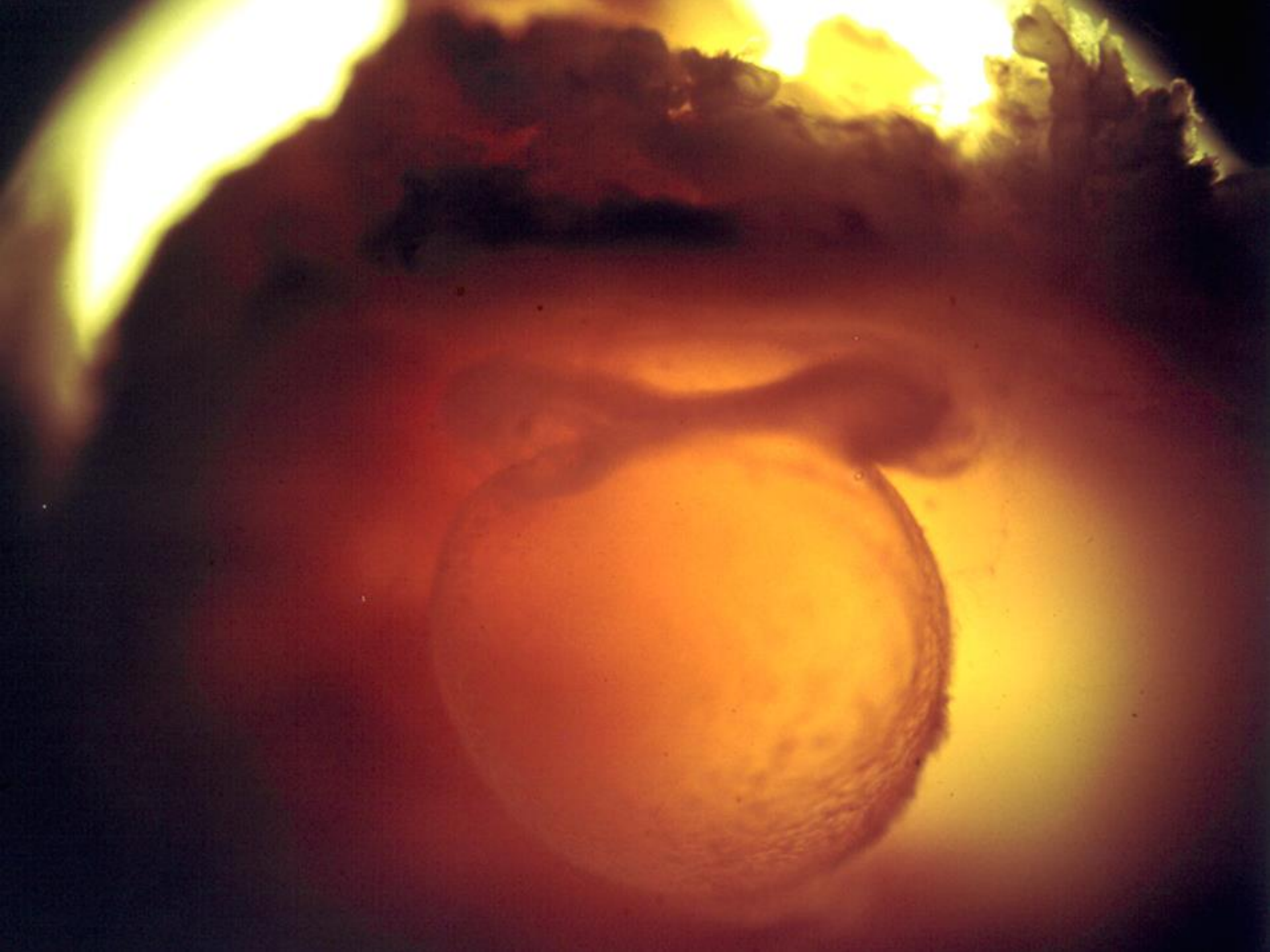
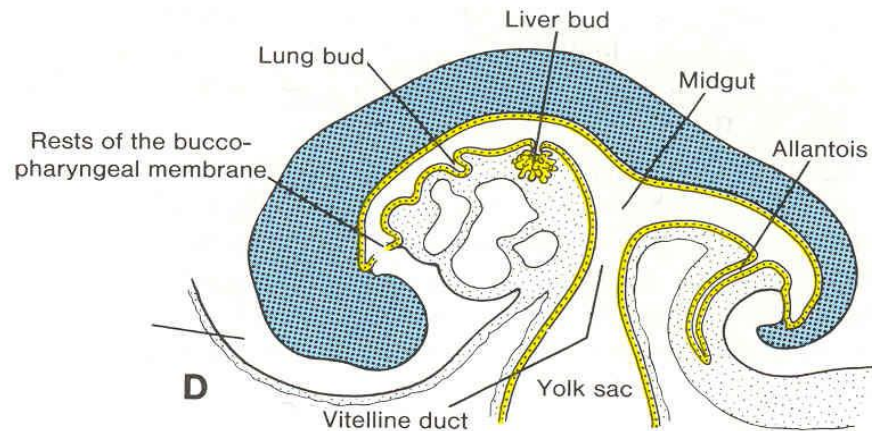
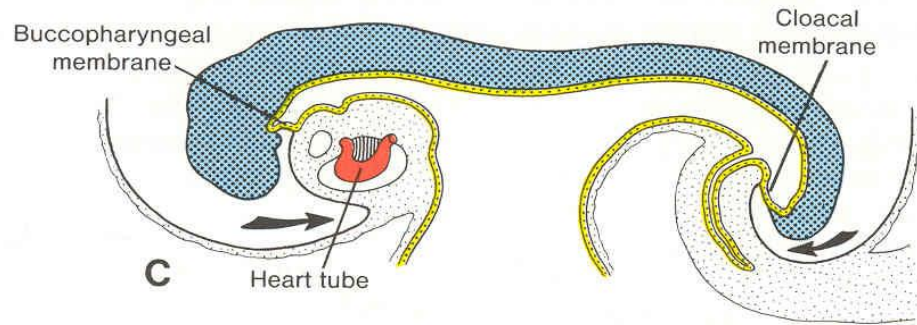
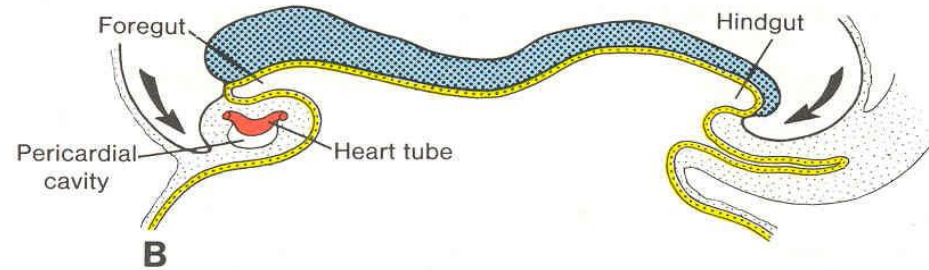
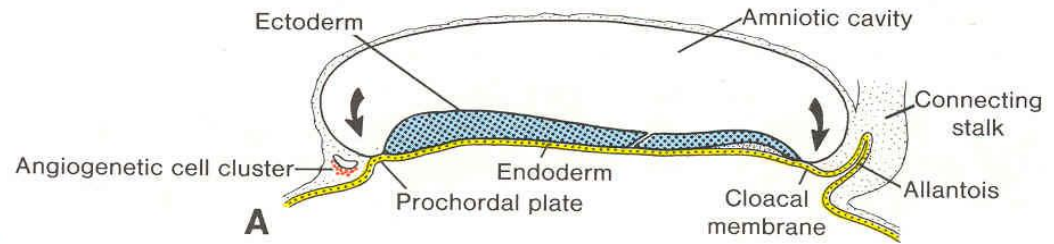


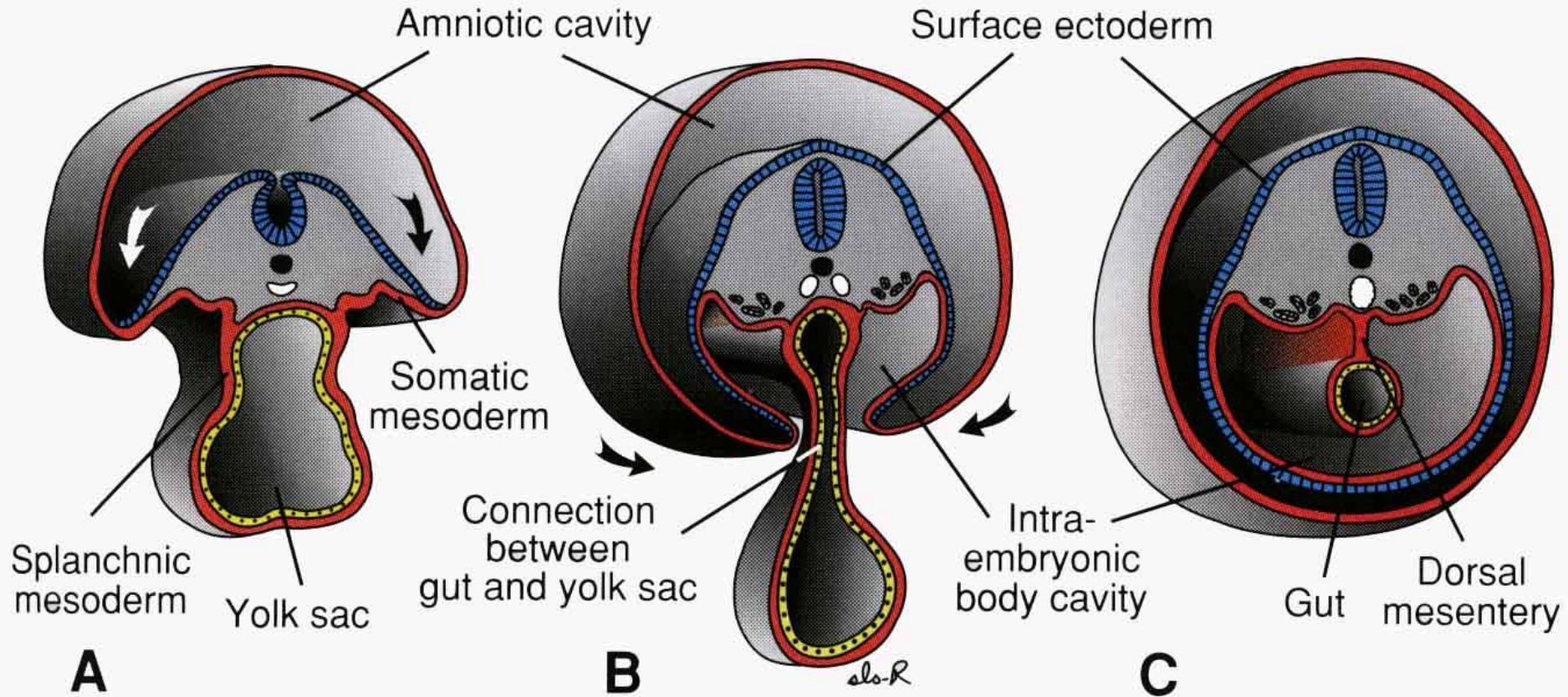
VÝVOJ HLAVY A KRKU



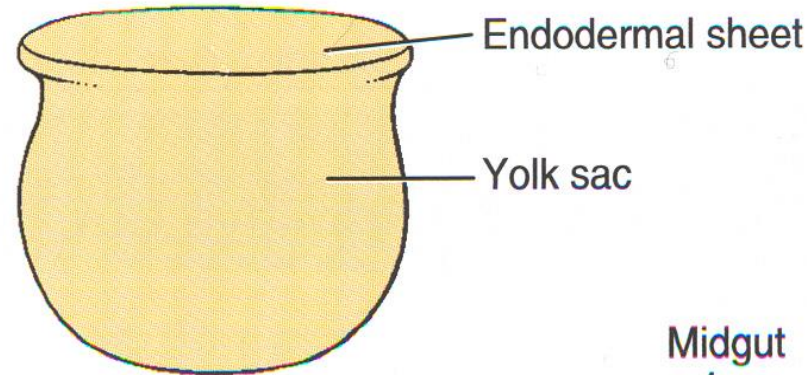
**vznik ohraničujících rýh
vytvoří z trilaminárního
zárodečného terčíku
trojrozměrnou trubici**



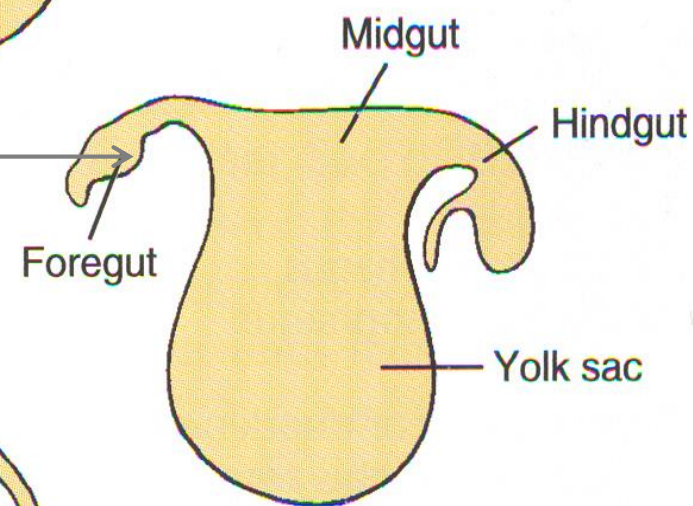
**žloutkový váček, vytváření trávicí
trubice
ductus omphaloentericus
uzavírání střeva, mesenterium, coelom**



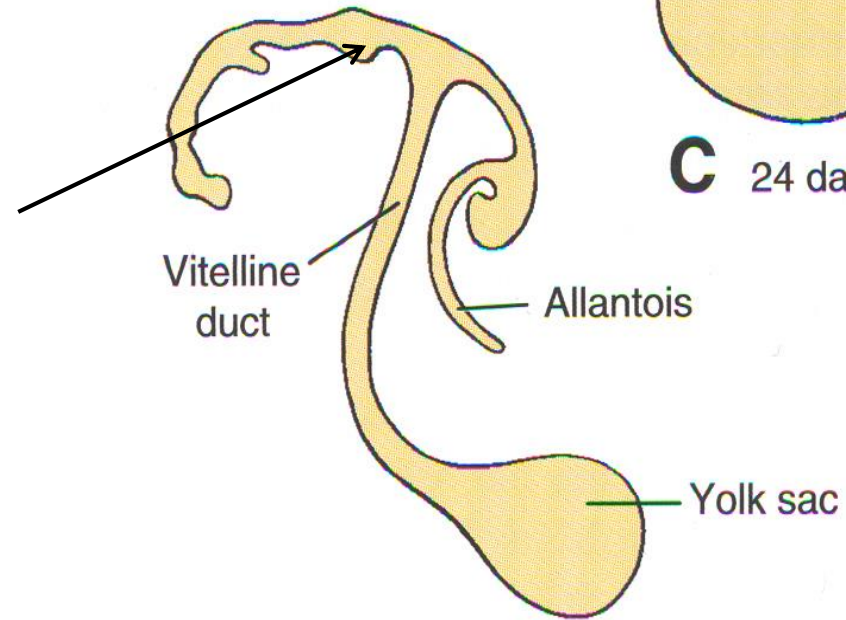
**vývoj trávicí trubice
vliv ohraničujících rýh**



B 20 days

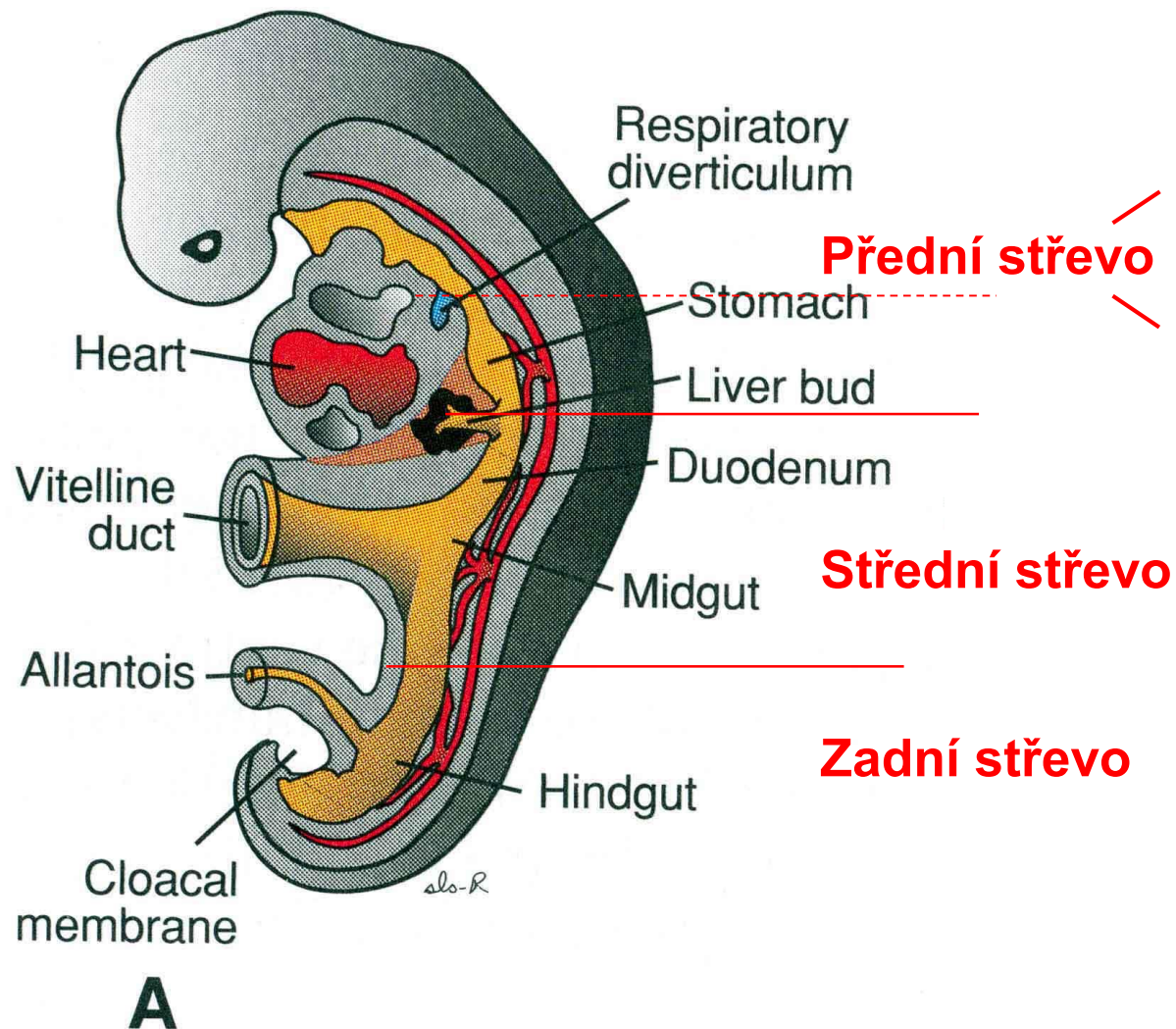


C 24 days



D 26 days

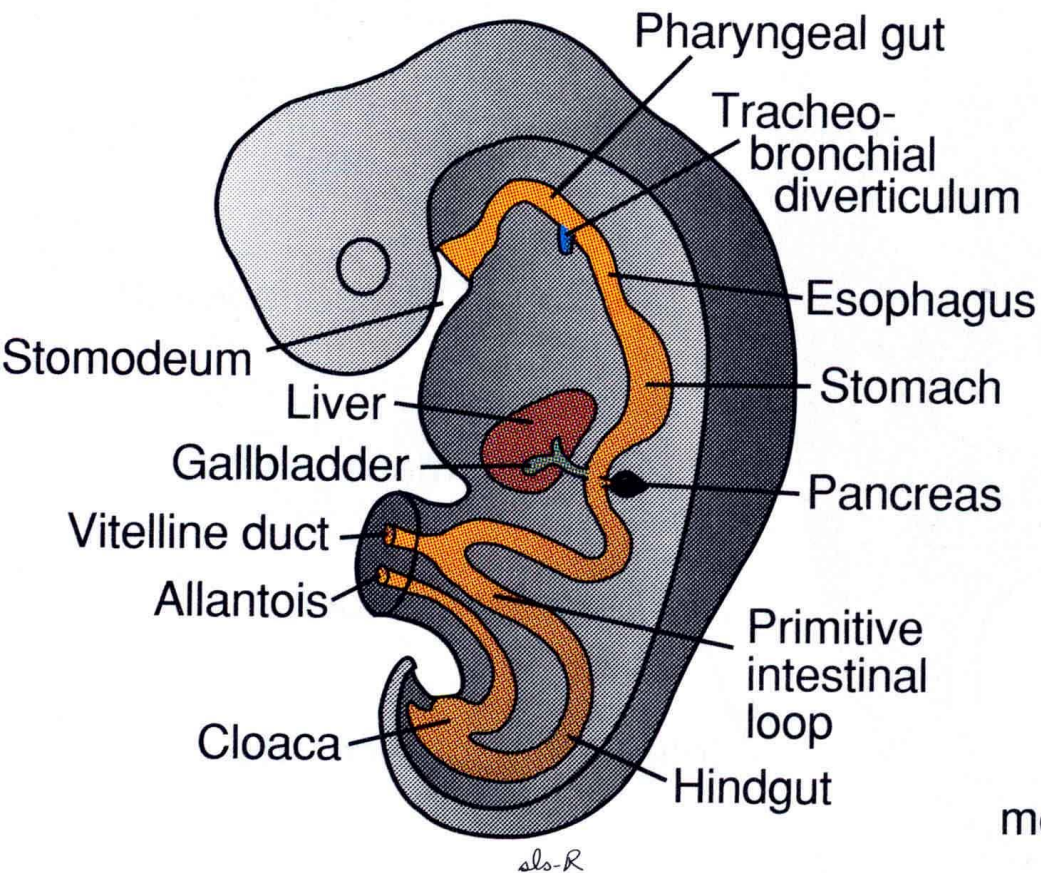
formování trávicí trubice



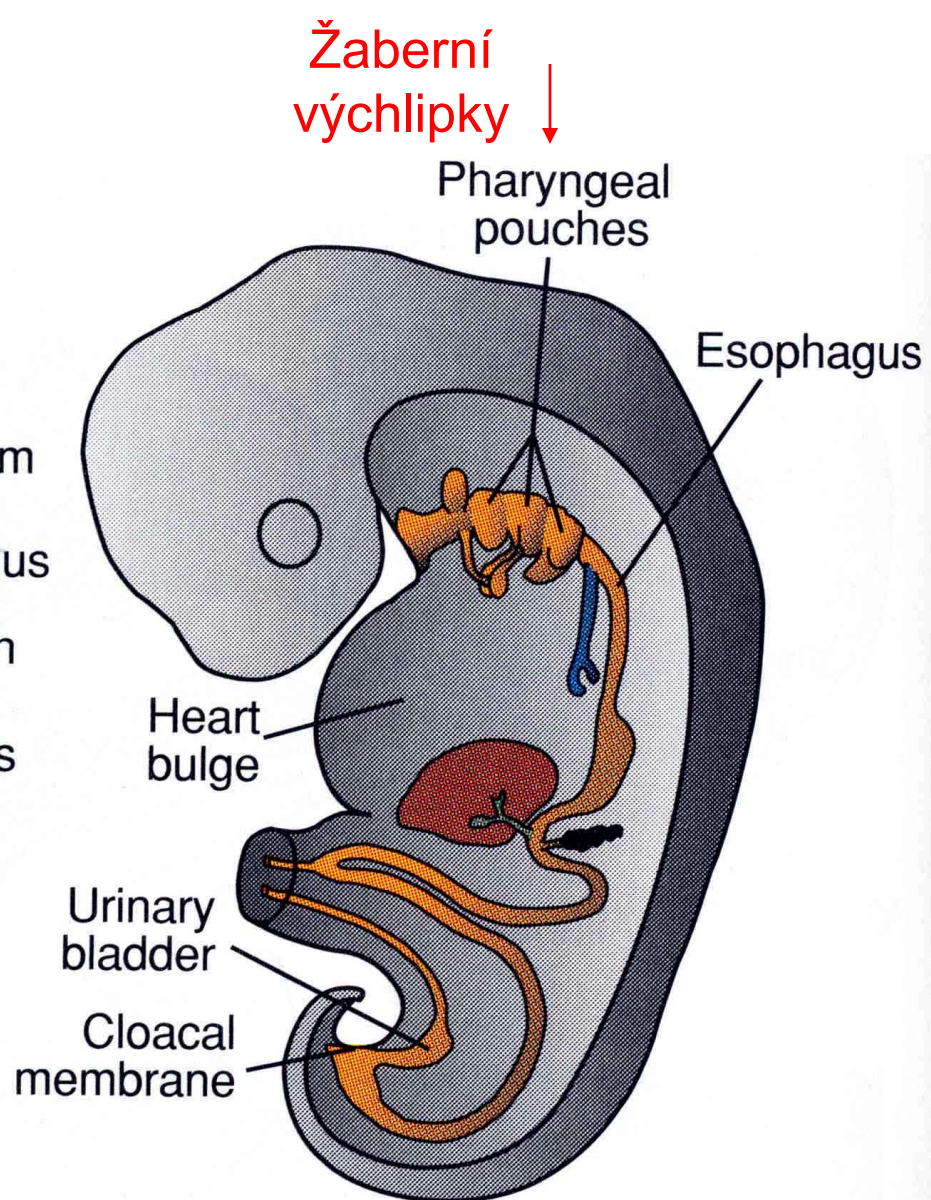
faryngové střevo
(primitivní farynx)

kaudální část
předního střeva

**DIFERENCIACE PRIMITIVNÍHO FARYNGU
(FARYNGOVÉHO STŘEVA), ŽABERNÍ
VÝCHLIPKY, VKLESLINY A OBLOUKY**



A



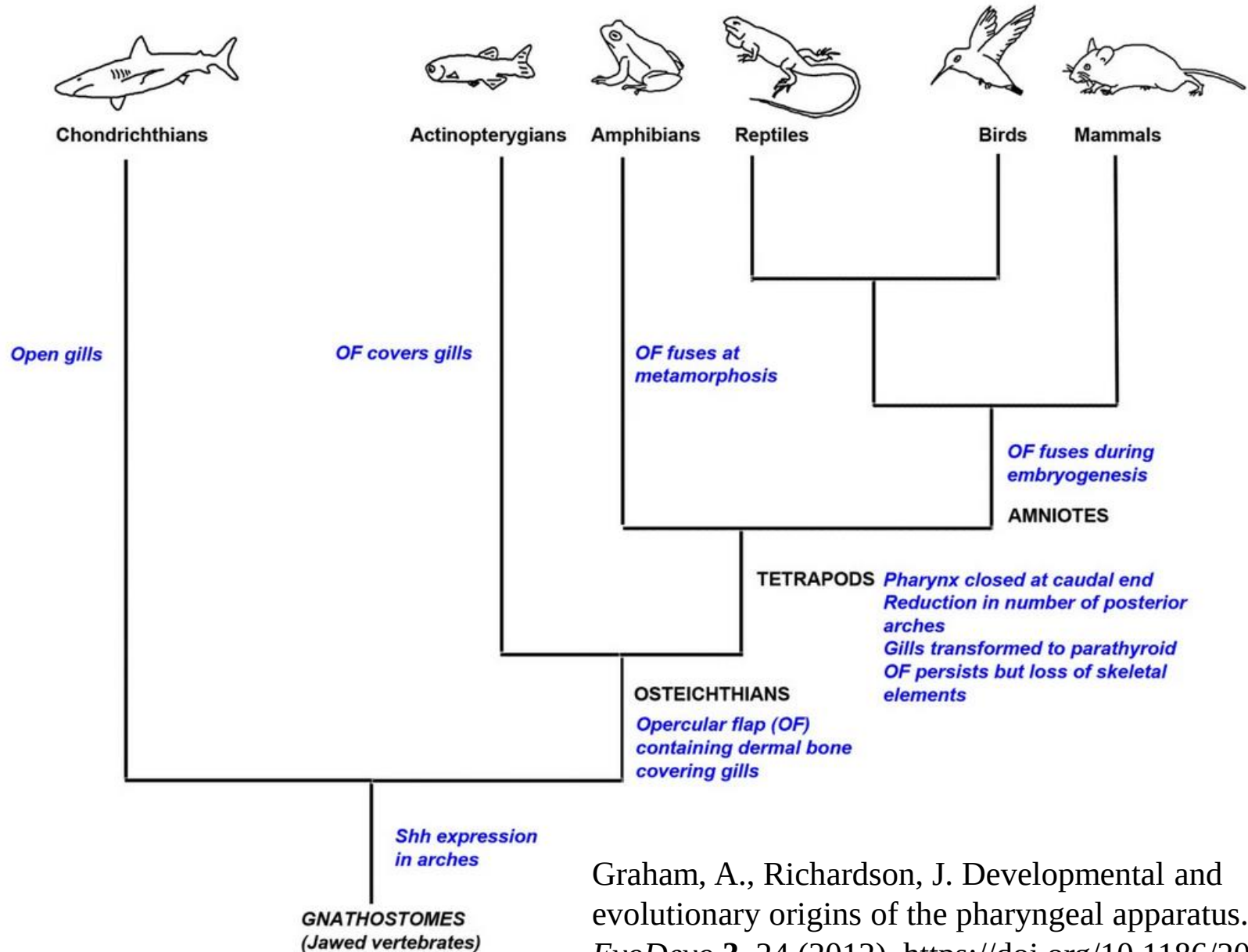
B



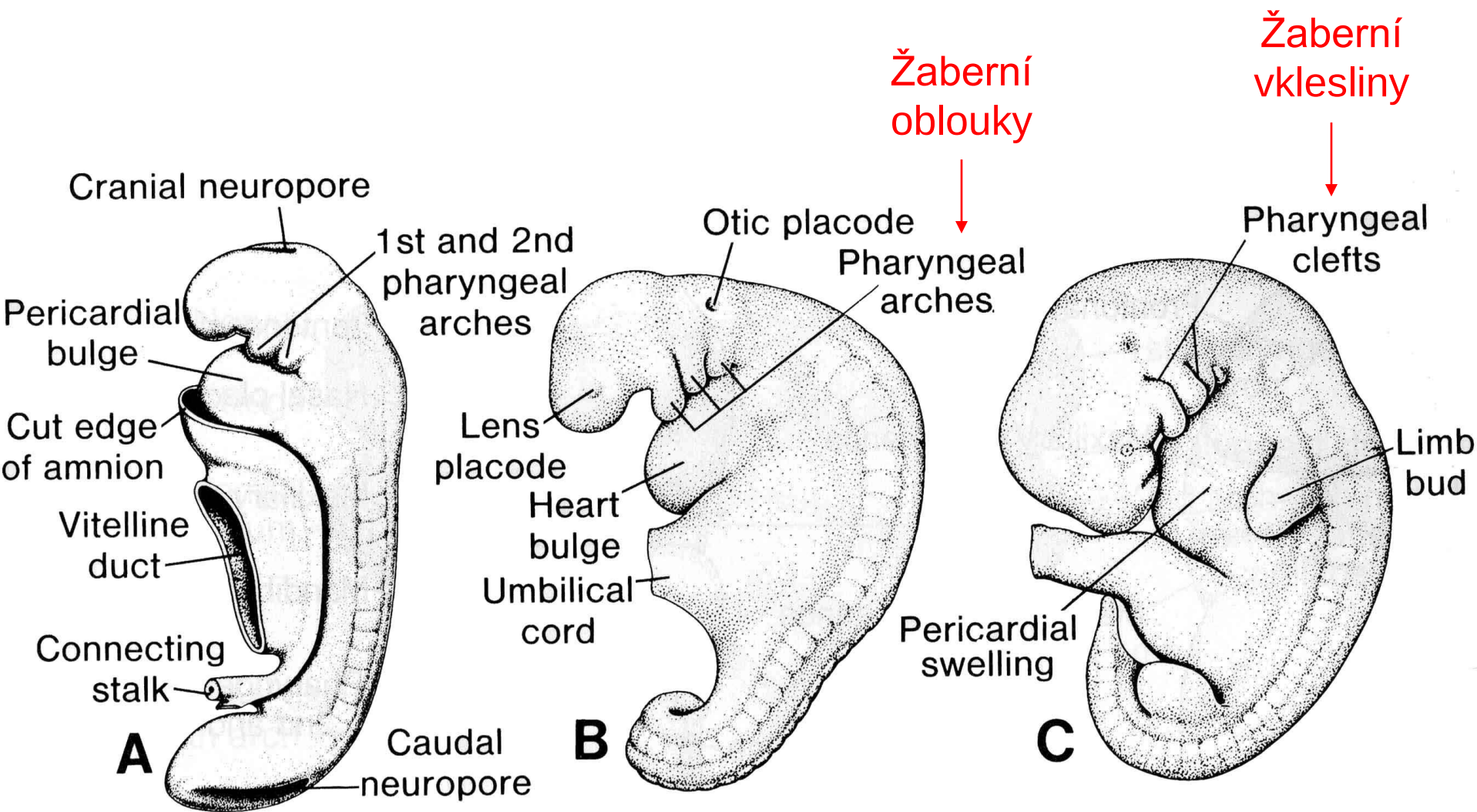
Při pohledu do
tlamy štiky jsou
vidět 4 páry
žaberních oblouků
nesoucích žábry.

Figure 4

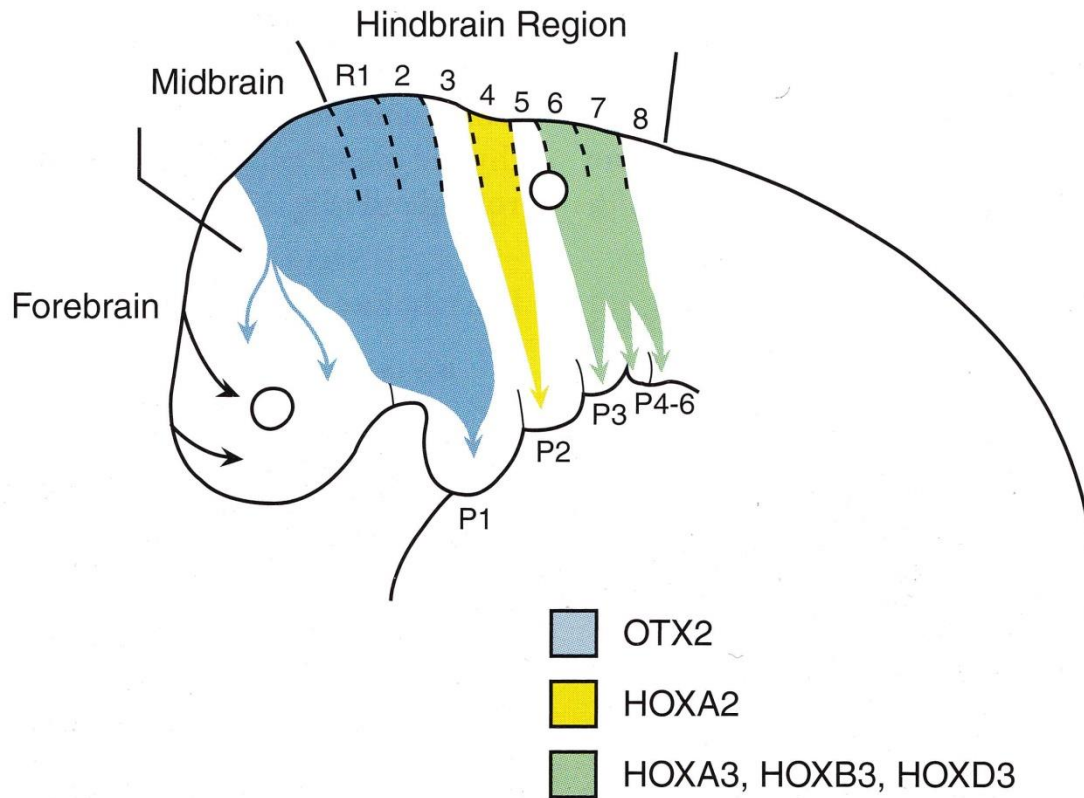
From: [Developmental and evolutionary origins of the pharyngeal apparatus](#)



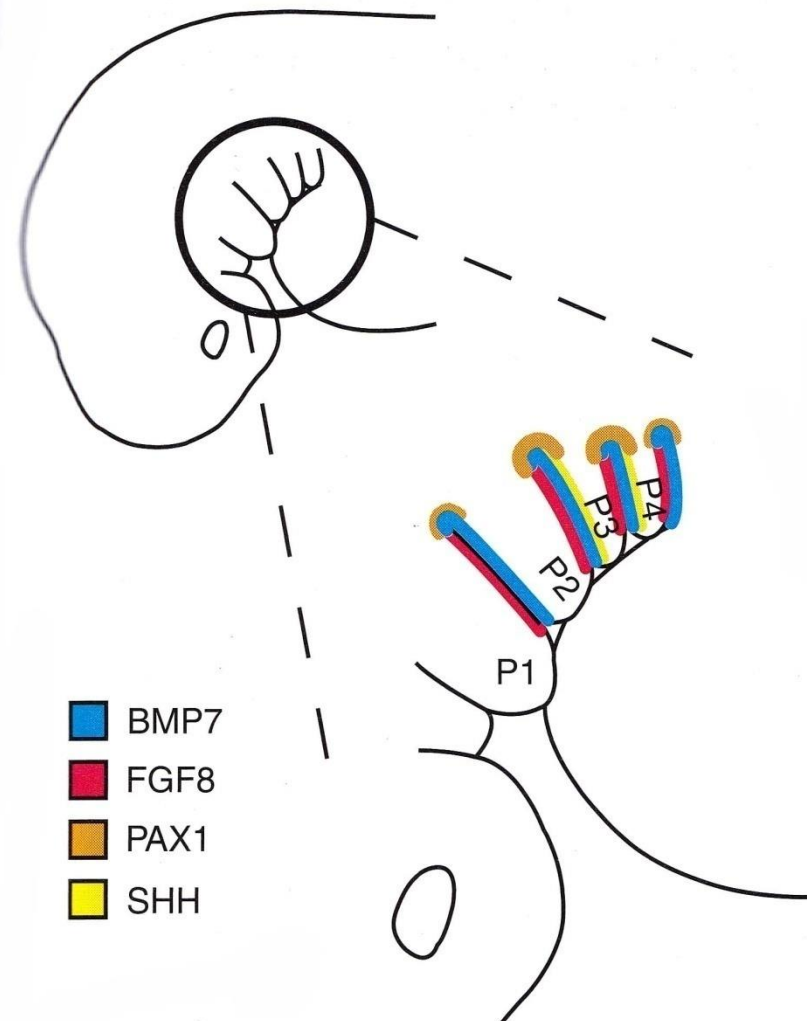
Graham, A., Richardson, J. Developmental and evolutionary origins of the pharyngeal apparatus. *EvoDevo* 3, 24 (2012). <https://doi.org/10.1186/2041-9139-3-24>



Molekulární řízení vzniku žaberních oblouků



exprese genů v migračních
proudech buněk neurální lišty

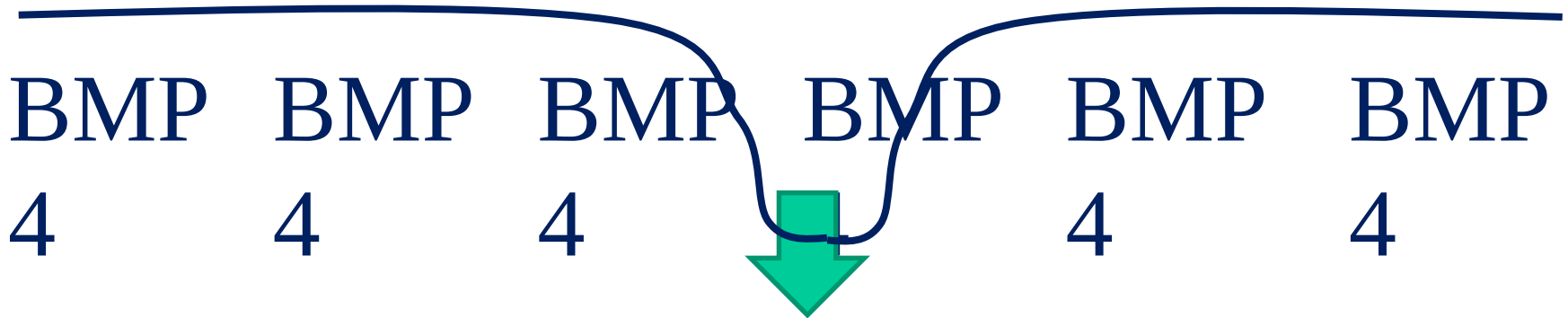


exprese genů v entodermu žaberních
výchlipek

neuroektoderm

Goosecoid

(via chordin
elevation) together
with noggin a
follistatin - BMP4
inhibition



BMP4

BMP4

BMP4

BMP4

BMP4

BMP4

4

4

4

4

4

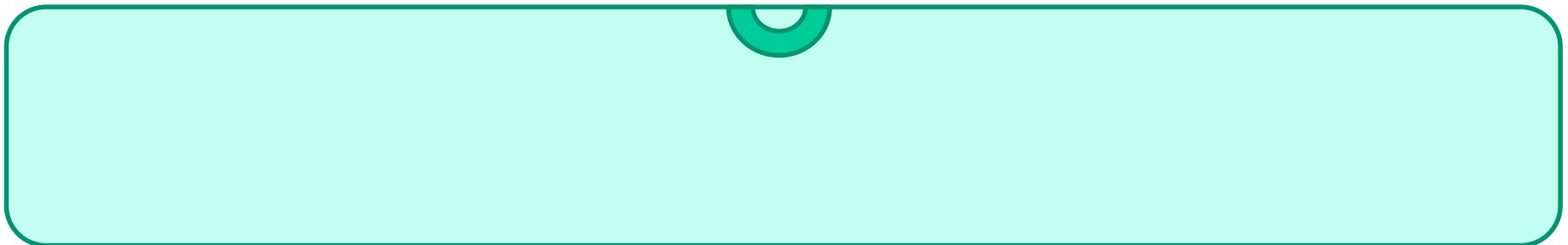
neuroektoderm

Goosecoid

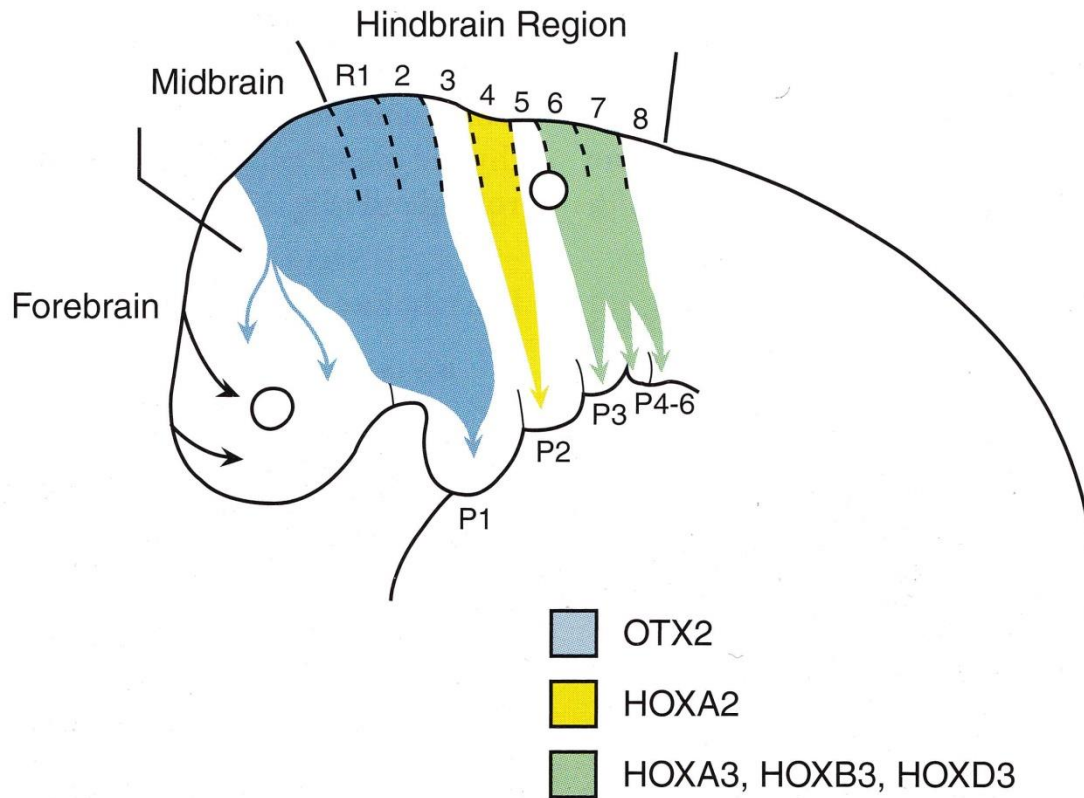
(via chordin
elevation) together
with noggin a
follistatin - BMP4
inhibition

WNT – neural crest

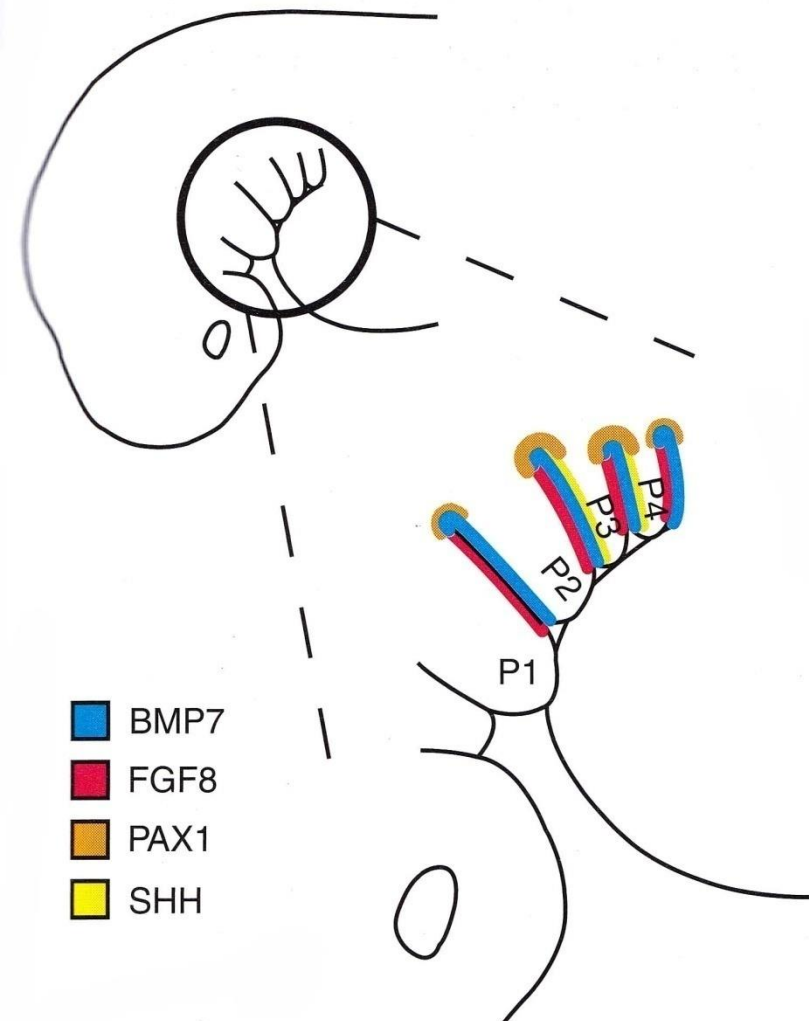
BMP BMP BMP BMP BMP BMP
4 4 4 4 4 4



Molekulární řízení vzniku žaberních oblouků

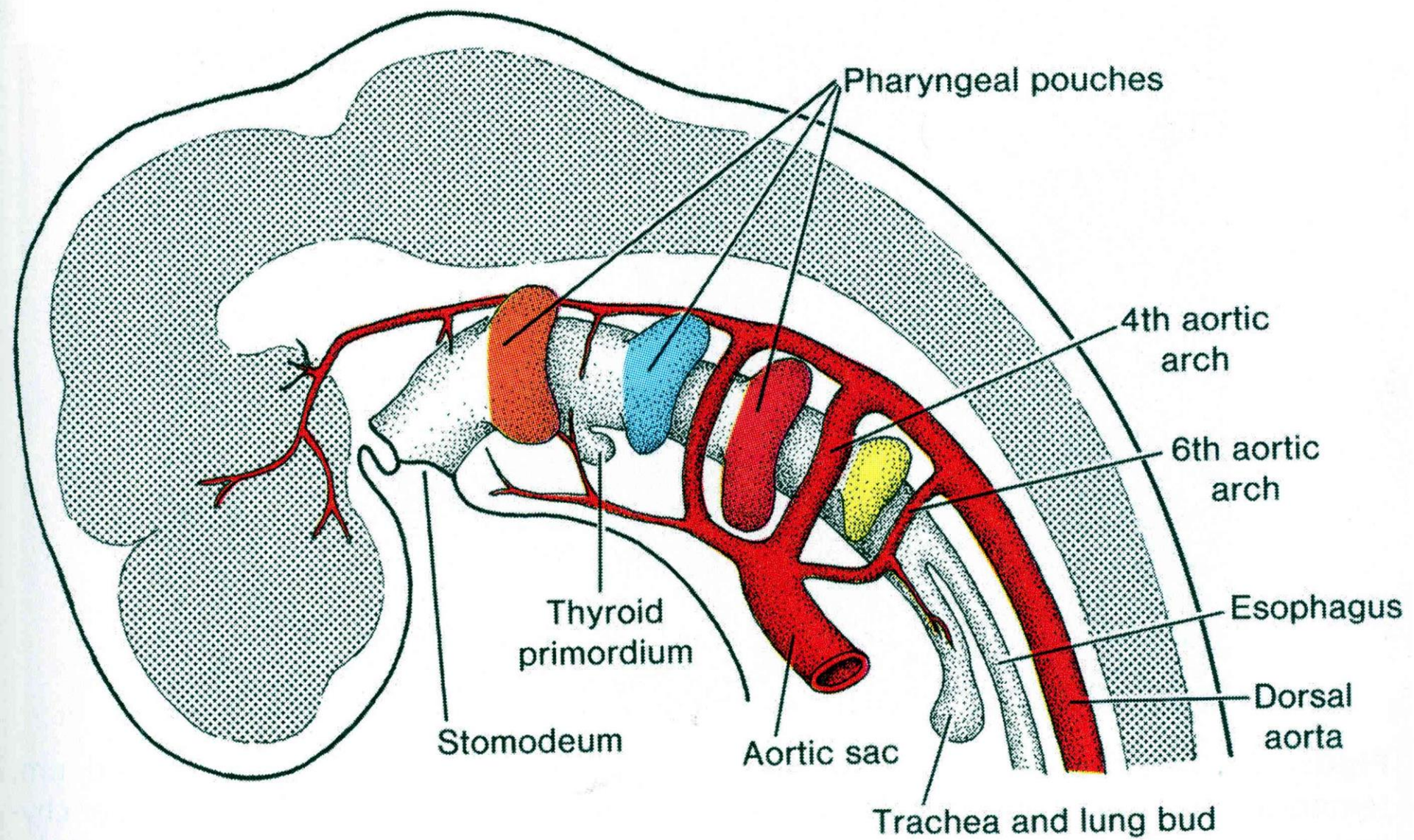


exprese genů v migračních
proudech buněk neurální lišty

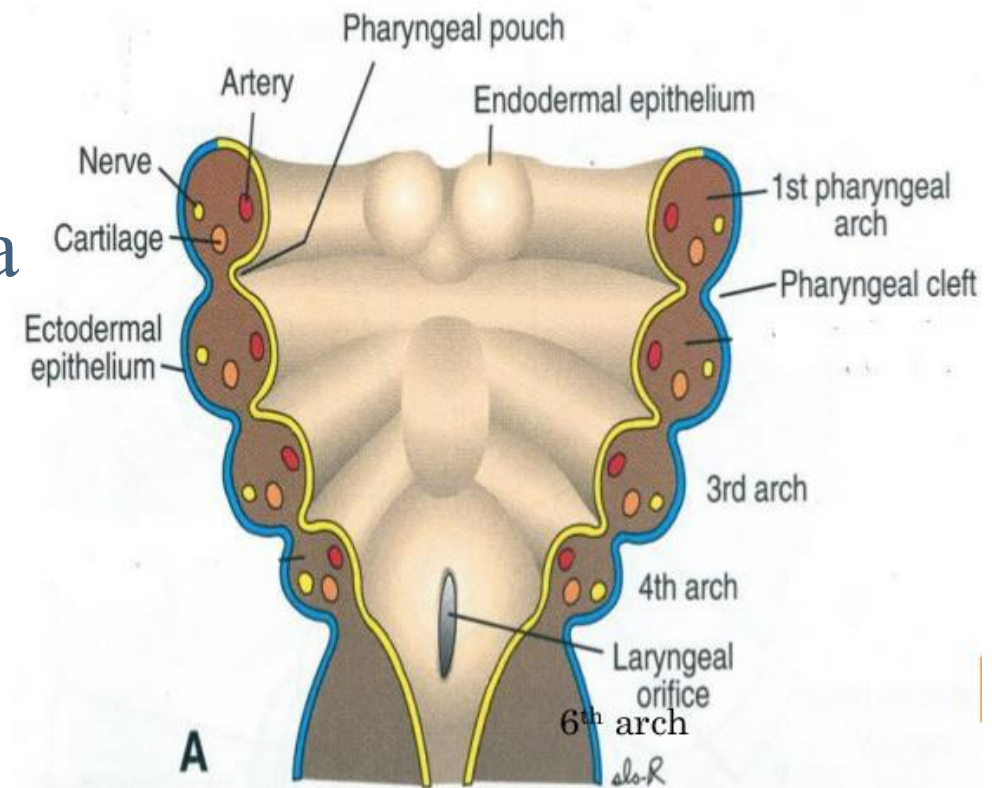


exprese genů v entodermu žaberních
výchlipek

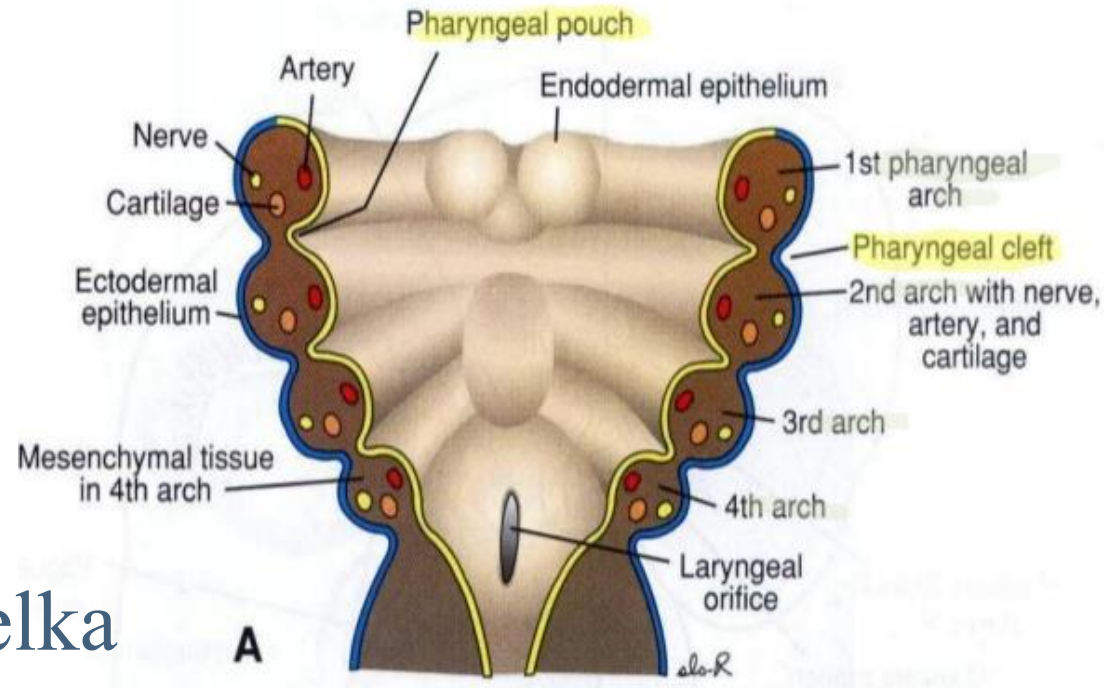




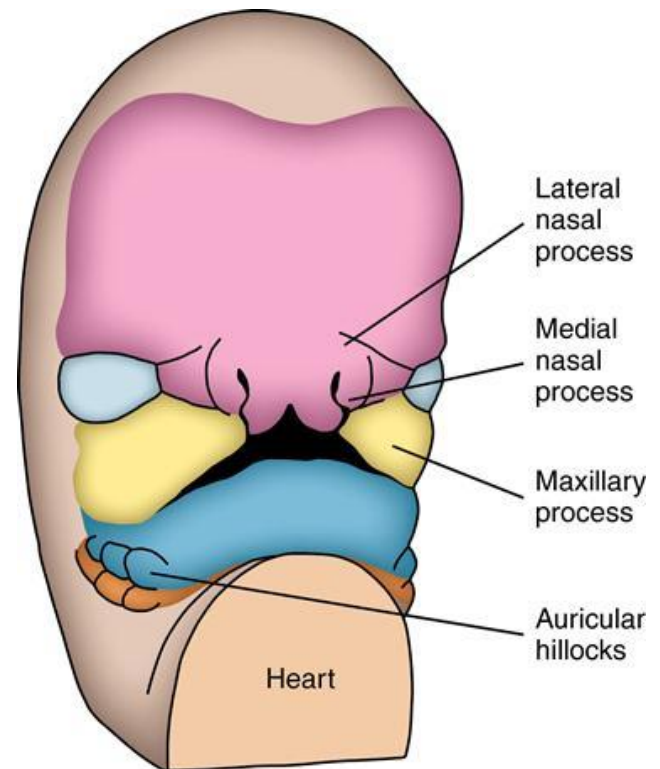
- Faryngový oblouk
- Faryngová výchlípka
- Faryngová štěrbina
- Faryngová membrána



- Povrch kryt ektodermem
- Mezenchymové jádro (mezoderm + **buňky neurální lišty**)
- Aortální oblouk
- Chrupavka
- Komponenta kosterního svalu inervovaná specifickým nervem
- Endodermální výstelka

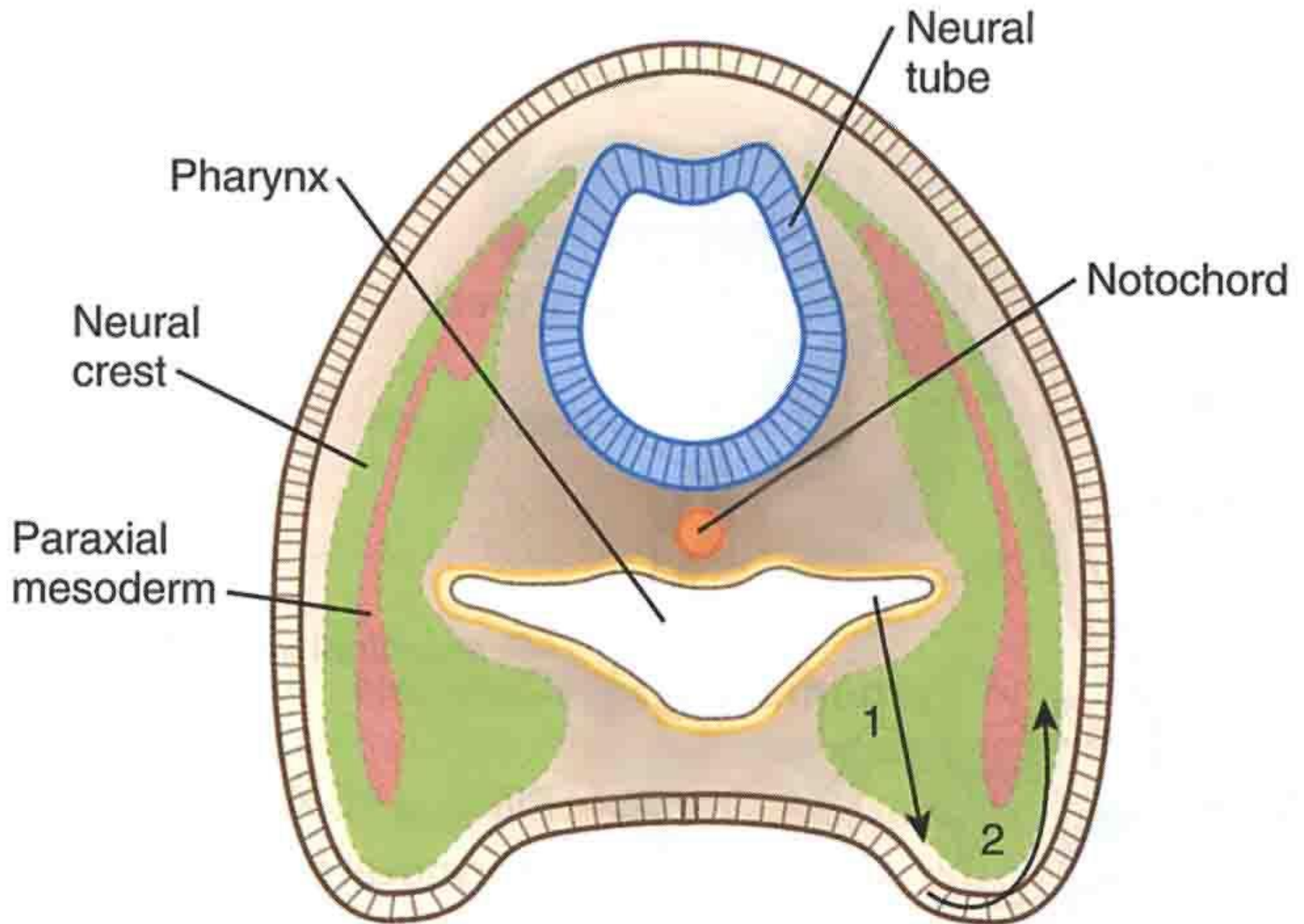


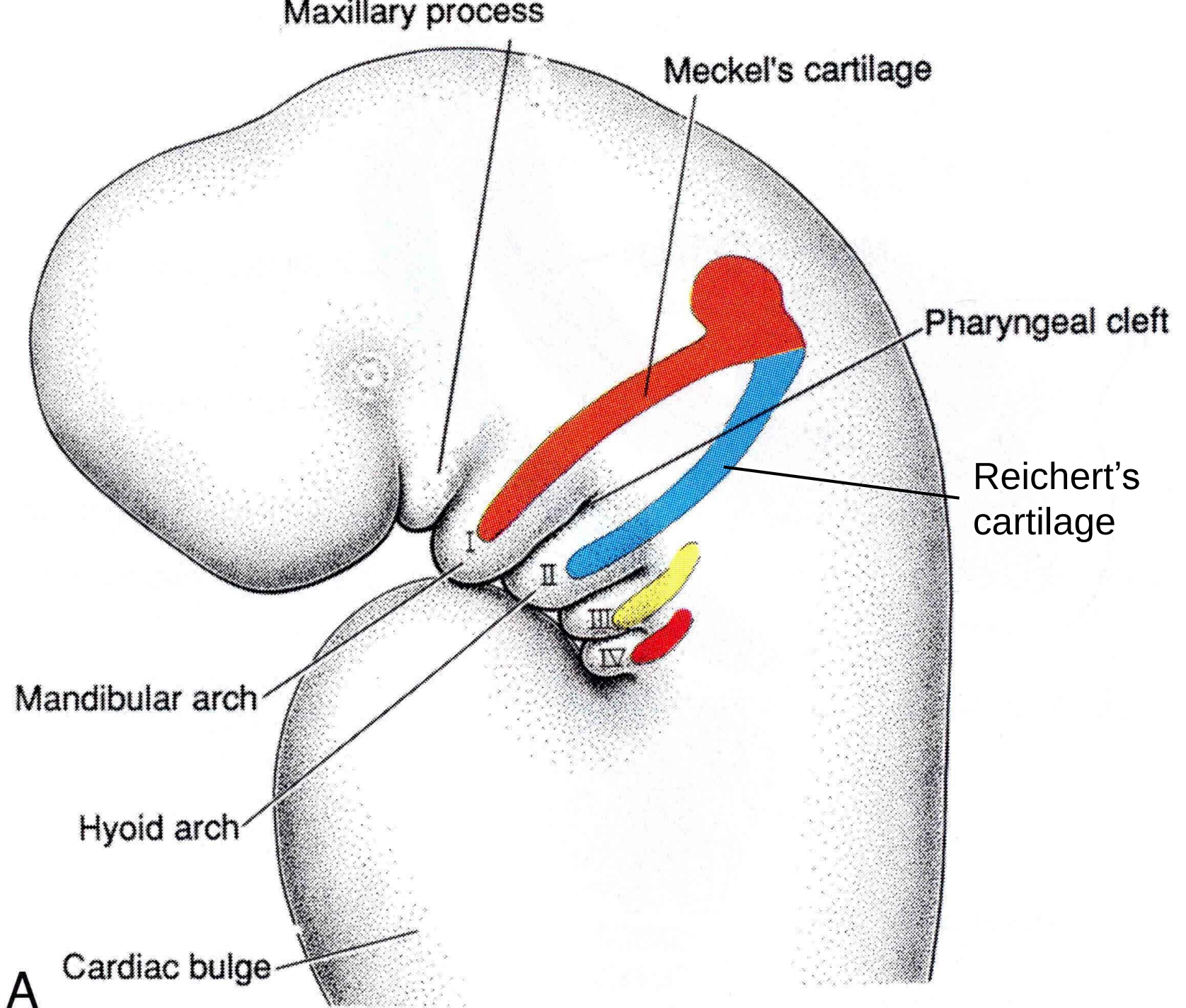
- 4. – 10. týden vývoje
- Frontonasální výběžek
- 1. FO
 - Párový maxilární výběžek
 - Párový mandibulární výběžek

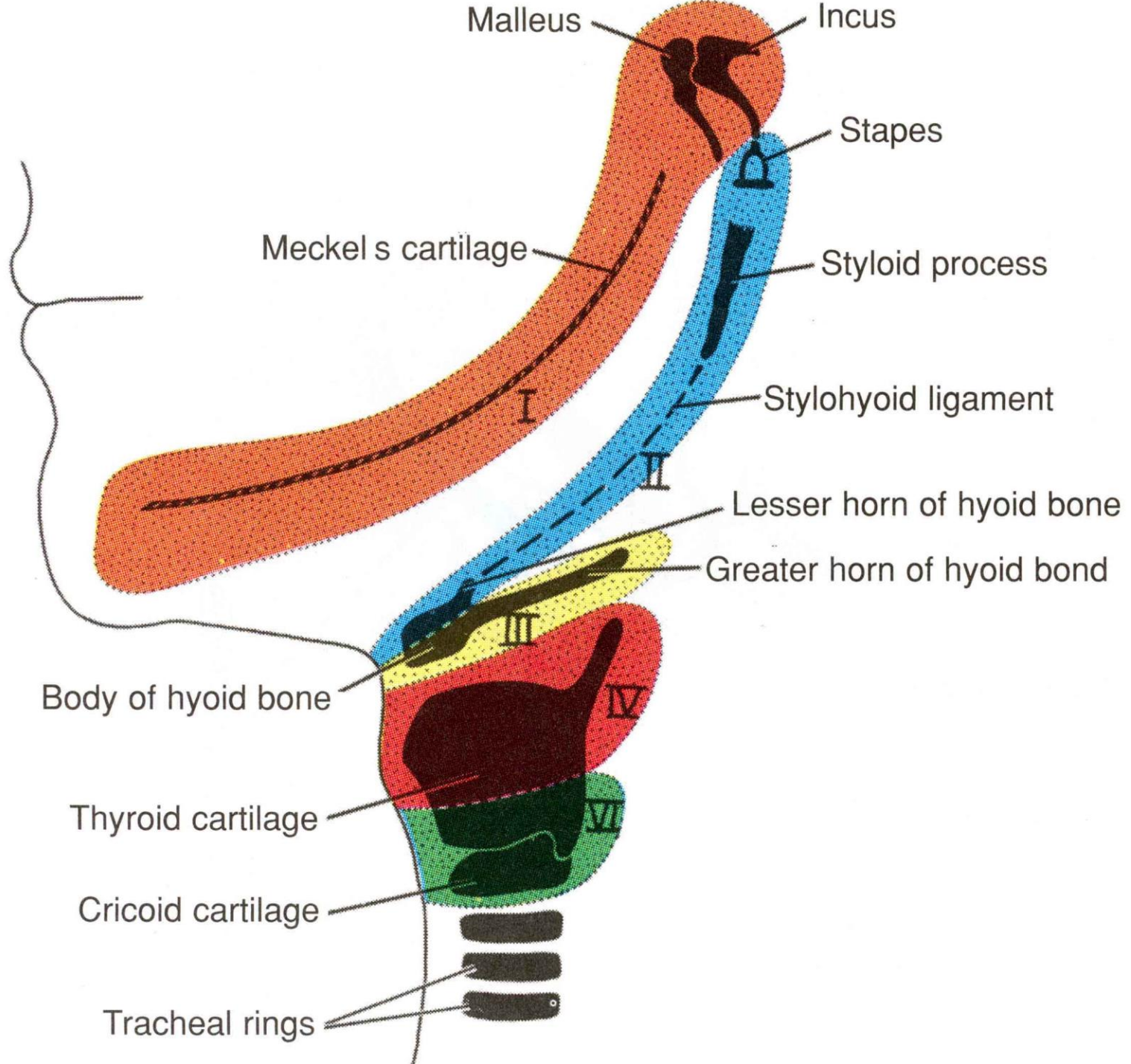


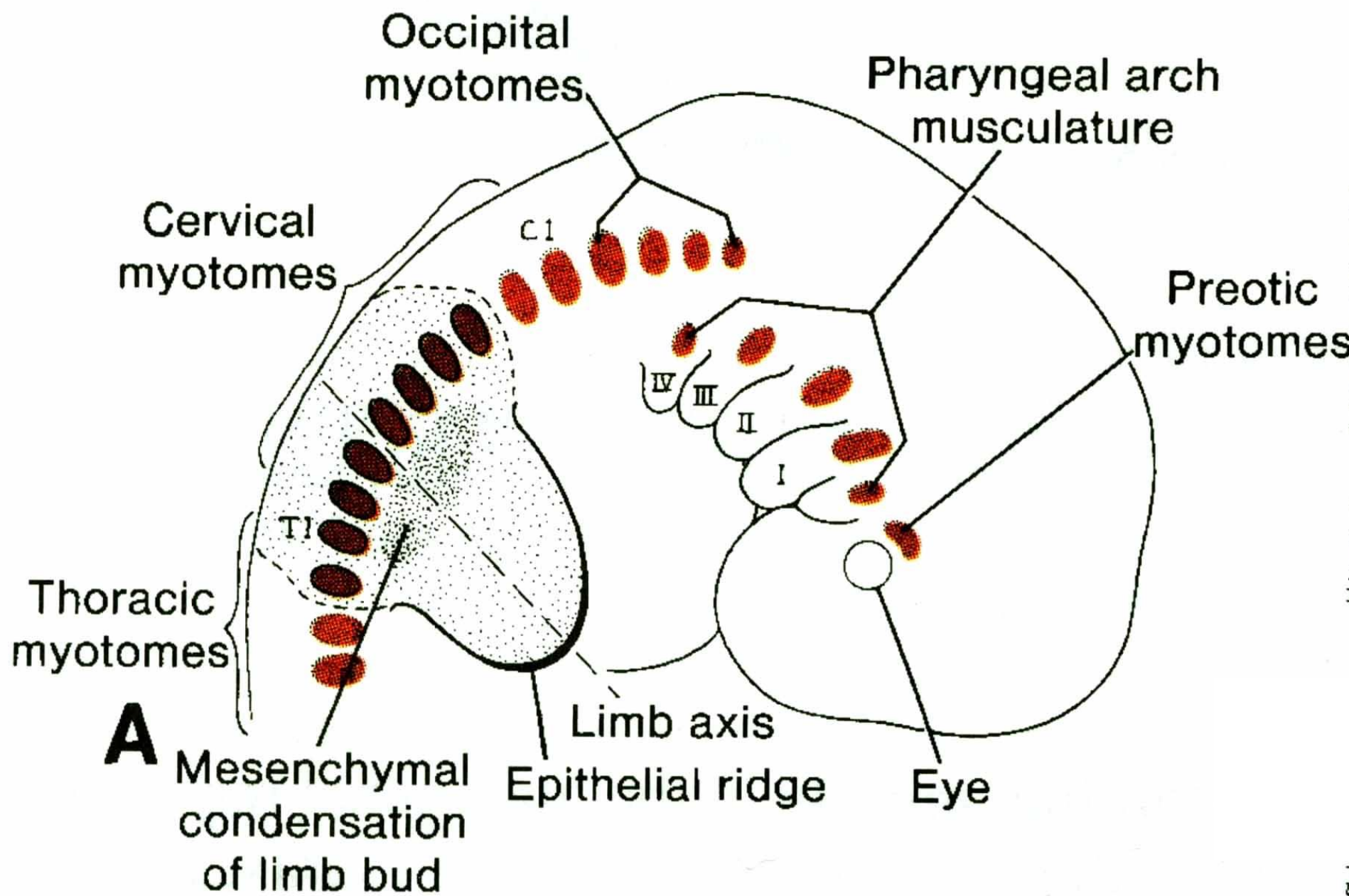
Faryngeální oblouky

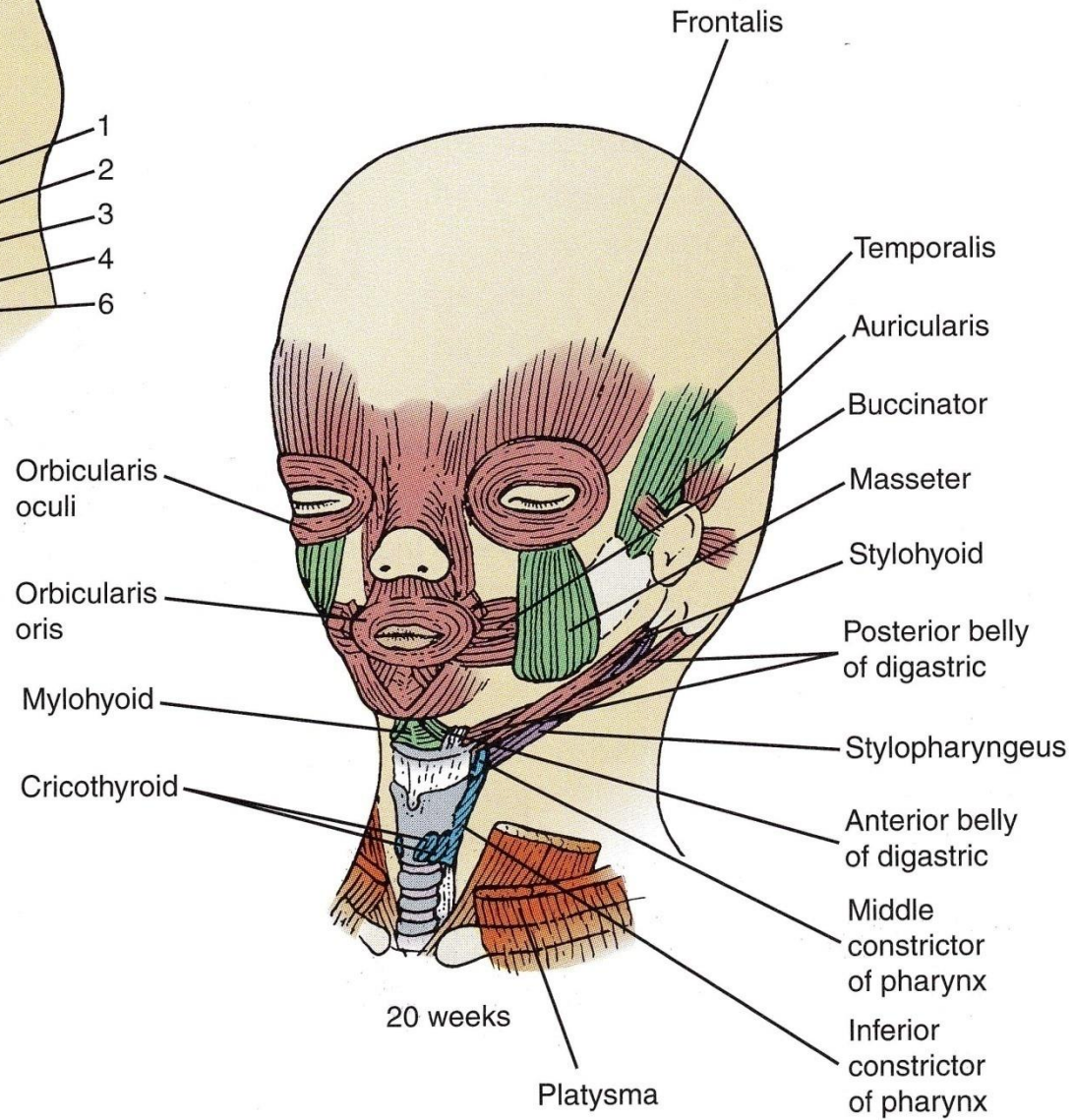
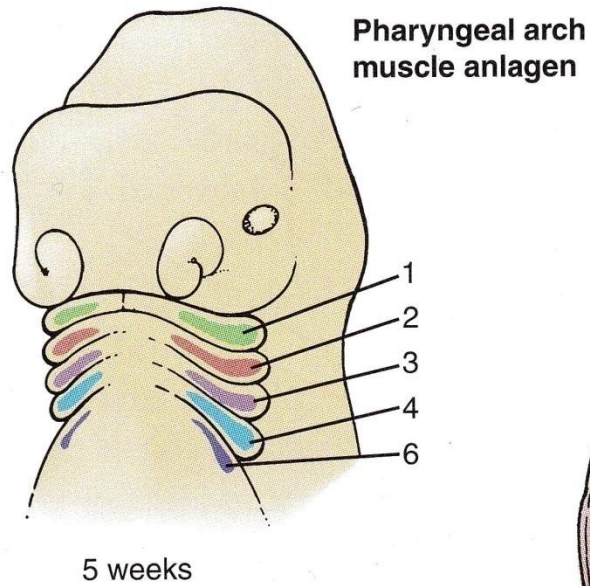
Derivates of pharyngeal folds		Arch number	Aortic arch	Cranial nerv	Examples of branchiomic muscles	Skeletal derivatives	Derivates of pharyngeal pouch
external auditory meatus neck	I	I mandibular	maxillary artery	V trigeminal	muscles of mastication etc.	malleus, incus spheno-mandibular lig. Meckel cart.	I middle ear auditory tube
	II	II hyoid	hyoid, stapedial artery	VII facial	muscles of facial expression etc.	stapes, styl. proc., stylohyoid lig., part of hyoid cart.	II supra-tonsillar fossa
	III	III	internal carotid artery	IX glosso-pharyng.	m. stylopharyngeus	parts of hyoid cart.	III thymus, parathy. gland
	IV	IV	right subclavian artery, aorta	X vagus	pharyngeal and laryngeal musculature	laryngeal cart.	IV thymus parathy. gland ultimobranch. body

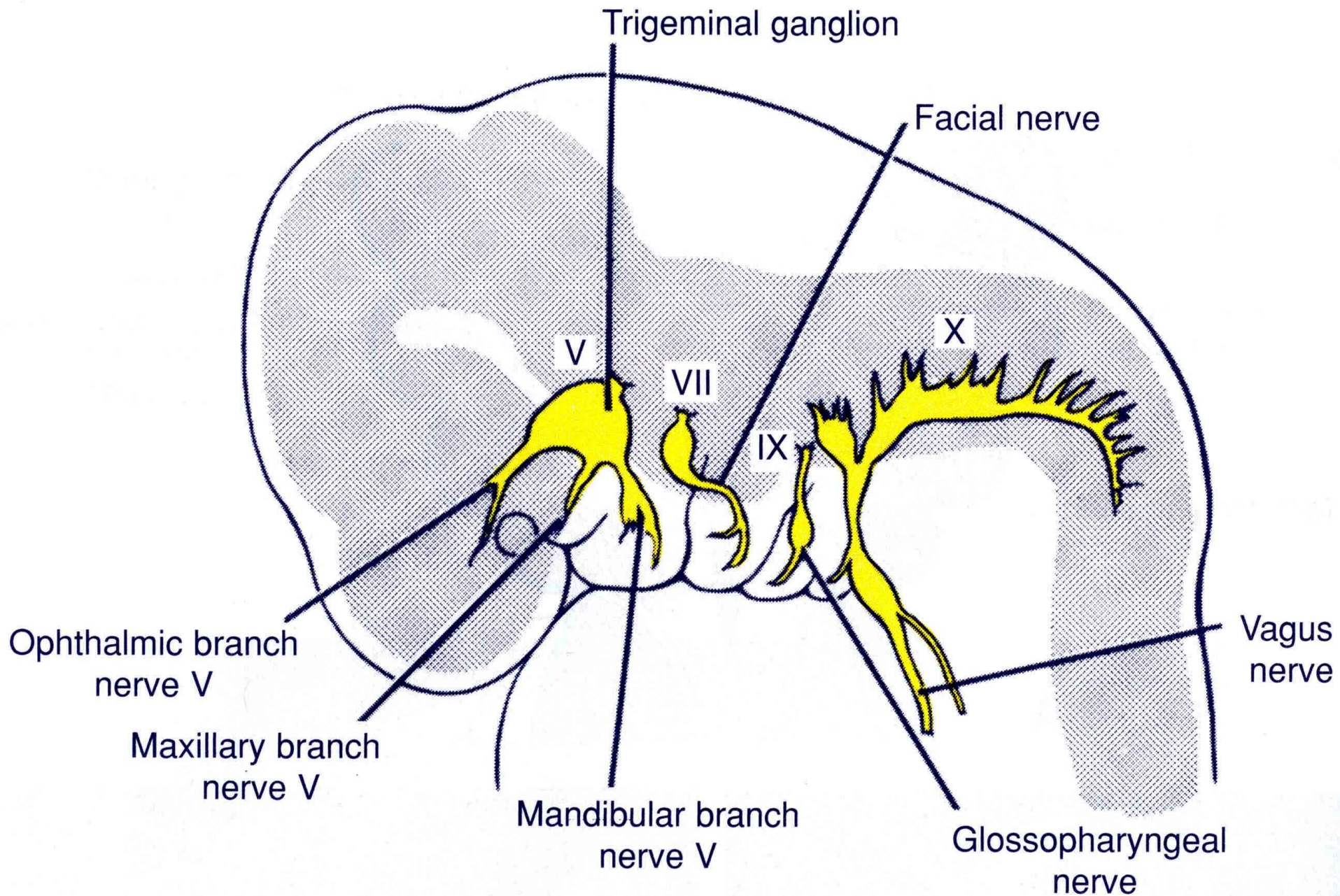




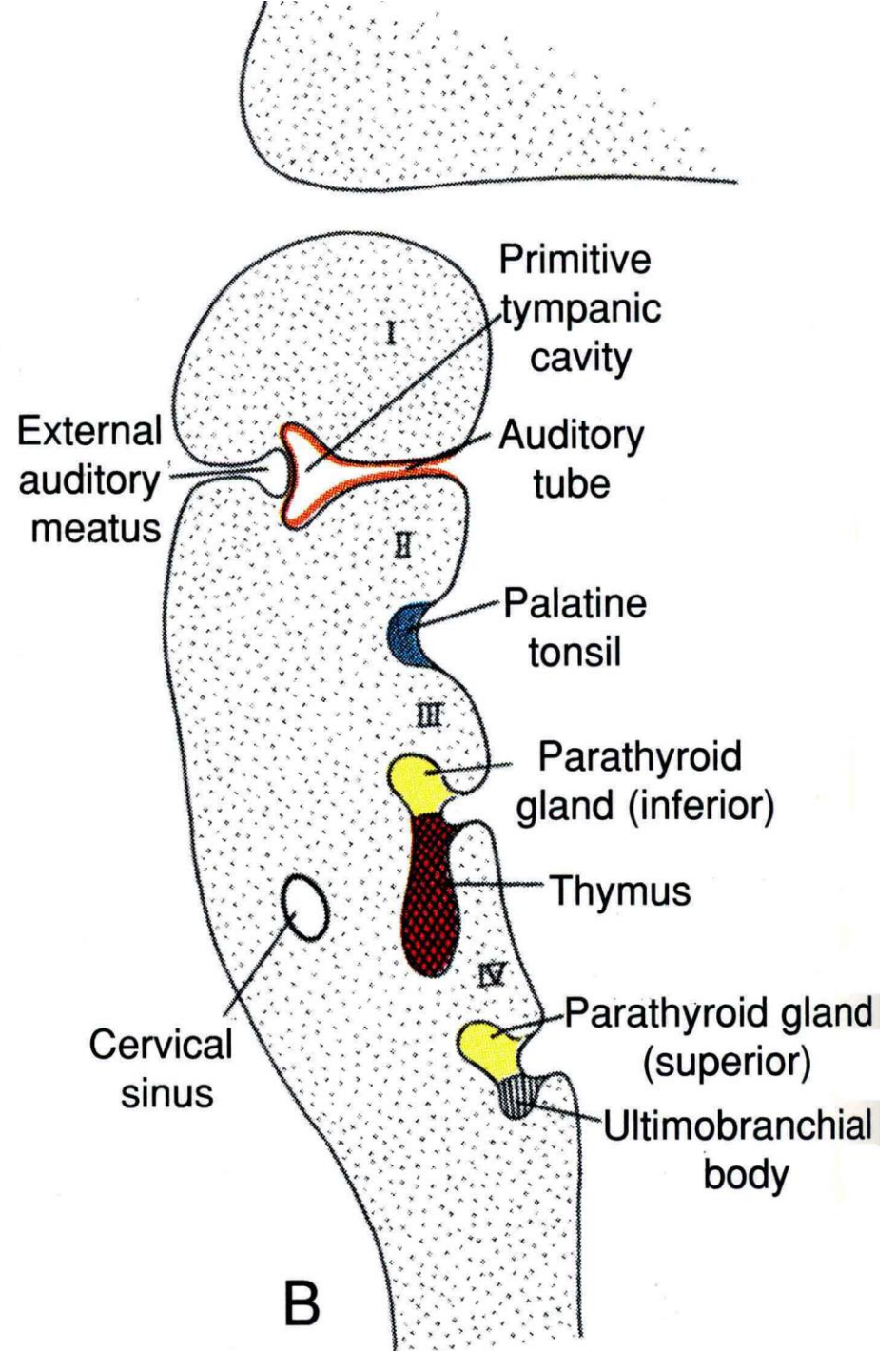
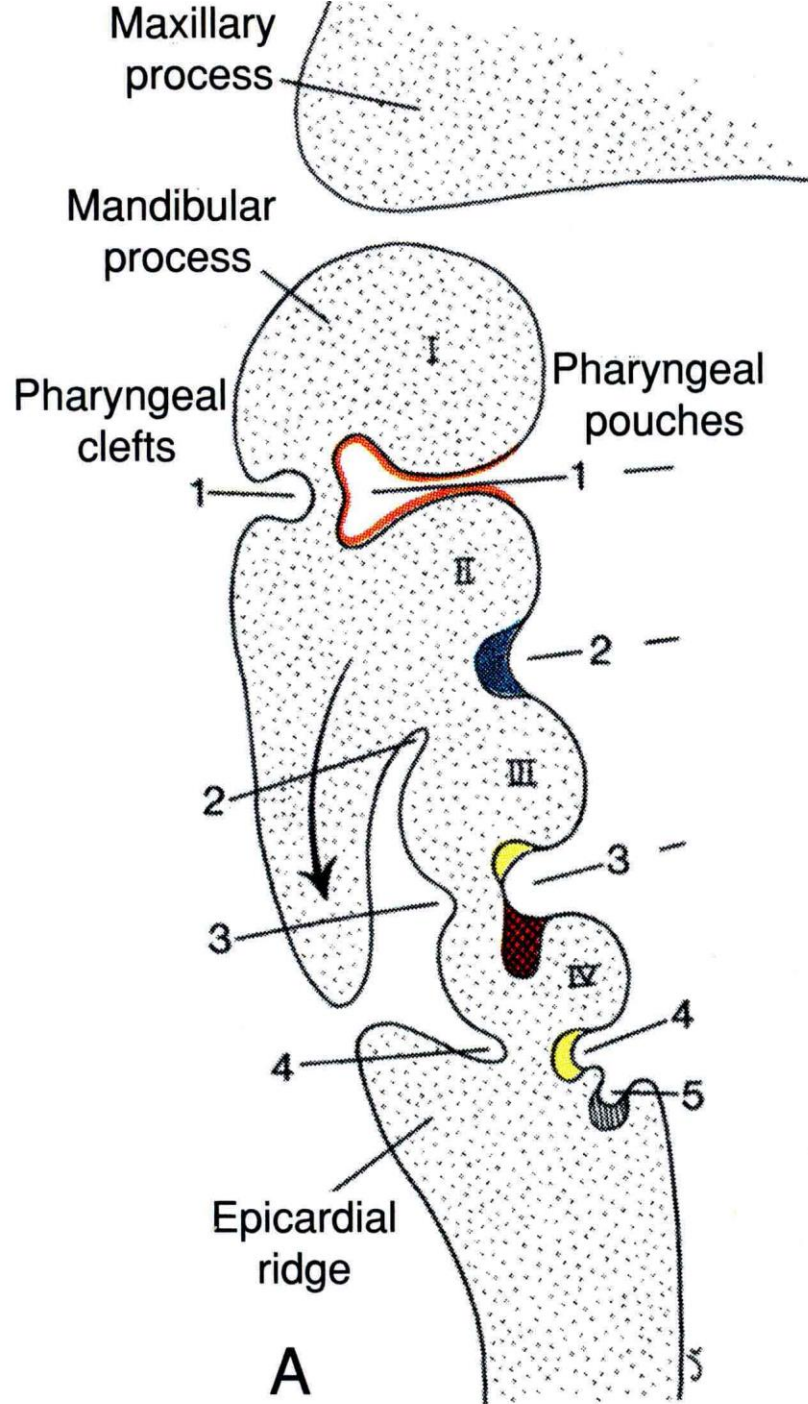








Faryngeální výchlípky



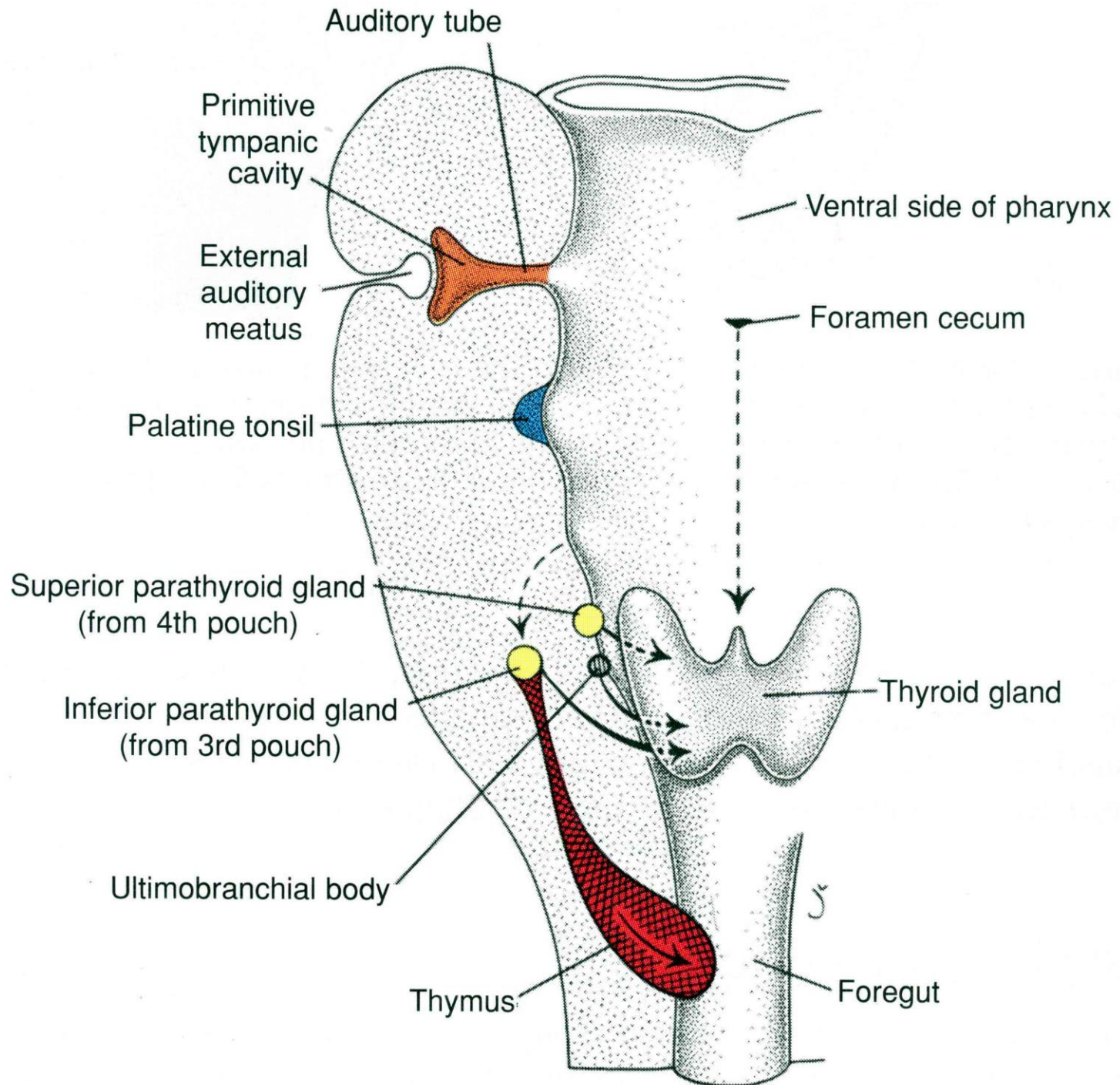
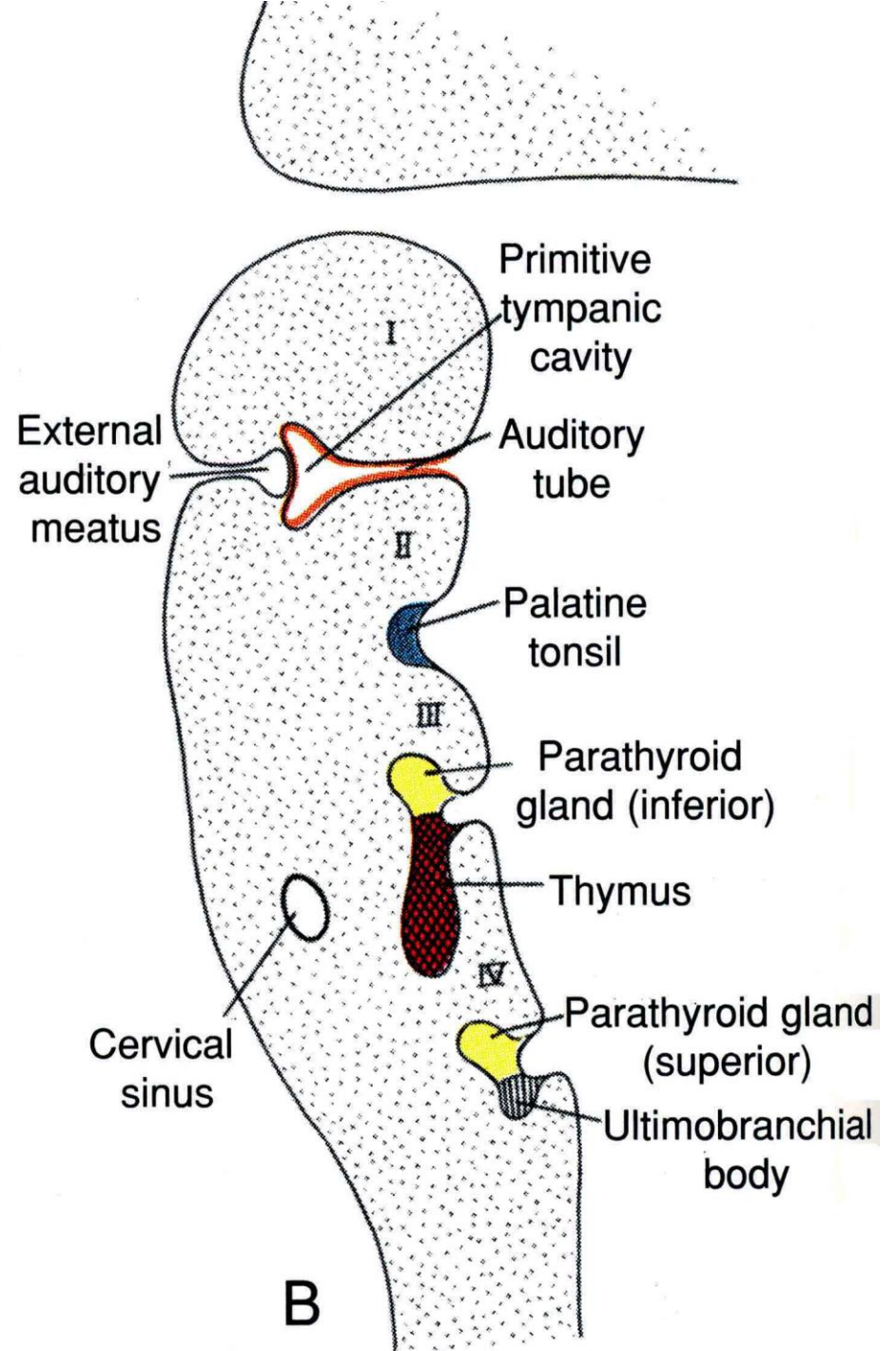
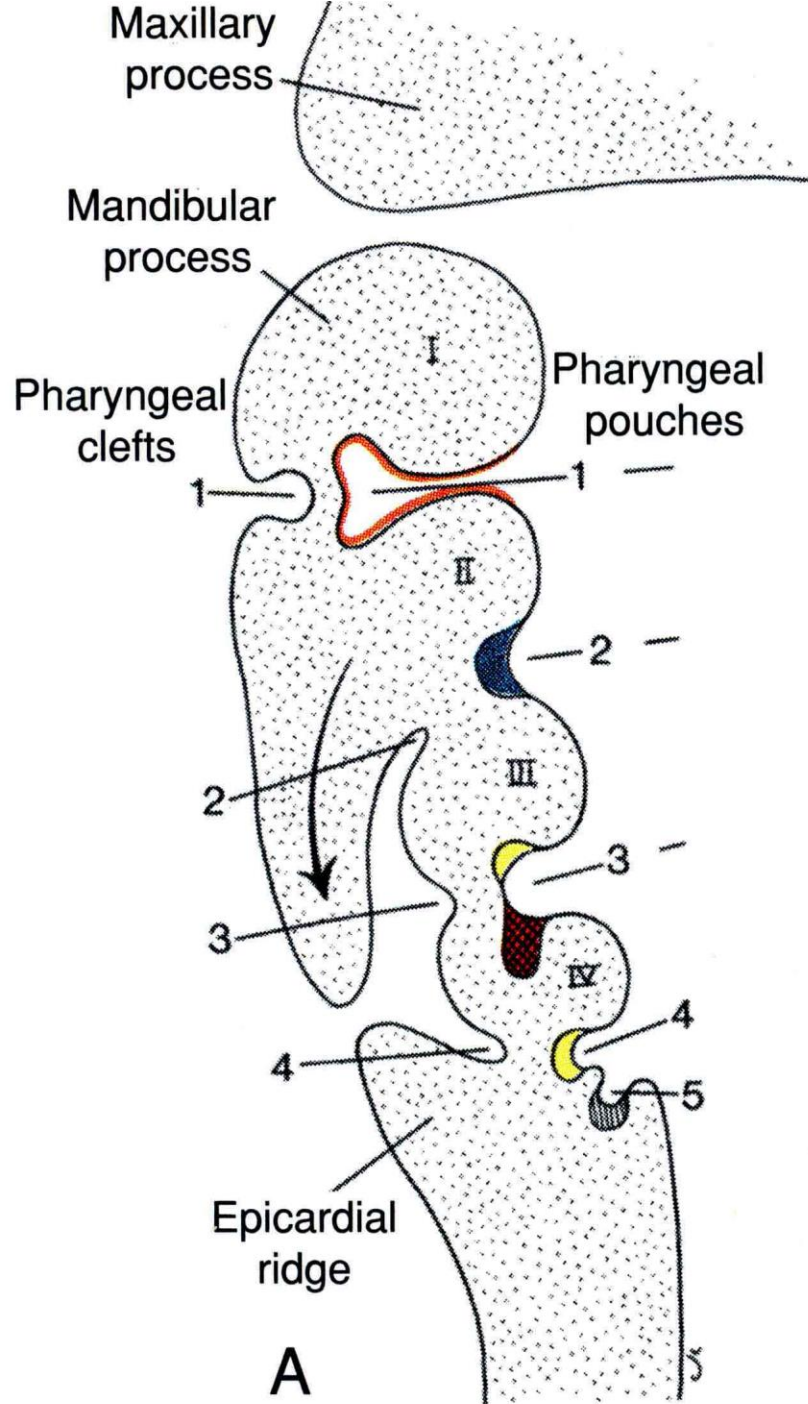
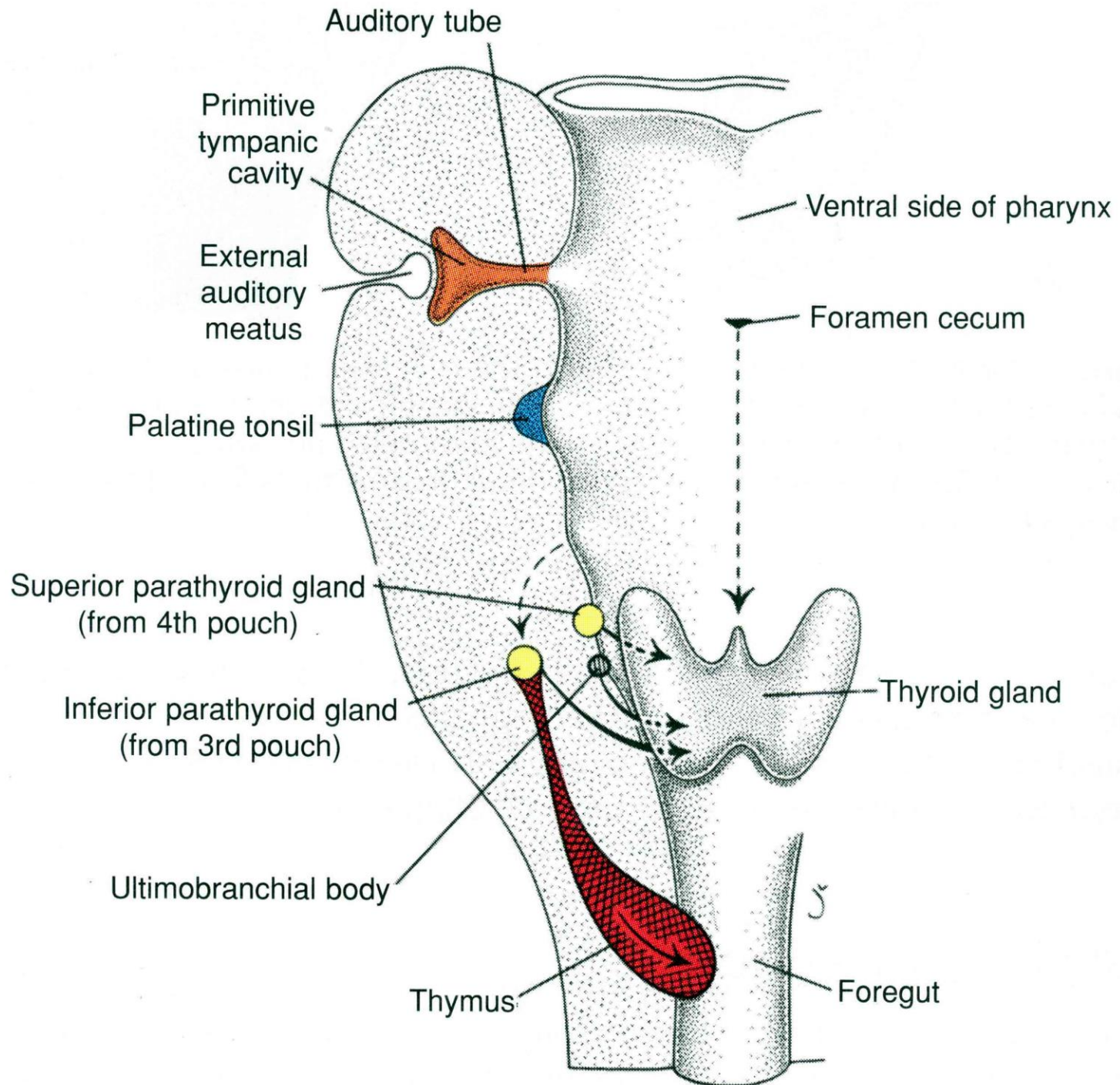


TABLE 17.2 *Derivatives of the Pharyngeal Pouches*

Pharyngeal Pouch	Derivatives
1	Tympanic (middle ear) cavity
	Auditory (eustachian) tube
2	Palatine tonsils
	Tonsillar fossa
3	Inferior parathyroid gland
	Thymus
4	Superior parathyroid gland ultimobranchial body (parafollicular [C] cells of the thyroid gland)

Faryngeální štěrbiny





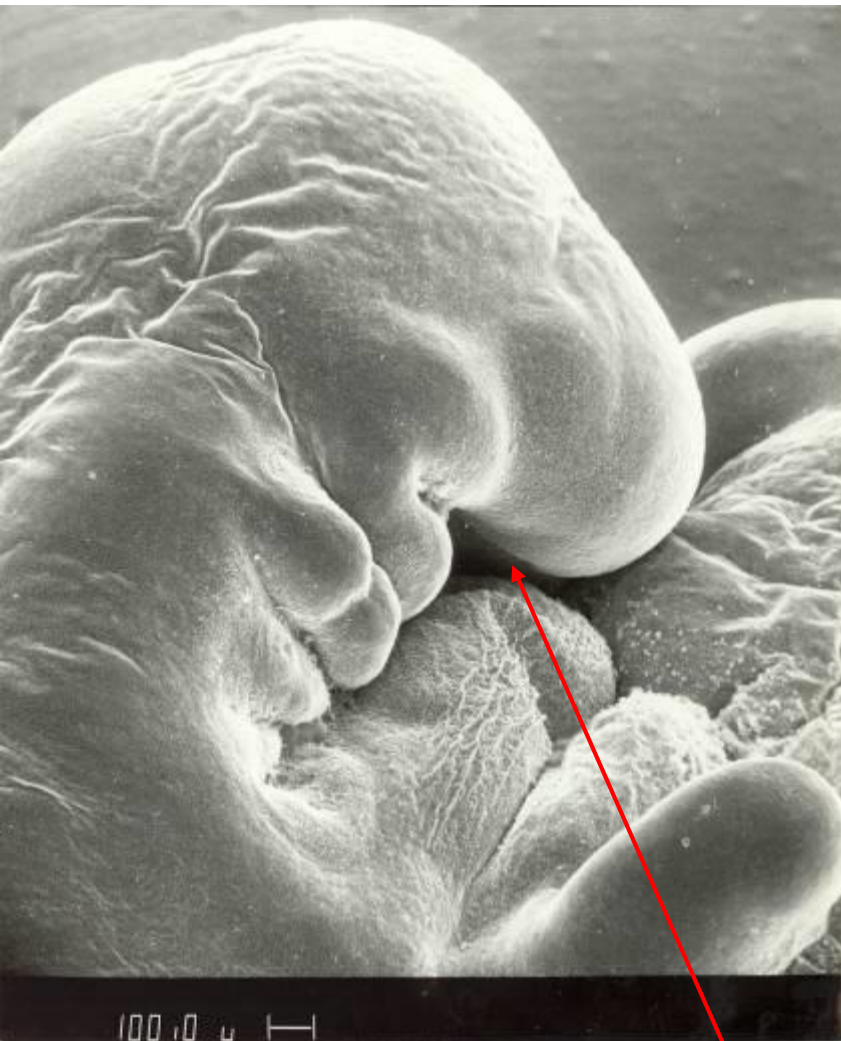
Malá Beátka dobývá svět. Do osvěty o Treacher-Collins syndromu se zapojují i celebrity



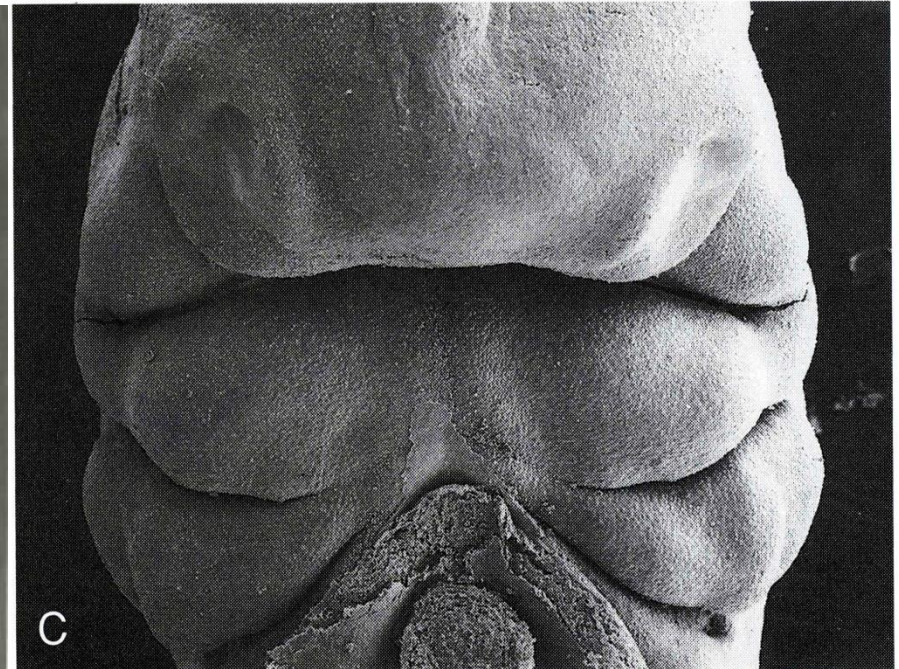
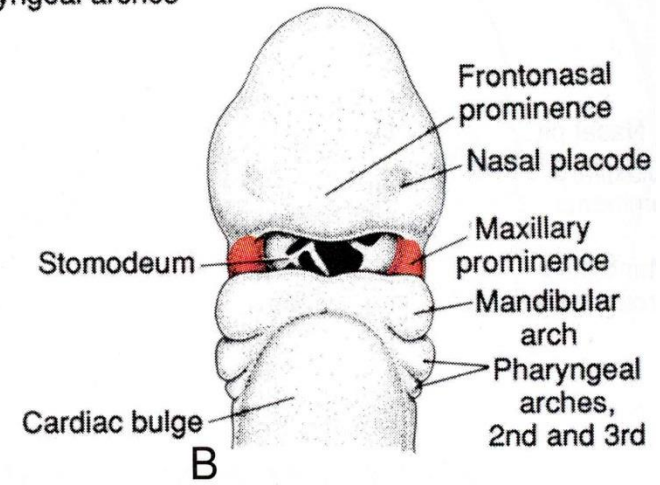
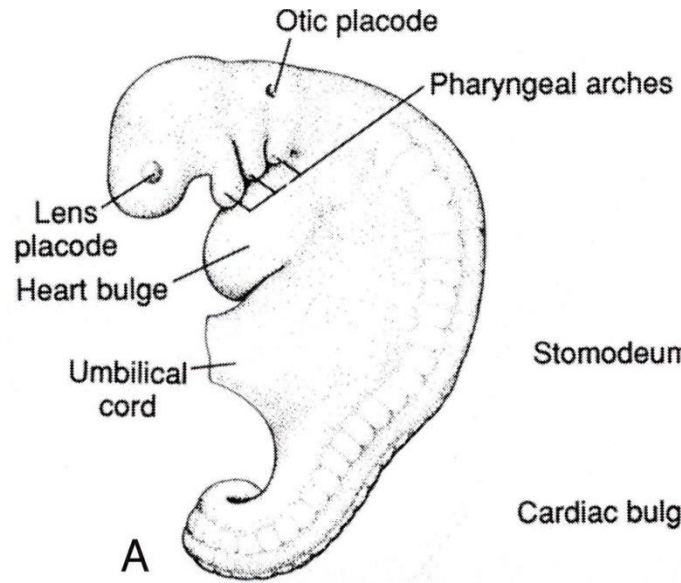
úterý, 12. února 2019, 18:54

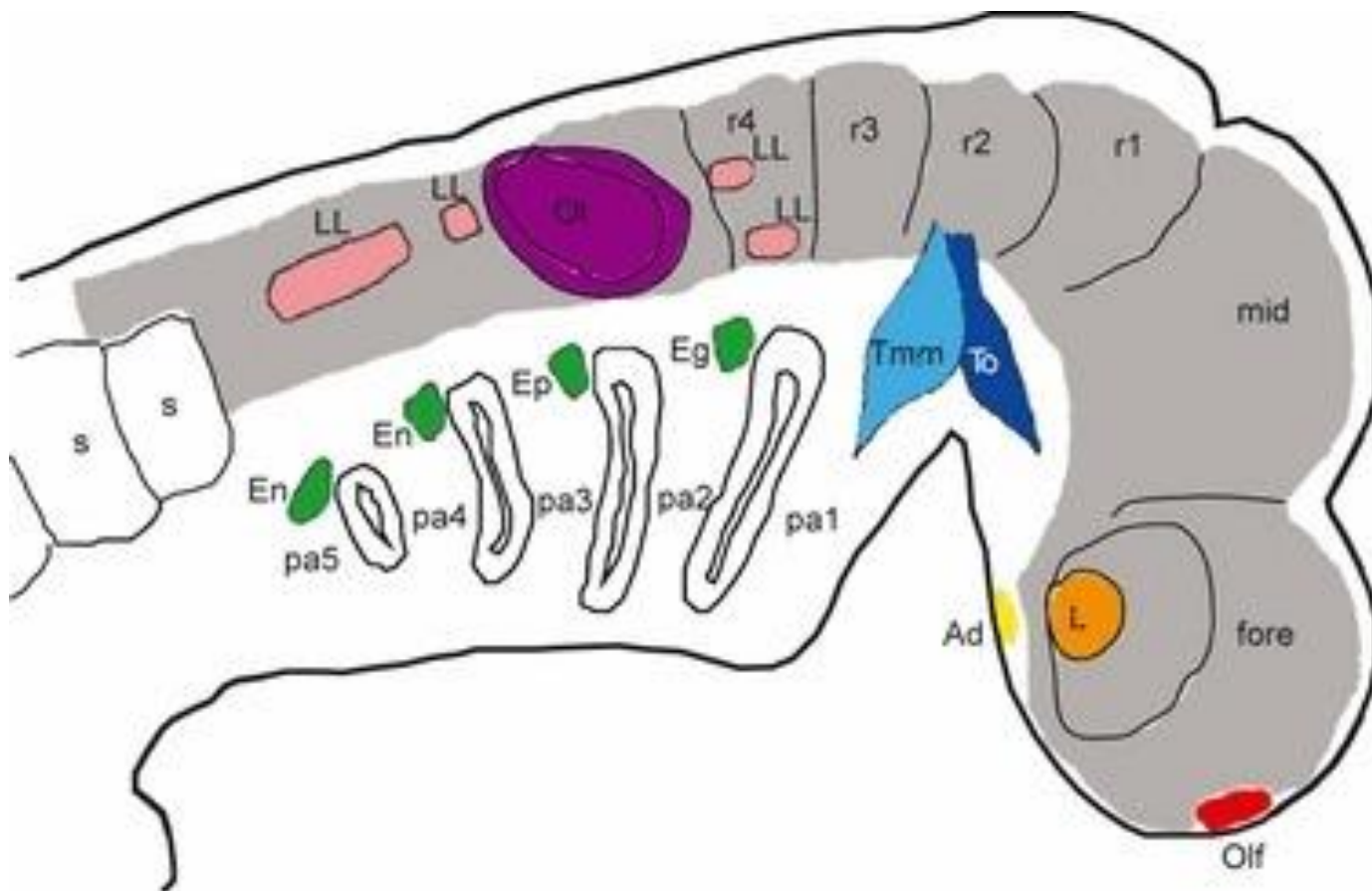
O malé Beátce, která trpí Treacher-Collins syndromem (TCS), už jsme psali v jednom z dílů pravidelného seriálu (Ne)Obyčejní. Její rodiče, Eliška a Dalibor, už se v té době snažili dostat do povědomí lidí, co vlastně TCS je. Jejich osvěta nabrala obrovských rozměrů a zapojují se do ní i slavné osobnosti.

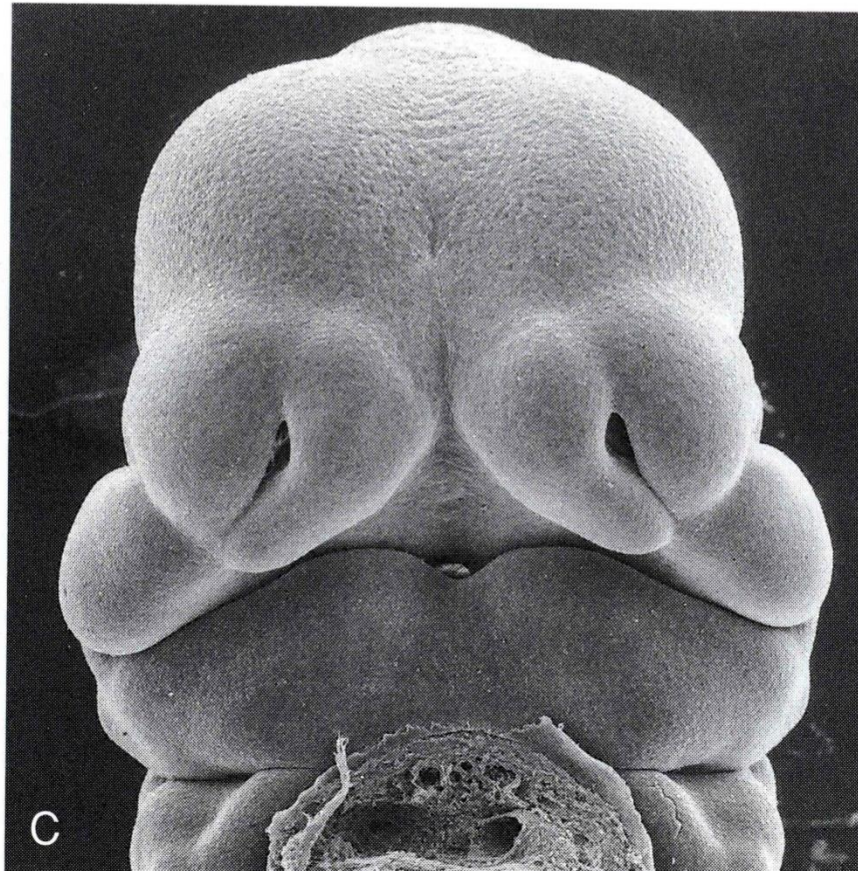
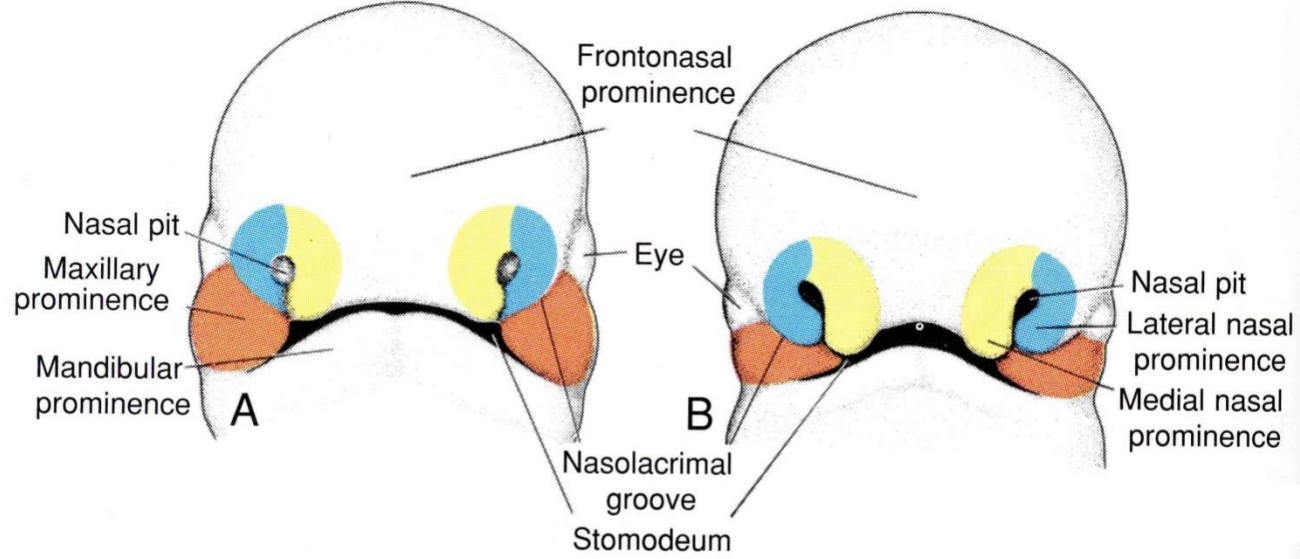
VÝVOJ OBLIČEJE, ÚSTNÍ A NOSNÍ DUTINY, PATRA A JAZYKA

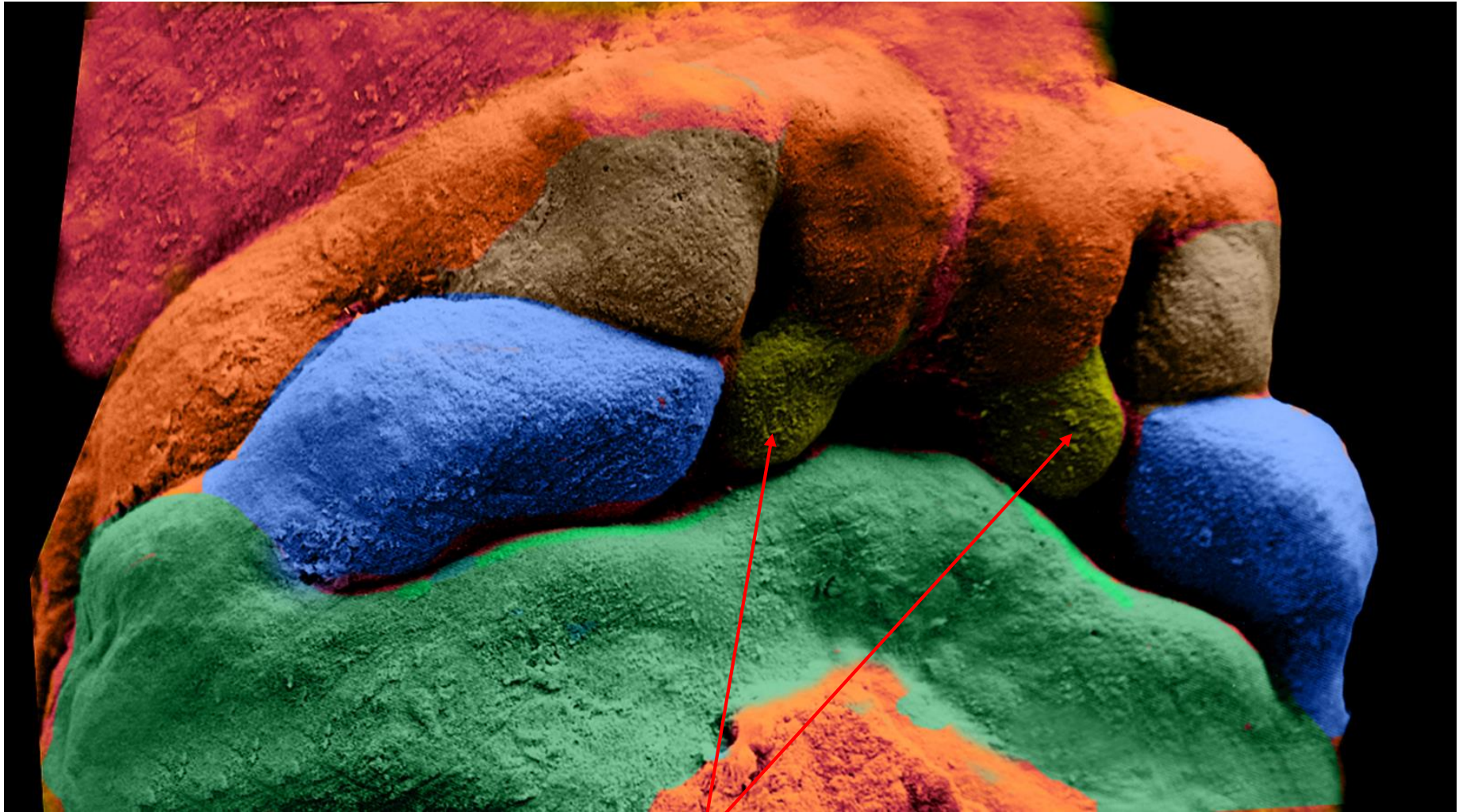


stomodeum



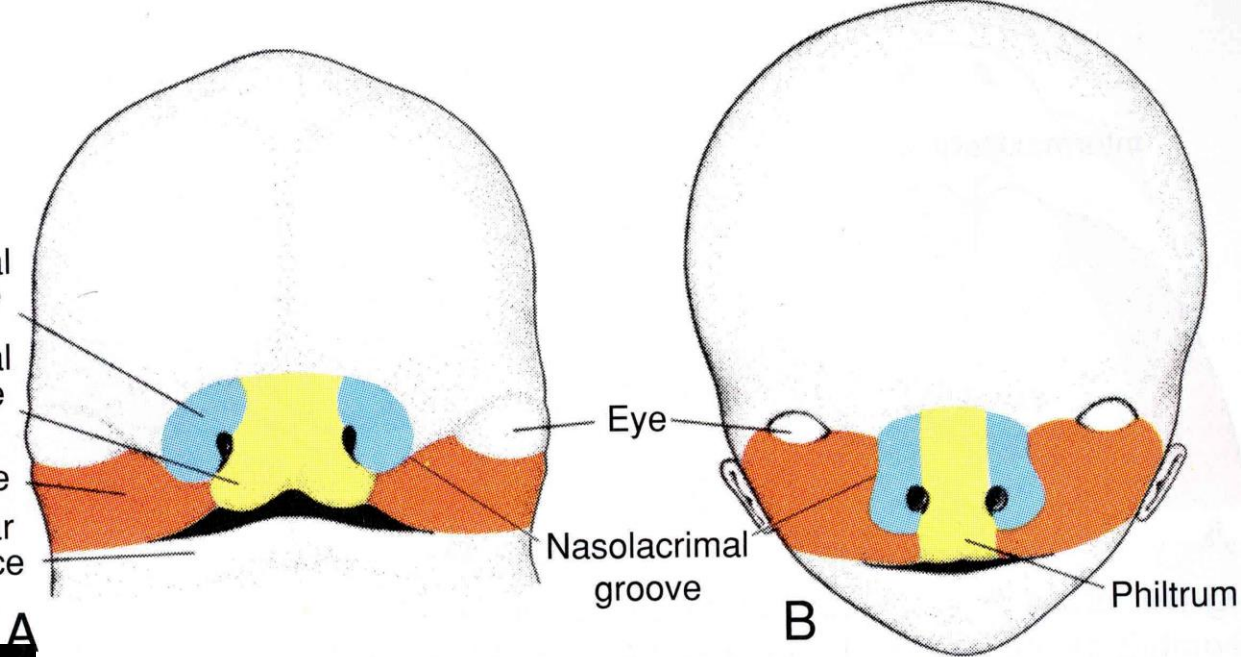






premaxilární výběžky

Lateral nasal
prominence
Medial nasal
prominence
Maxillary
prominence
Mandibular
prominence



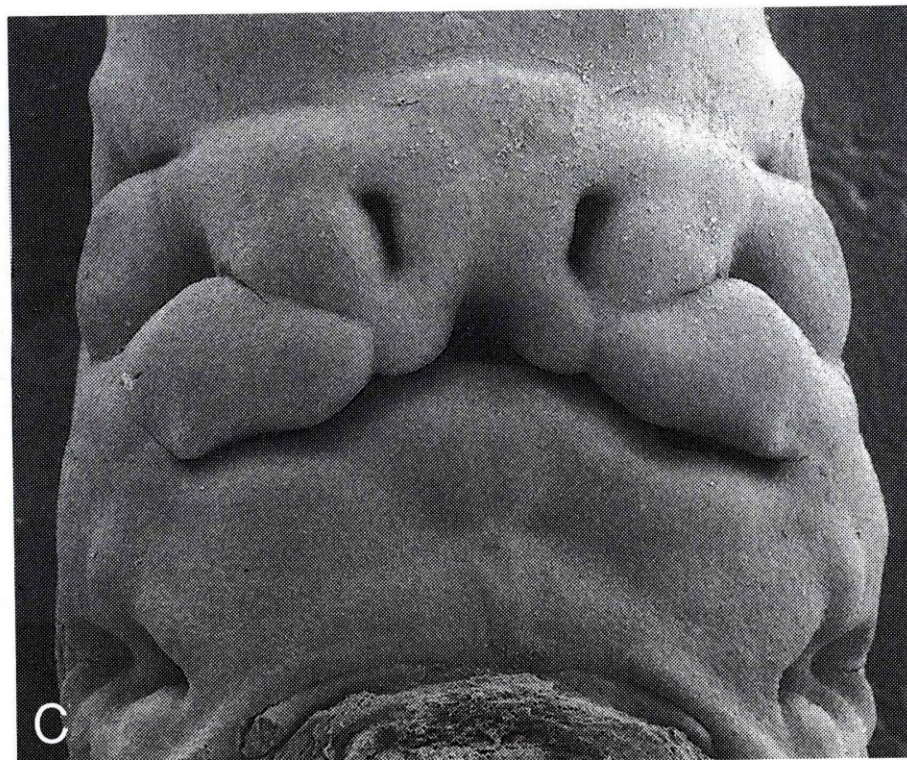
Eye

Nasolacrimal
groove

Philtrum

A

B

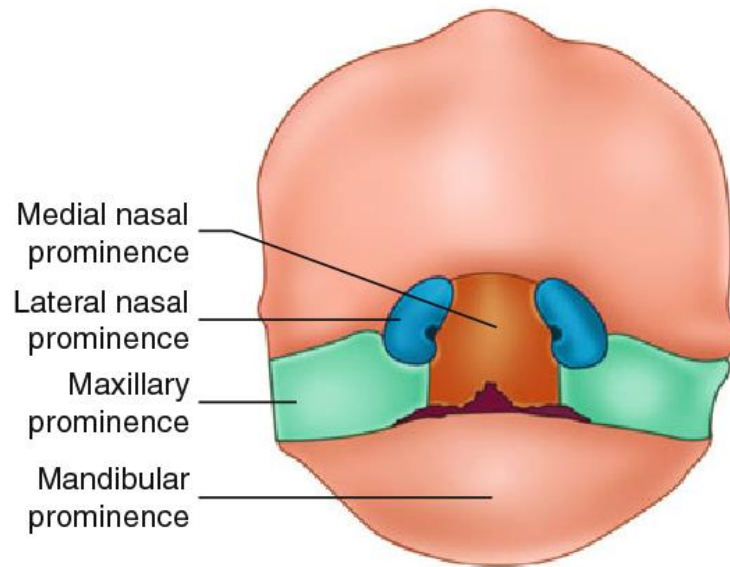


C

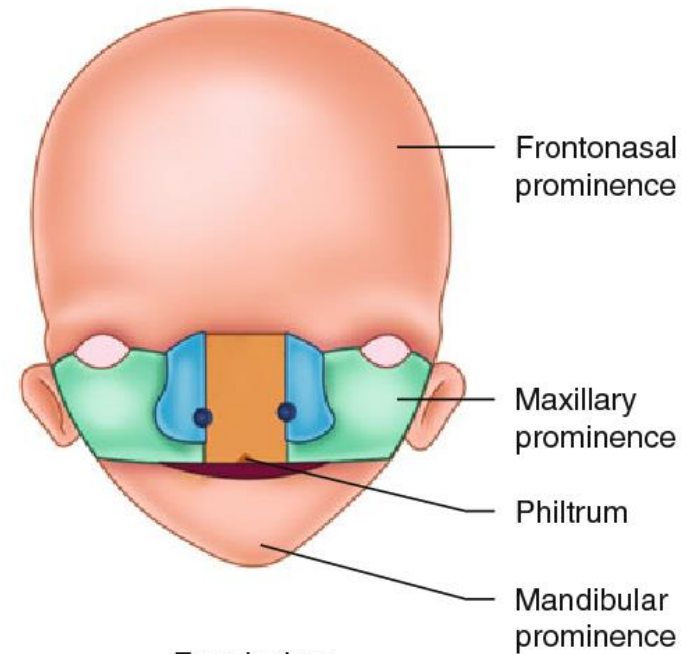
intermaxilární segment



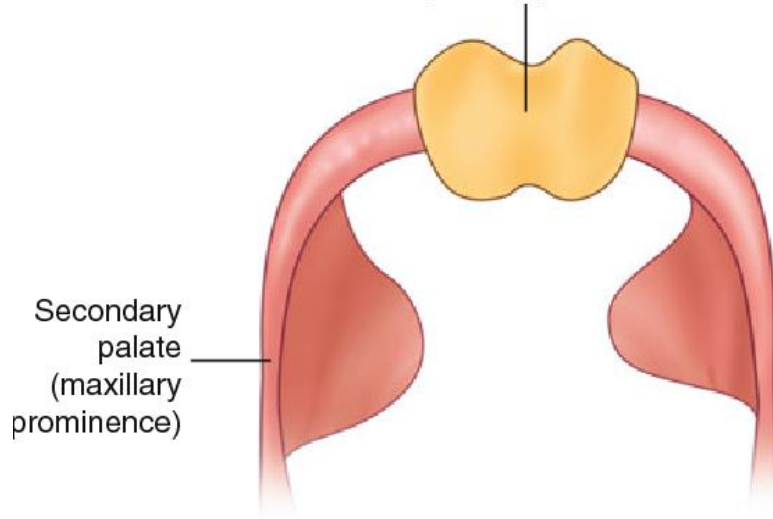
Face



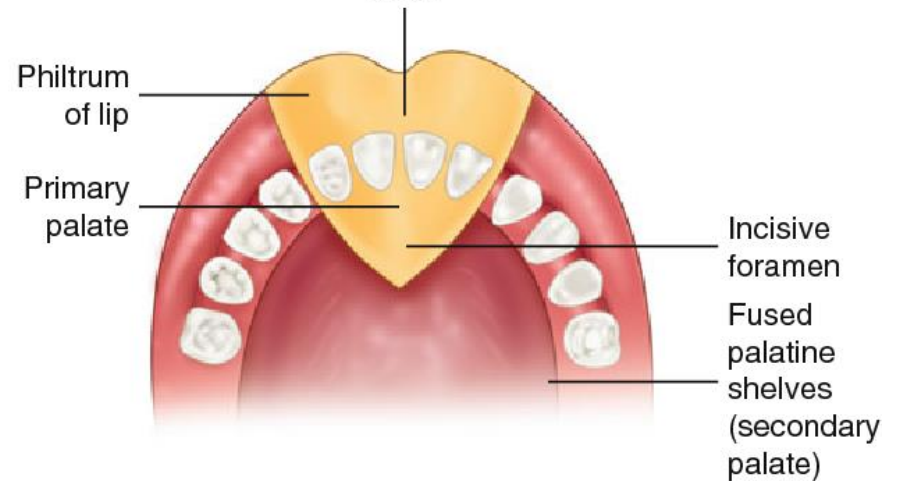
Development



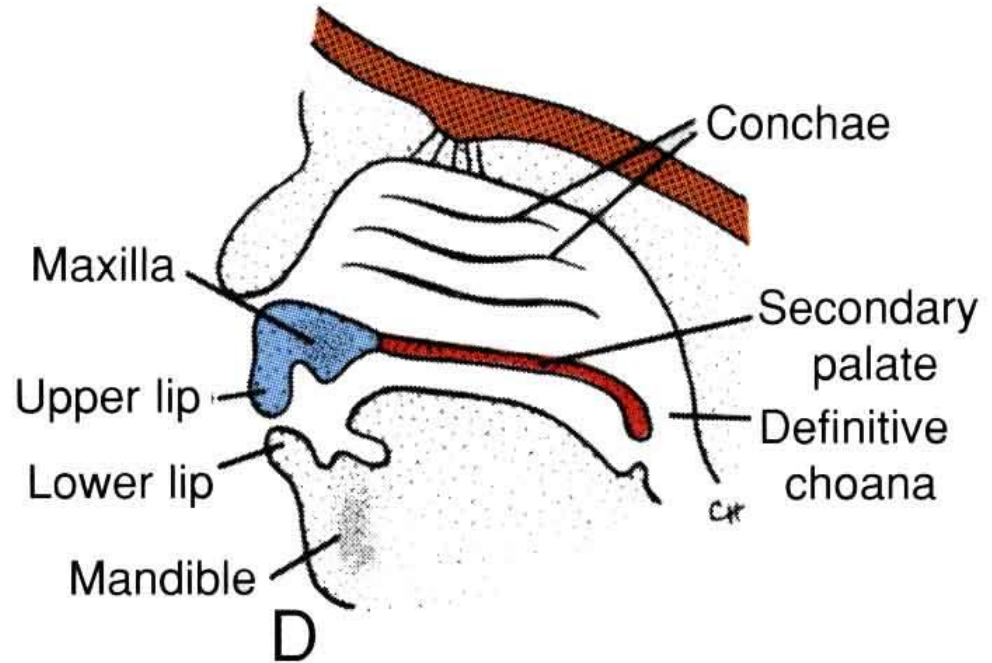
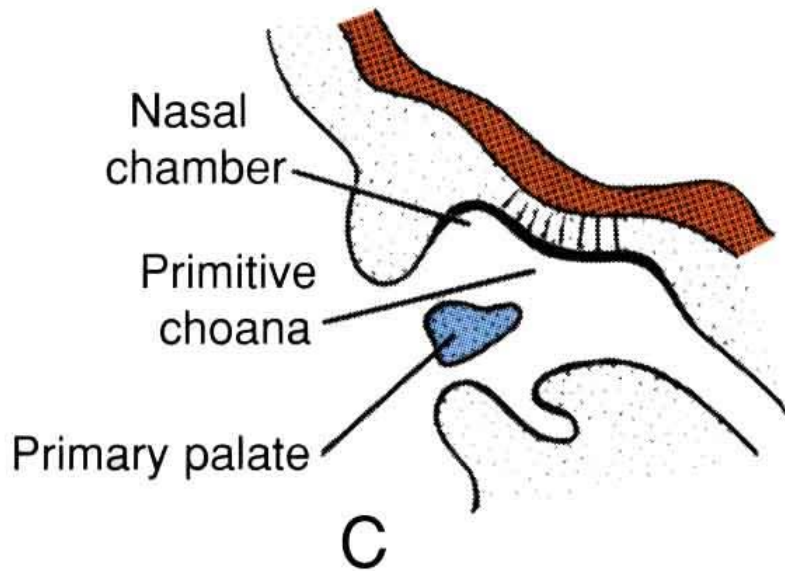
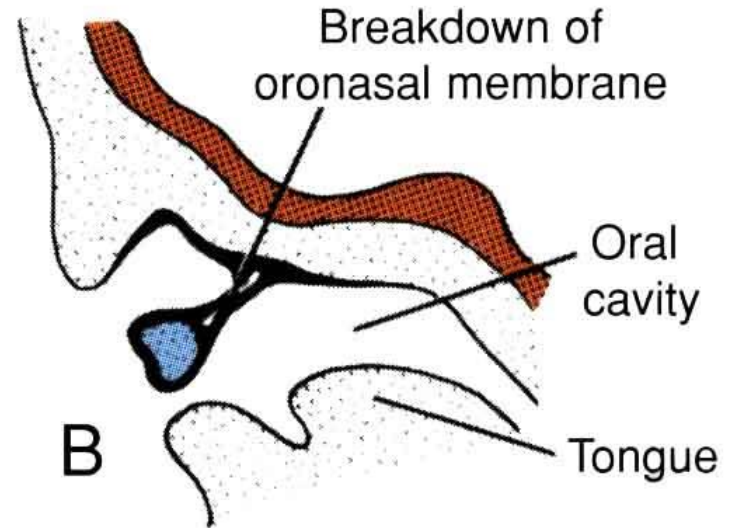
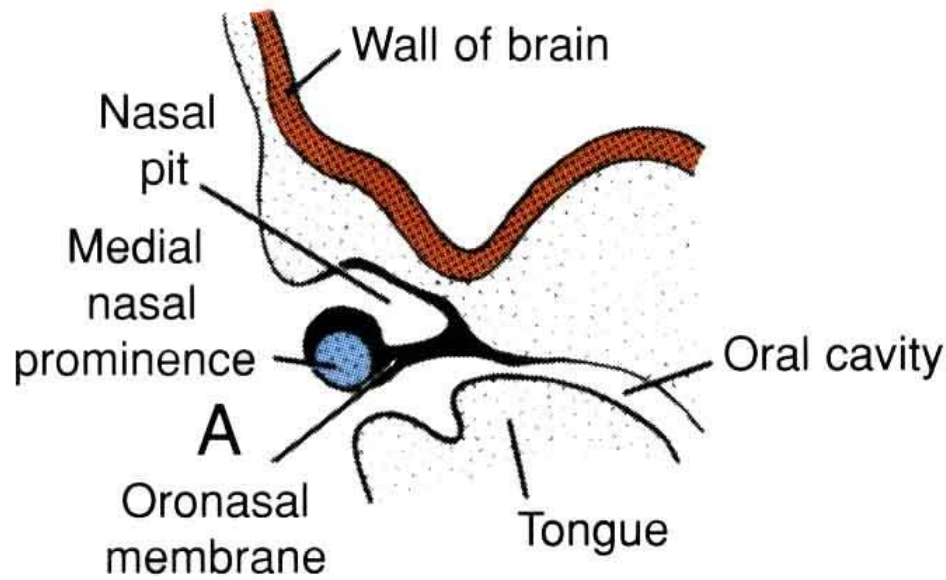
Intermaxillary segment primary palate



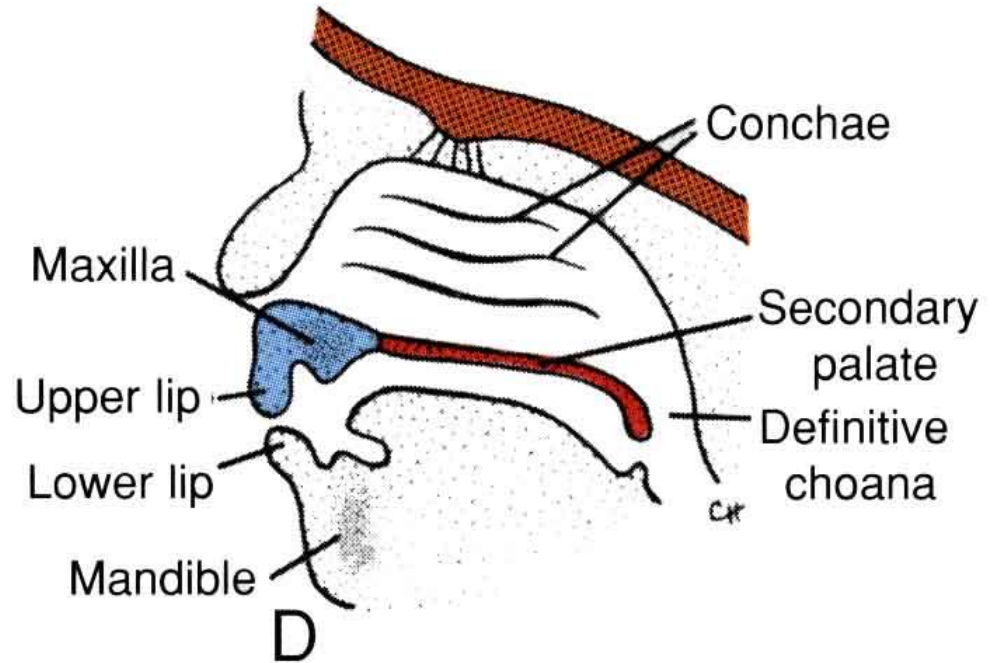
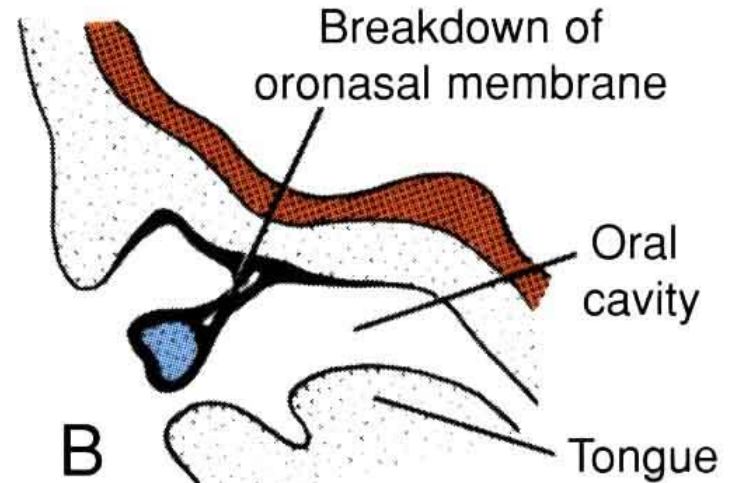
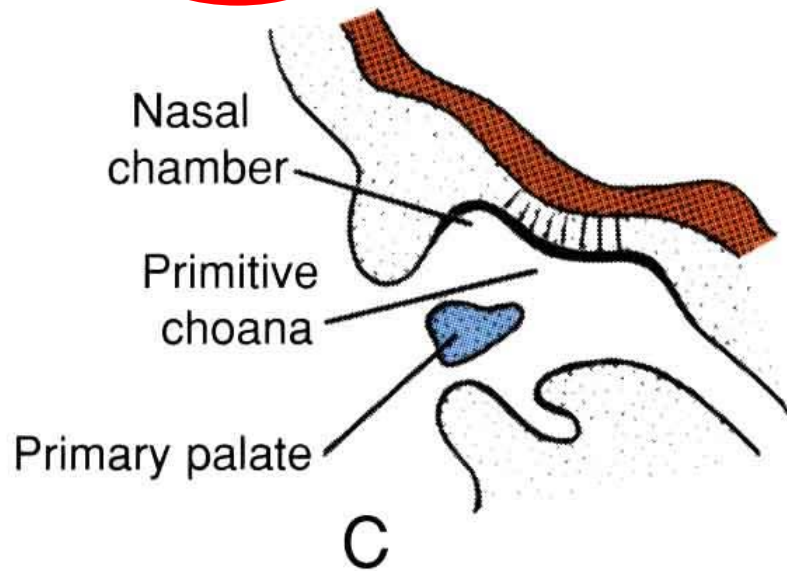
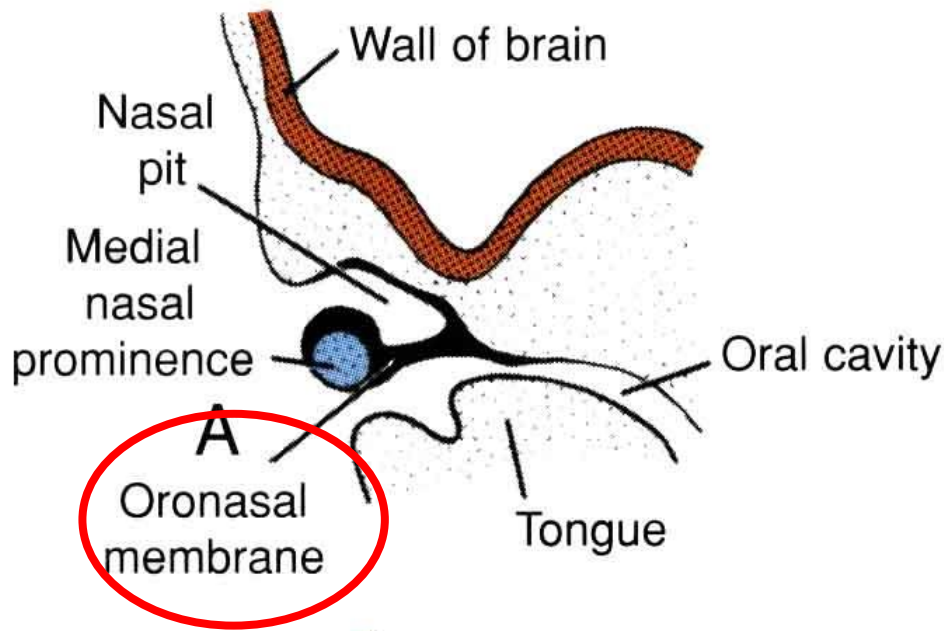
Four incisor teeth



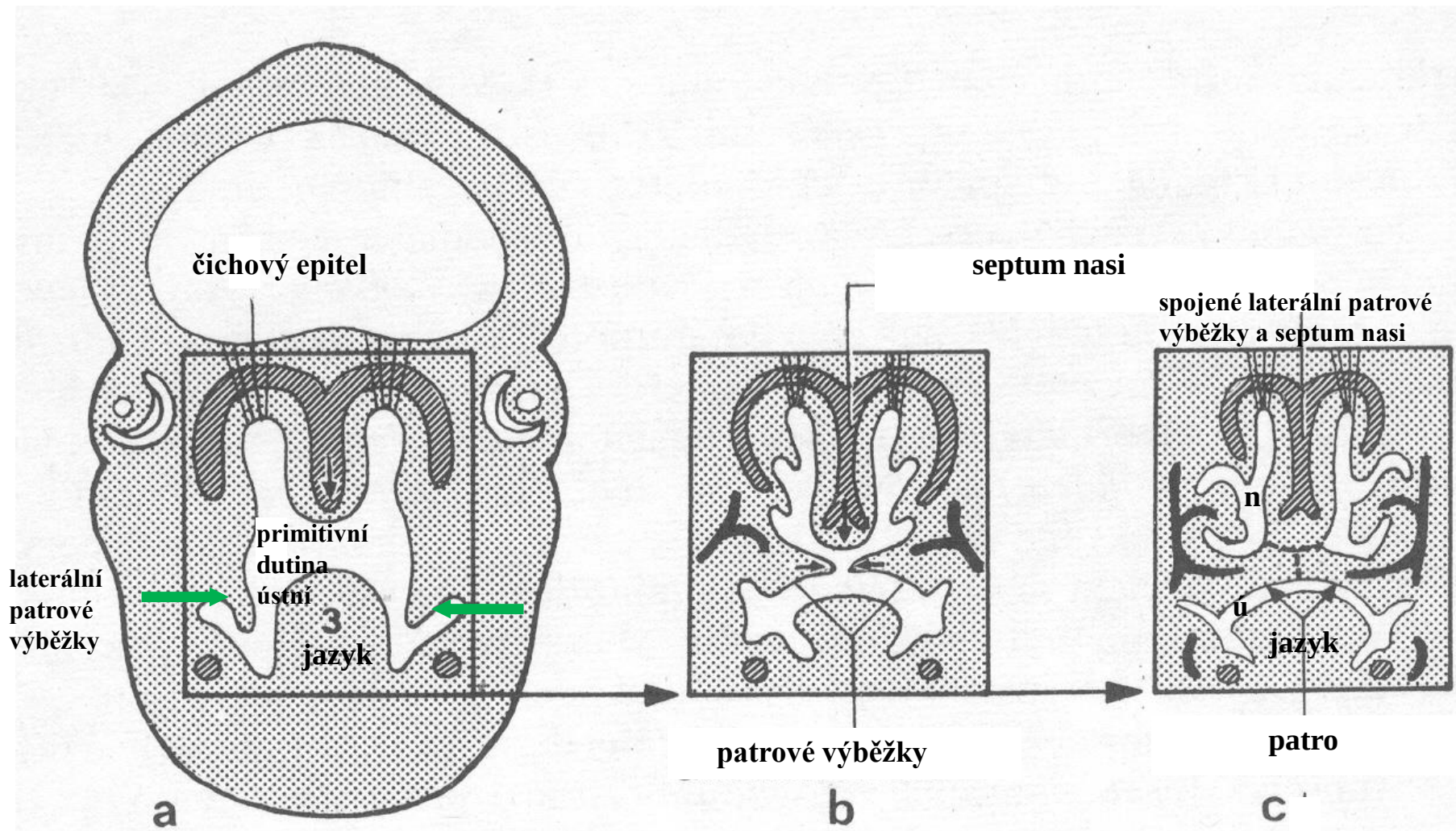
Vývoj nosní dutiny



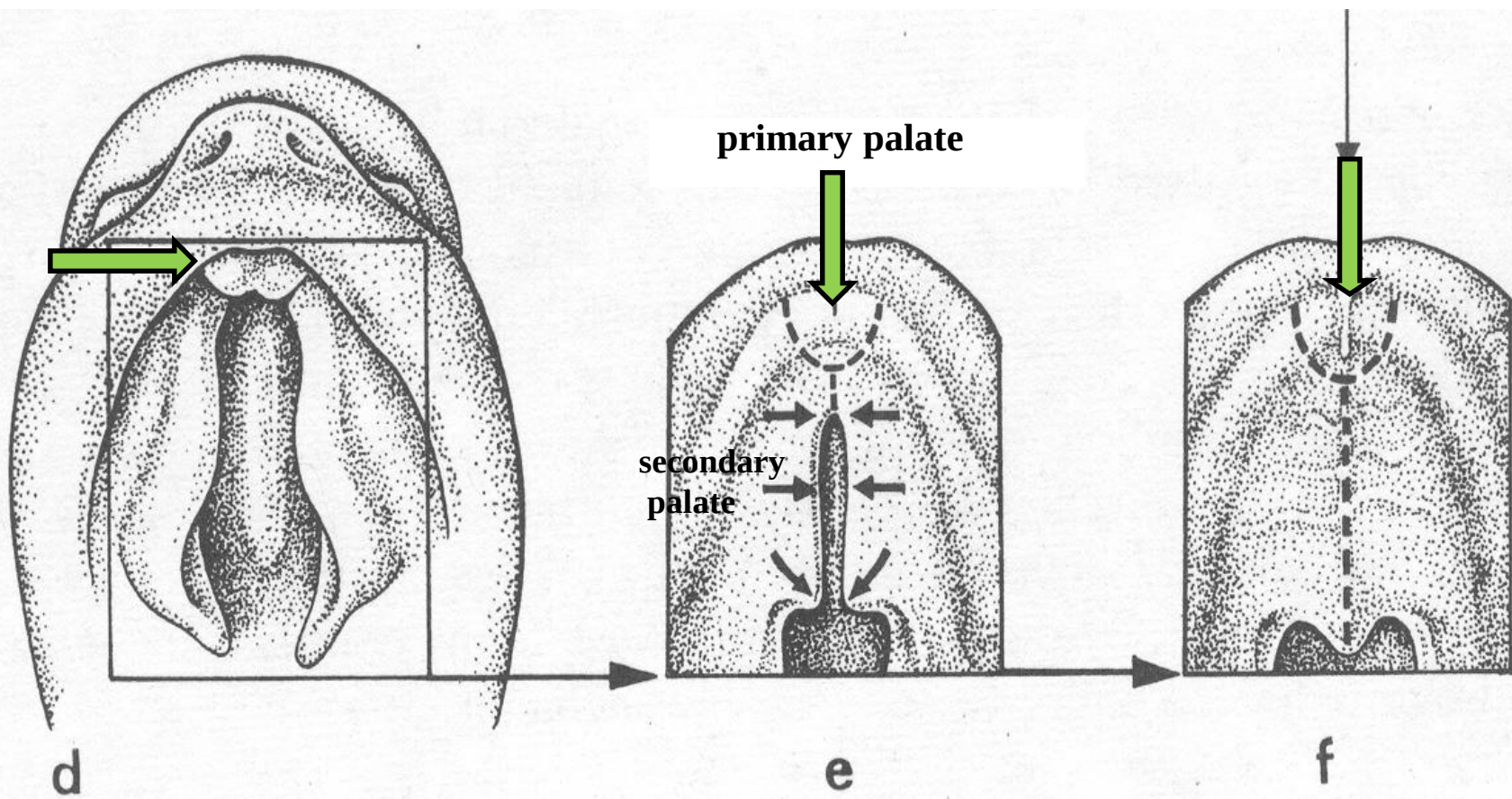
Vývoj nosní dutiny

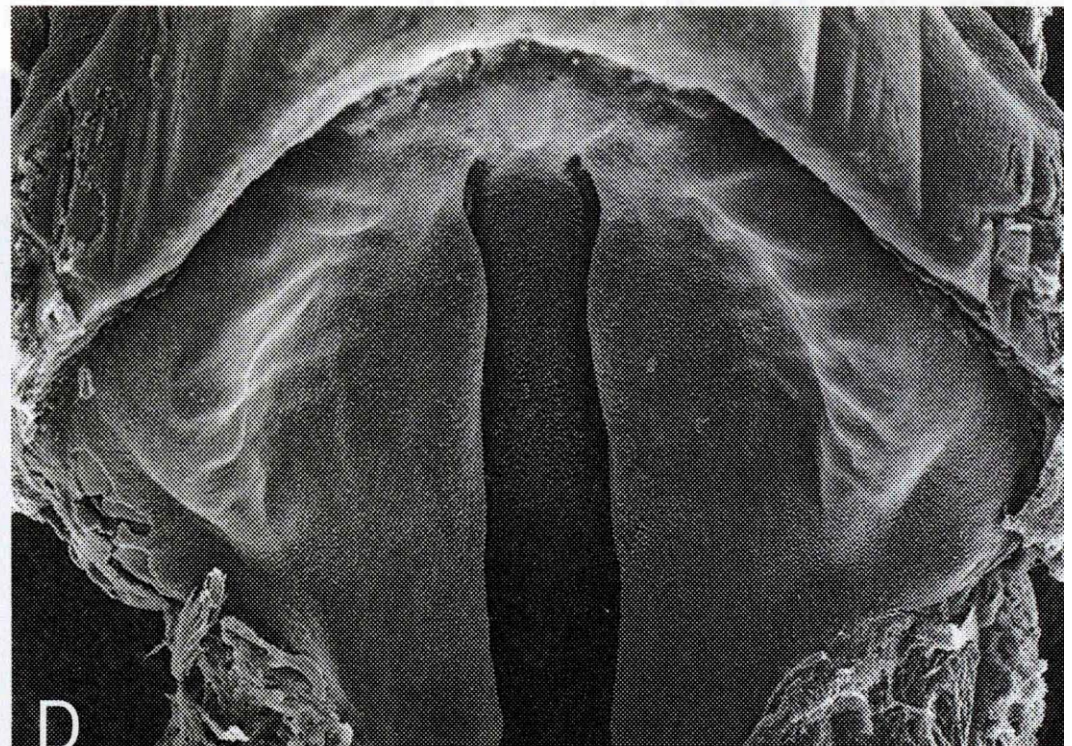
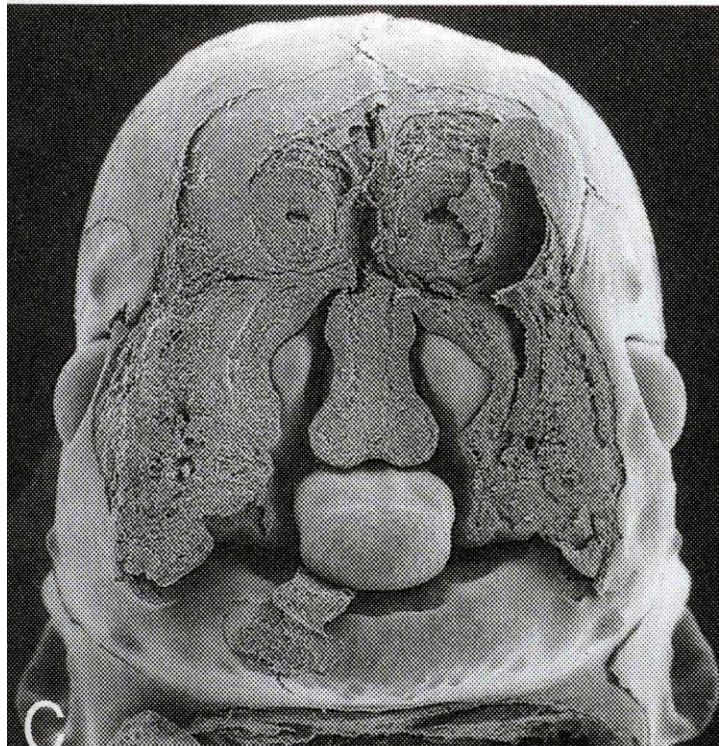
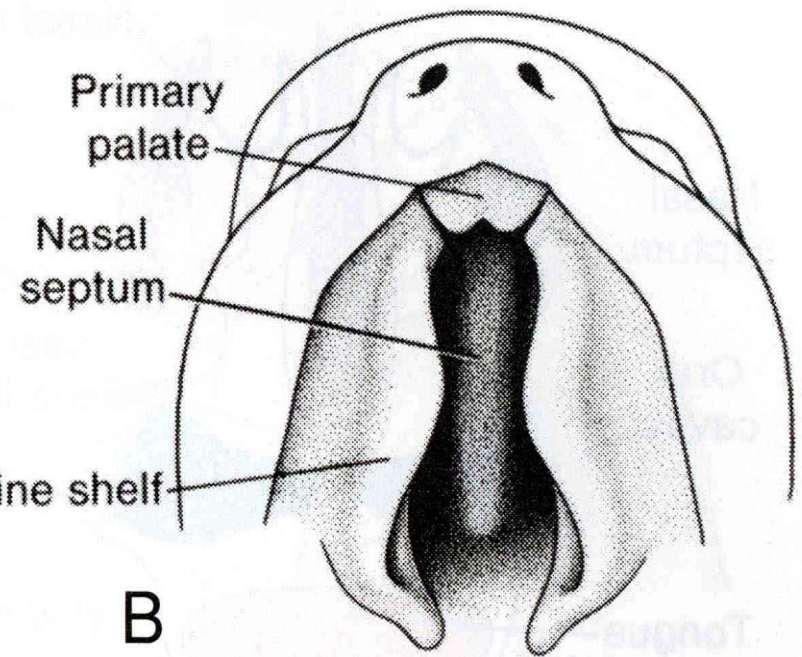
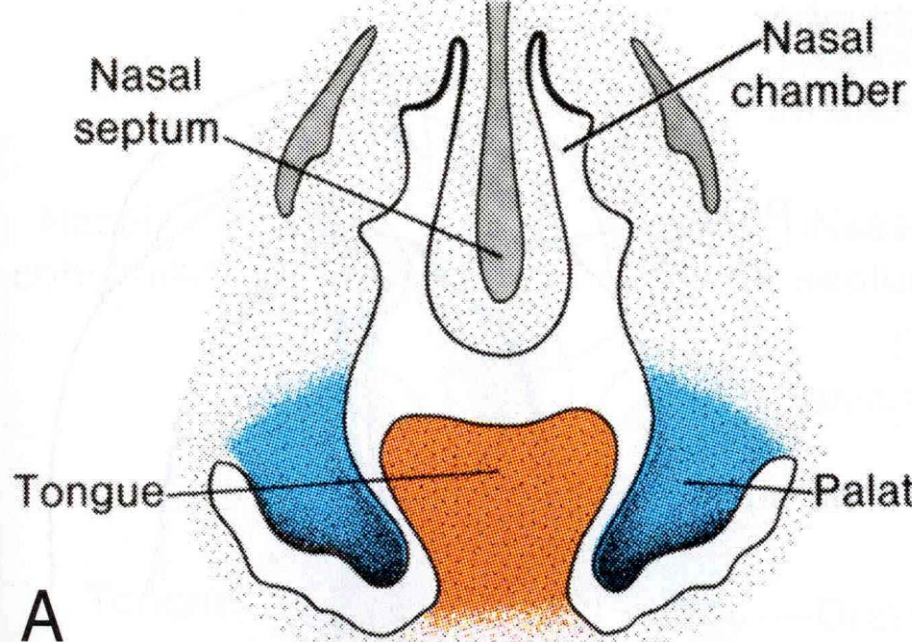


vývoj patrových výběžků, patra, vývoj dutiny nosní, dutiny ústní

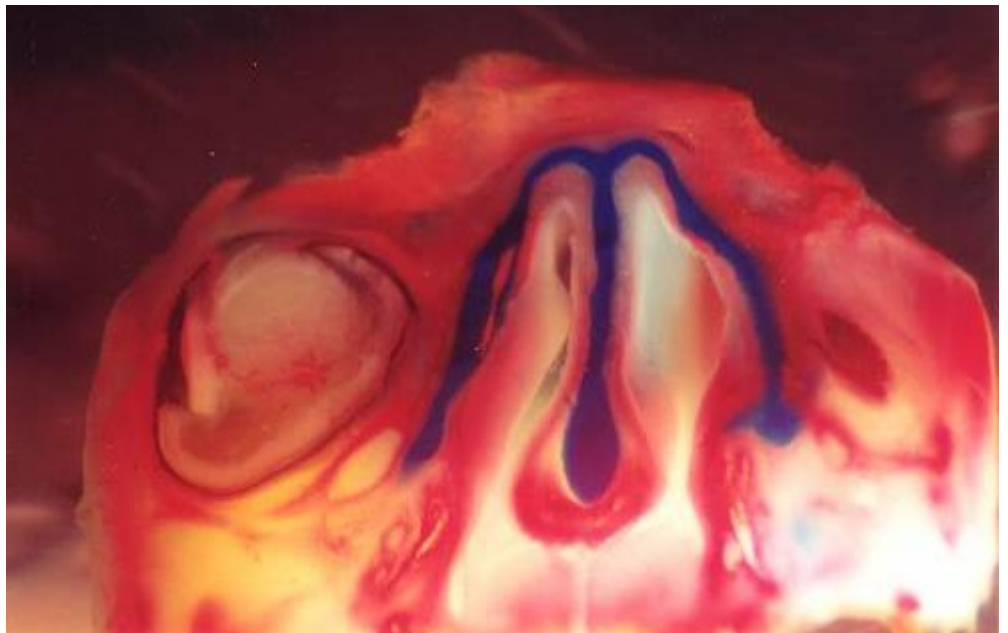


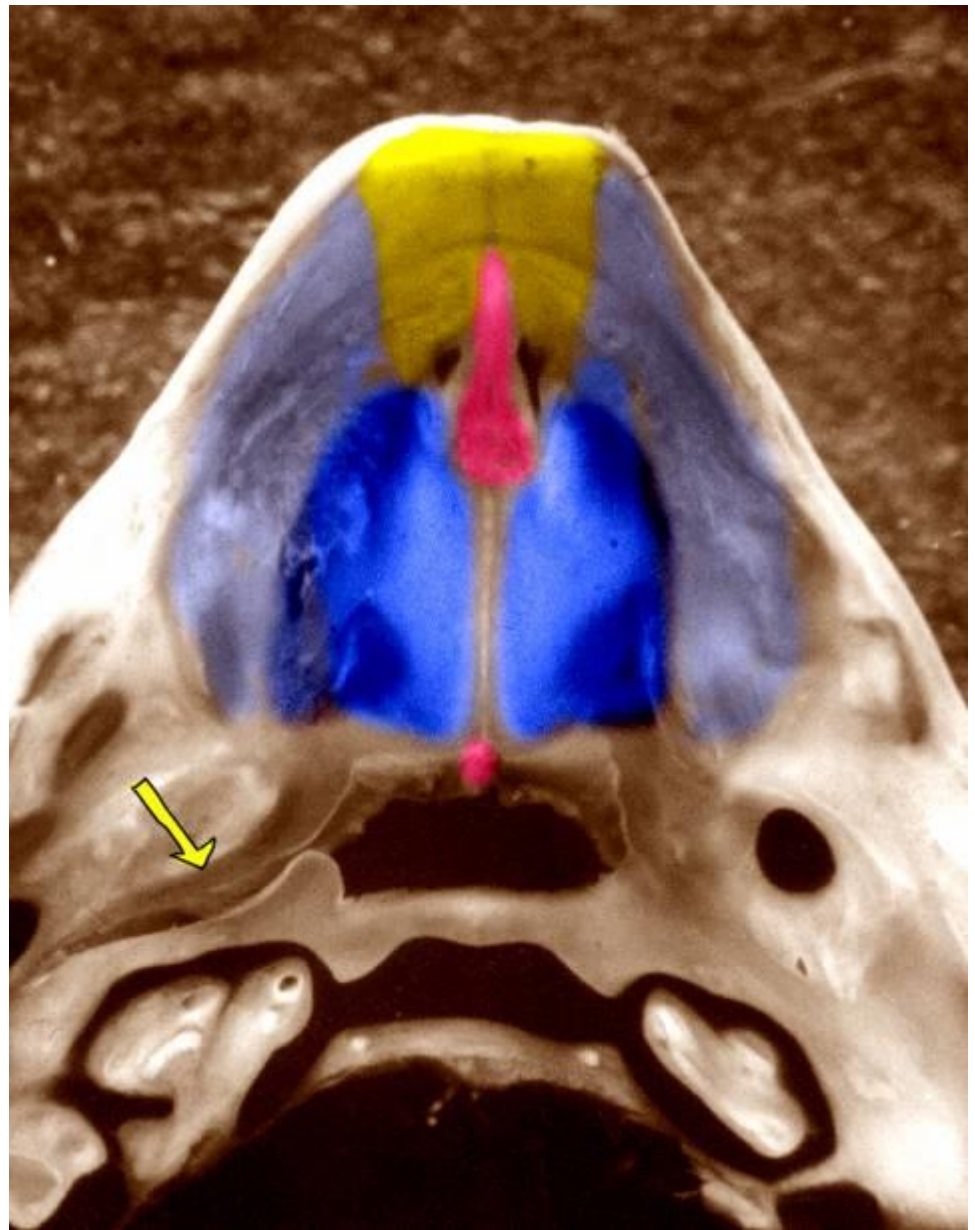
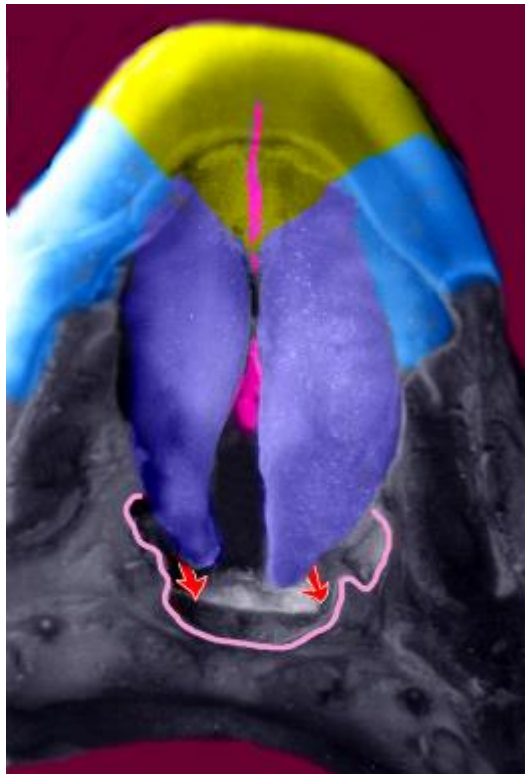
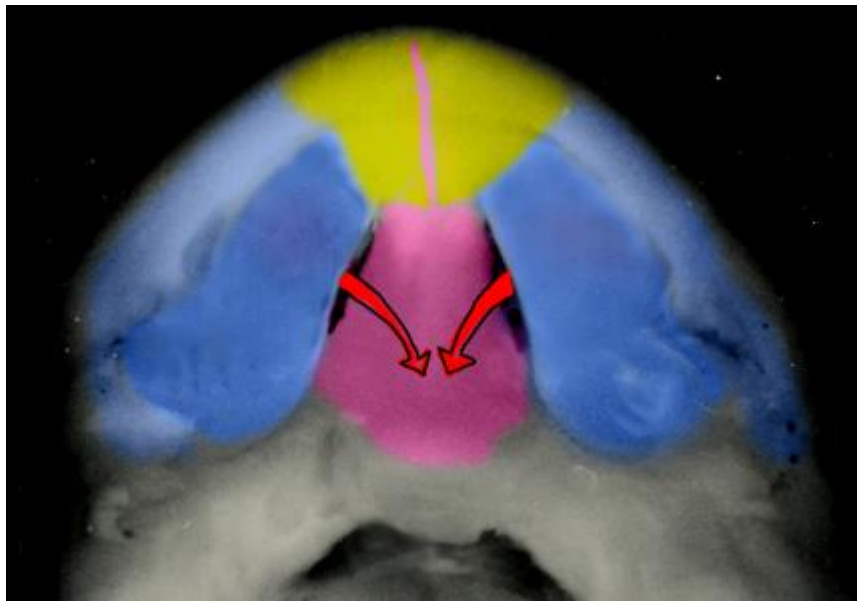
n= dutina nosní
ú= dutina ústní



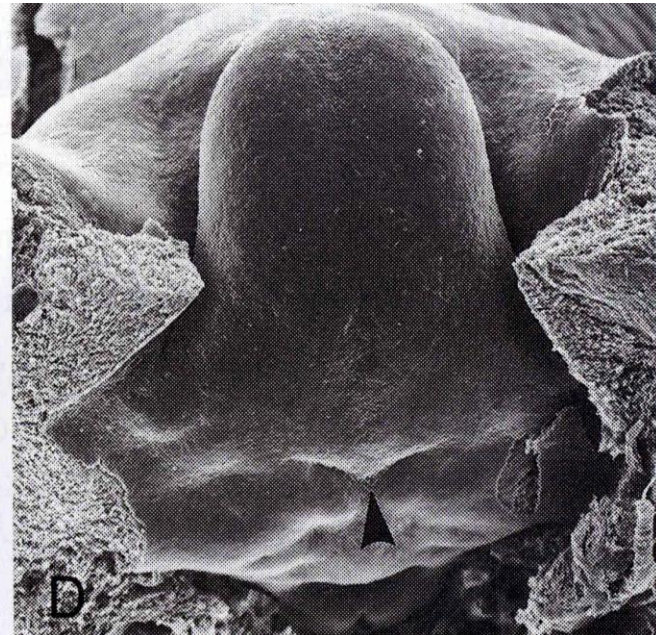
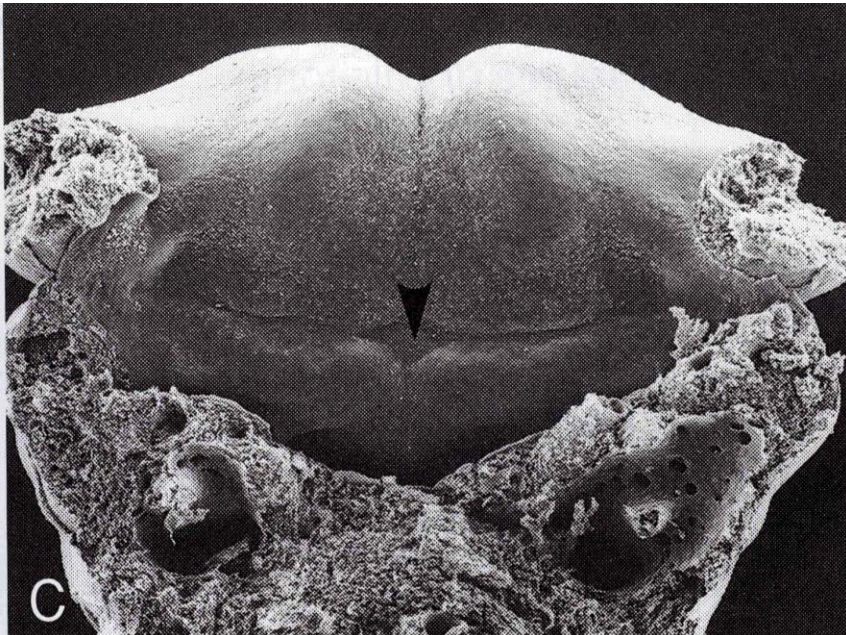
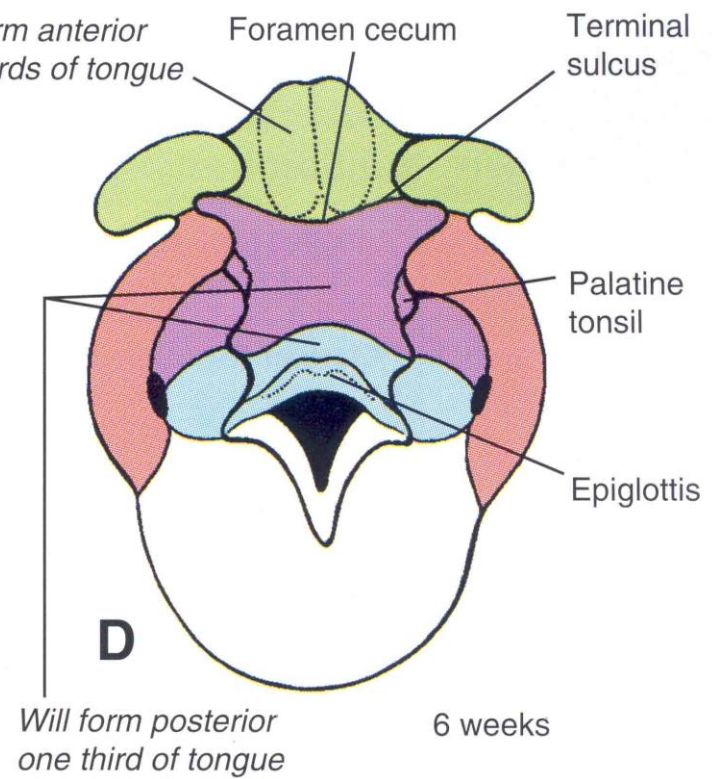
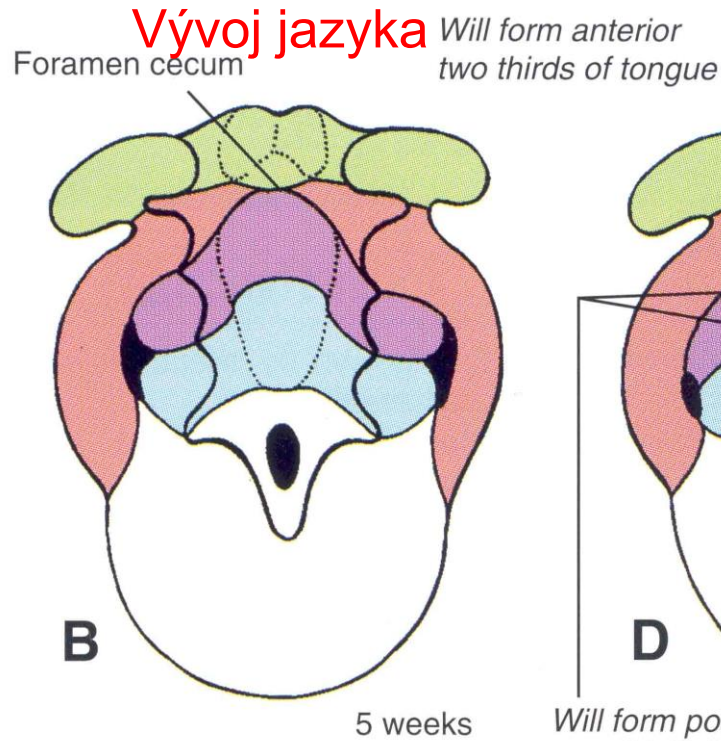
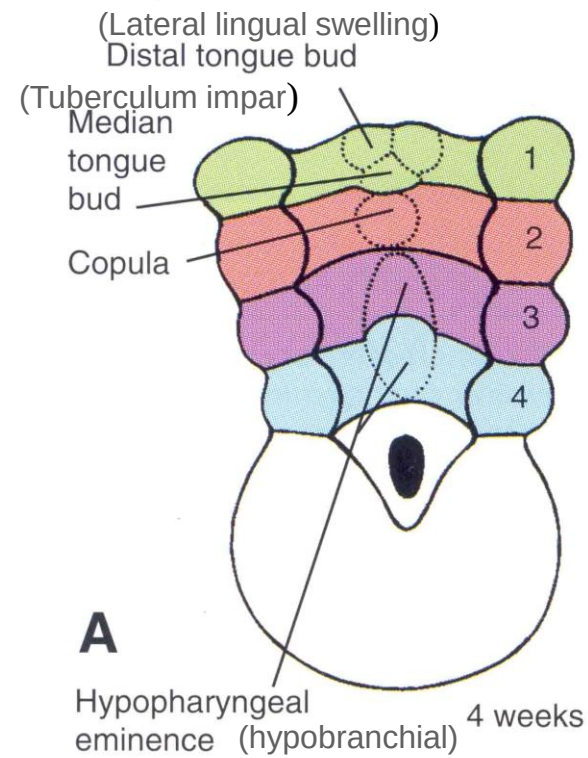


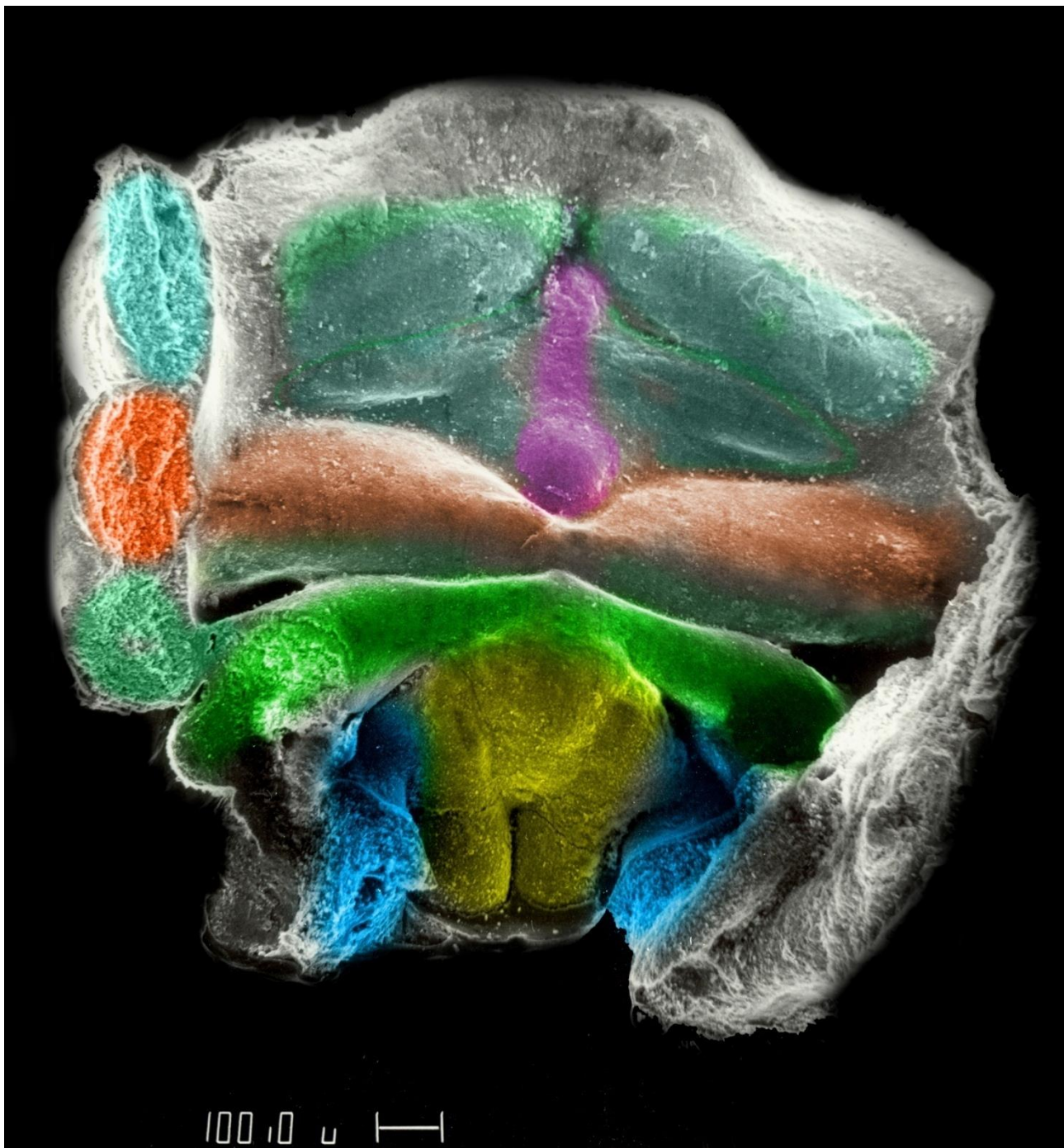
uzavírání sekundárního patra

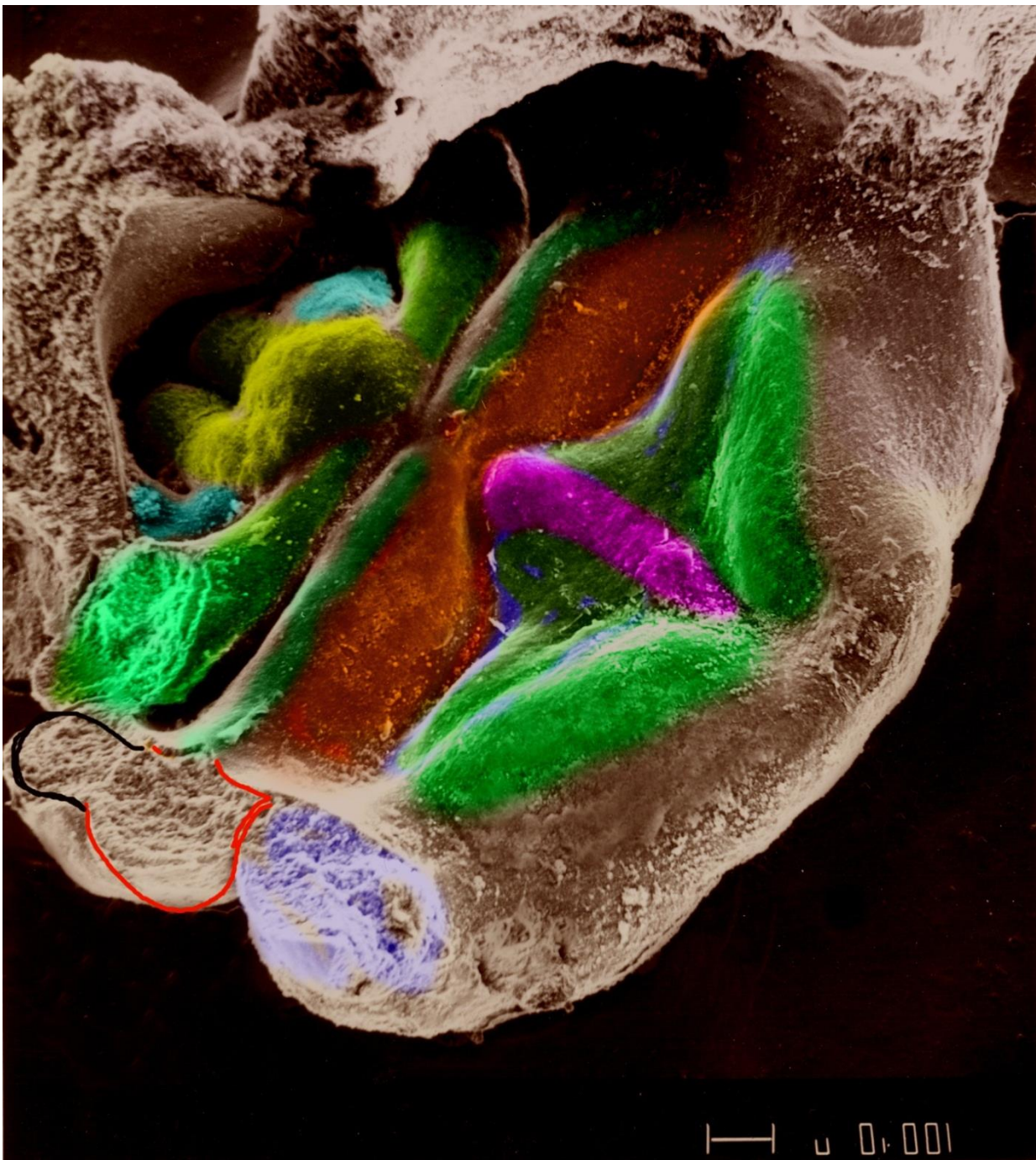


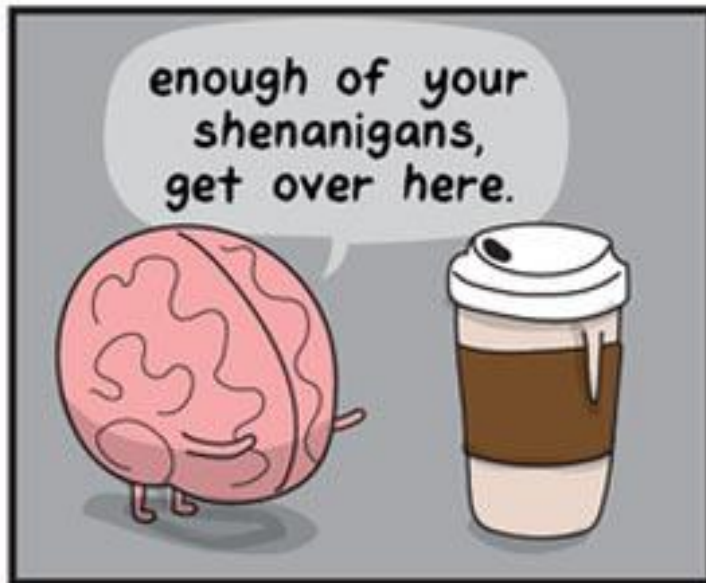
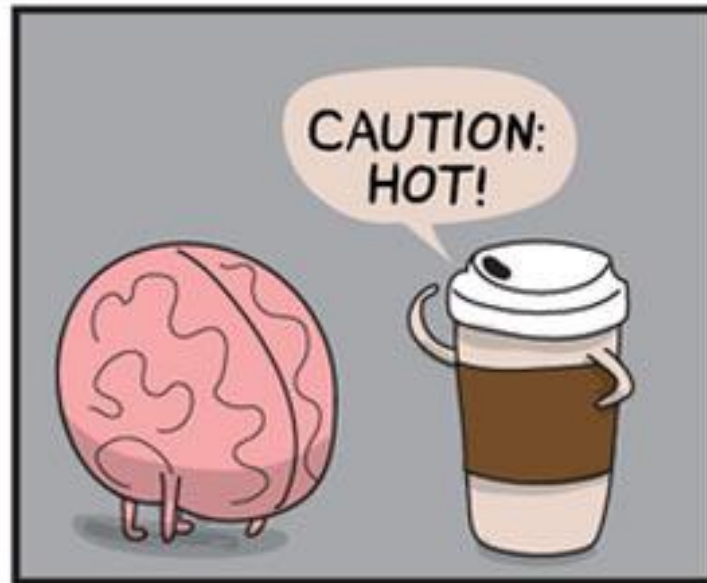


Vývoj jazyka









theAwkwardYeti.com