Corpus maxillae - facies post. (tuber maxillae)



CAVE!

- Alveolar foramens:
a.,v.,n. alveolaris sup.
post. - local anesthesia
- Thin bone → during
molar teeth extraction
can occur maxillary
tuberosity fractures

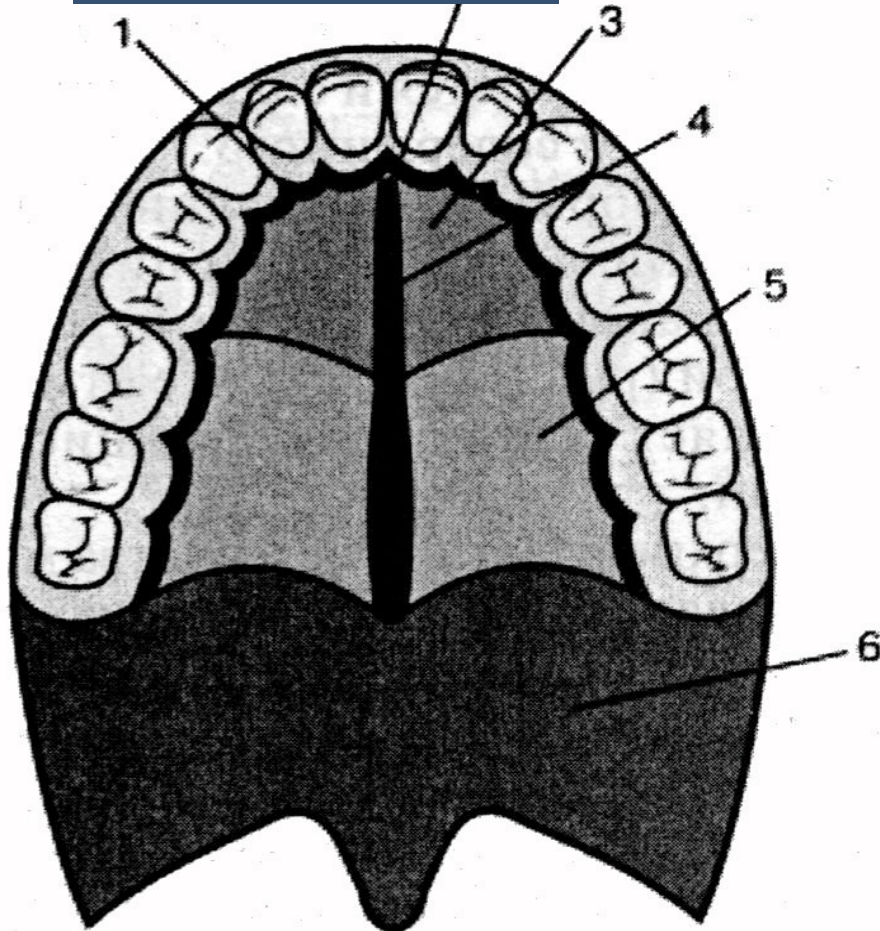
Corpus maxillae – fac. orbitalis – infraorbital canal



CAVE !

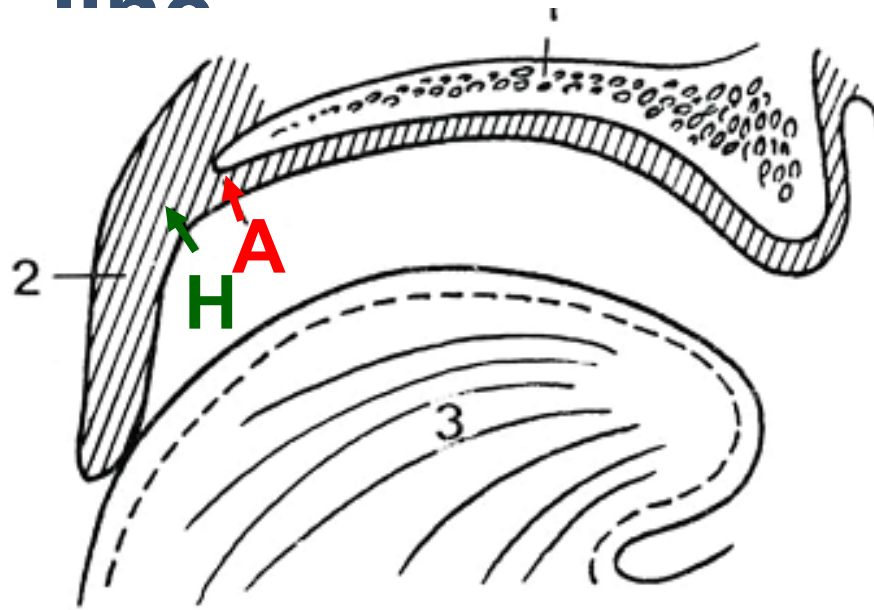
Maxillary sinus disease can lead to dehiscence of the orbital floor → **secondary neuralgia of trigeminal nerve**

Palatum – zones of mucous membrane



- 1 – the marginal zone
- 2 – the incisive papilla
- 3 – the adipose zone
- 4 – the zone of the palatine seam,
mucoperiosteum
- 5 – the glandular zone
- 6 – the soft palate

Palatum: A and H line



A line

localized on the line between hard and soft palate


H line

line between mobile and immobile parts of the soft palate



Dentoalveolar topography

Important for anesthesia, extraction, injury, implantology, endodontic treatment ...

1. The transverse asymmetry of alveolus
 2. The rate of the spongy and the compact bone
 3. The relationship the roots the upper jaw to neighbouring structures
- 

1. The transverse asymmetry of alveolus

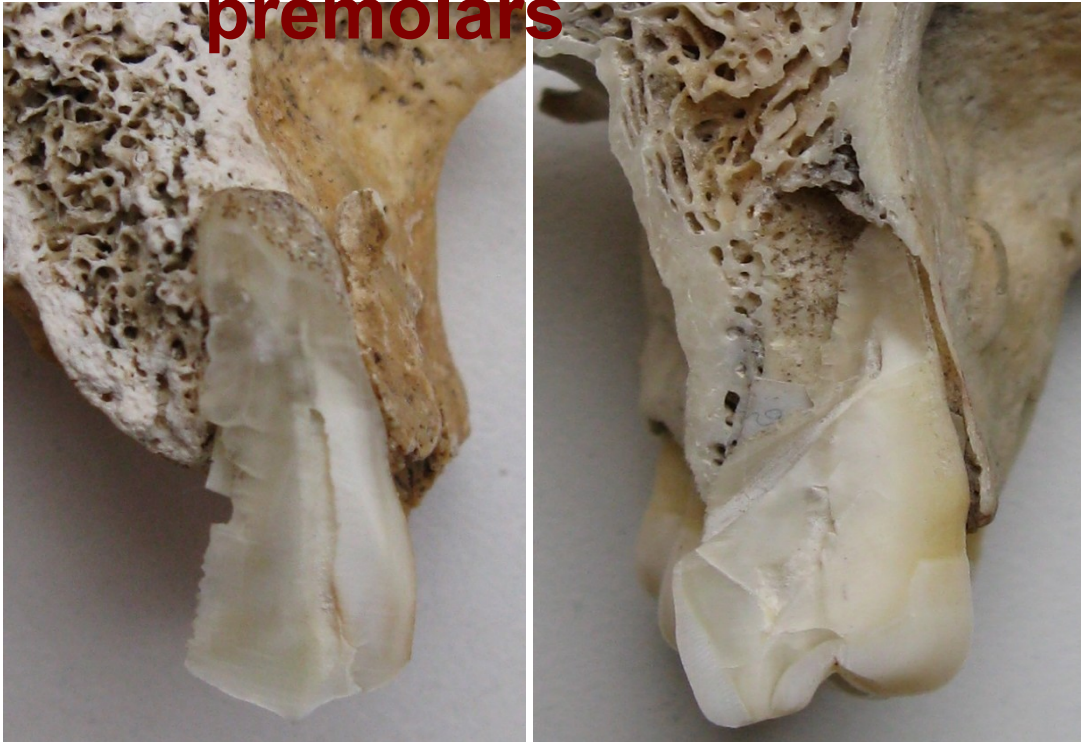


- The dental and skeletal arch are asymmetric !
- Roots of the teeth:
 - 1-5 eccentric by vestibular direction
 - 6-7 in alveolar process axis

2. The rate of the spongy/compact bone

- The layer of **compact bone** is thinner than in the lower jaw
- Roots of the 1-5 are surrounded by the compact bone. Posterior there are **variable layer of retroalveolar spongy bone**. The width of the alveolus depend on the arching palate
- Roots of the molars are surrounded by thin layer of the compact bone (except infrazygomatic crest)

Incisivi, canini, premolars



Compact bone and variable thickness of spongy bone lingually

Molars



Only compact bone



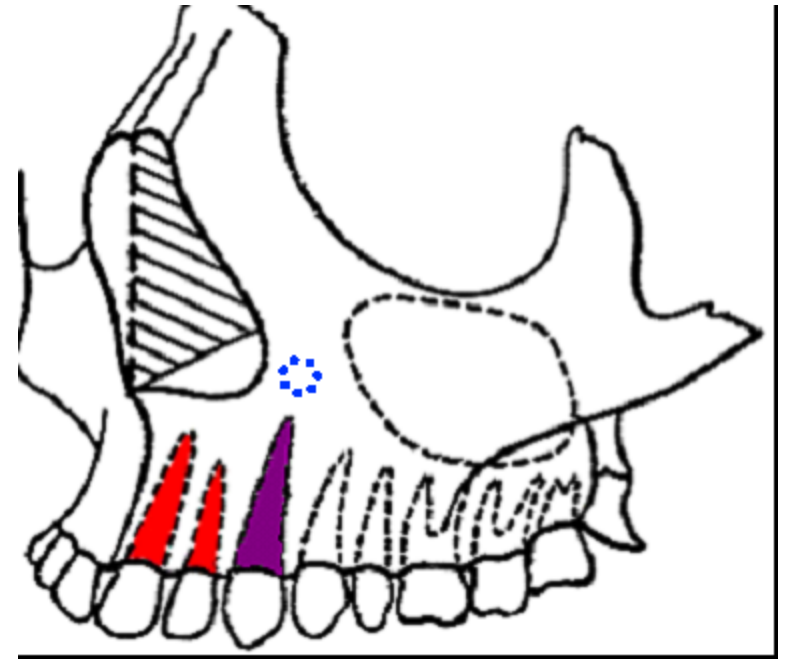
3. The relationship the roots the upper jaw to neighbouring structures

- **Nasal cavity**
 - **Infraorbital foramen**
 - **Maxillary sinus**
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Nasal cavity

Infraorbital foramen

- Variable layer of spongy bone between nasal cavity and roots of incisivi
- Root of 3 localized between nasal cavity and sinus maxillaris



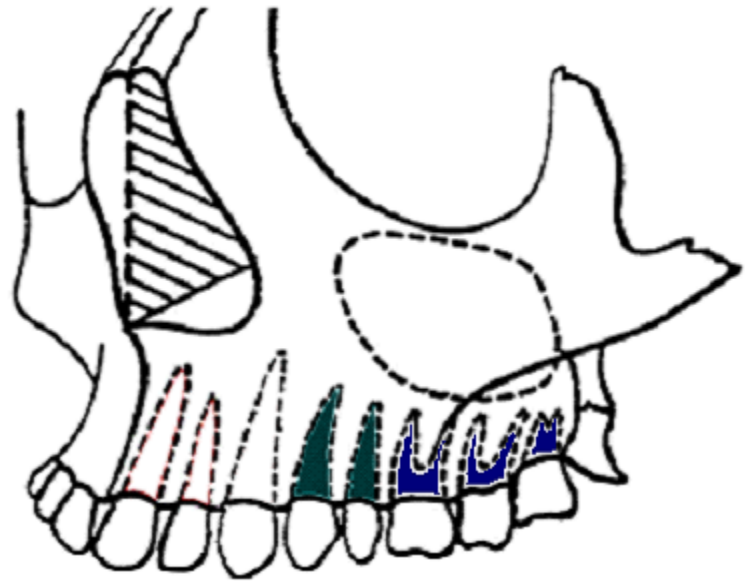
CAVE!

Radices 1,2: periapical inflammatory may led to **abscess of the floor of nasal cavity**

Radix 3: relation to a.,v., n. infraorbitalis and - possible **trombophebitis of cavernous sinus**

Maxillary sinus

Variable layer of spongy bone between maxillary sinus and roots of posterior teeth



CAVE!

- Periapical inflammation developing at the root apices of maxillary molars and premolars are very close to the floor of the maxillary sinus - **sinusitis or empyema**
- Potential **oro-antral communication** by the extraction

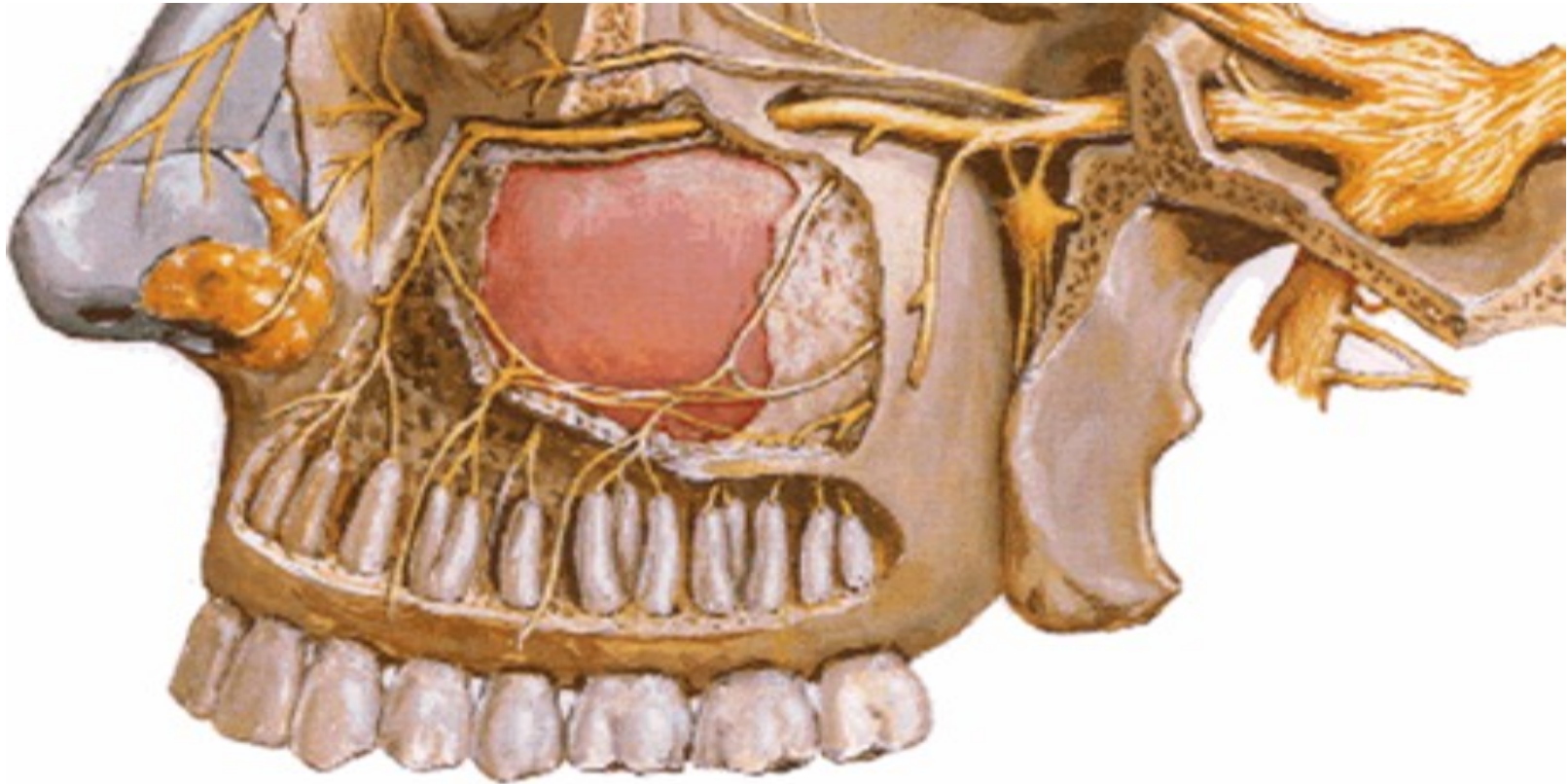


Inflammation in sinus
maxillaris

The image features a white background with several realistic, 3D-rendered bubbles of various sizes. These bubbles are positioned in the corners: top-left, top-right, and bottom-right. The bubbles have a metallic or glass-like appearance with highlights and shadows, giving them a three-dimensional effect. The central text is in a bold, dark blue font.

Nerve and blood supply

Trigeminal nerve



Maxillary nerve - infraorbital nerve

anterior sup. alv. nerve
middle sup. alv. nerve
posterior sup. alv. nerve

Maxillary artery

Post. sup. alveolar
a.

Infraorbital a.
ant. sup. alveolar
a.

