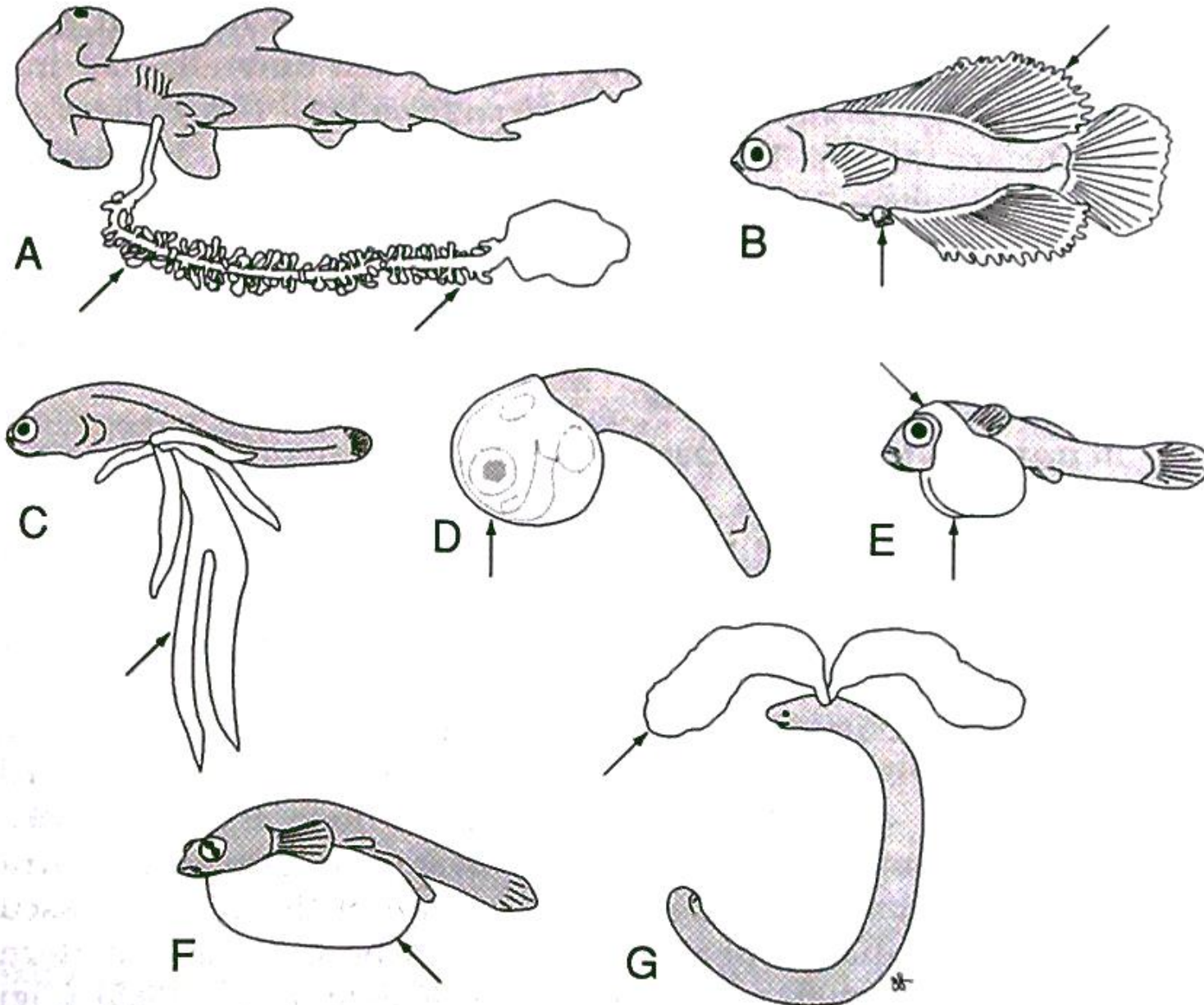


Membranas extraembrionarias



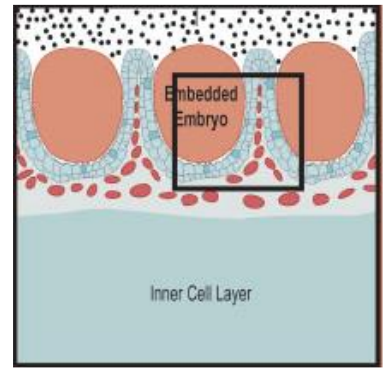
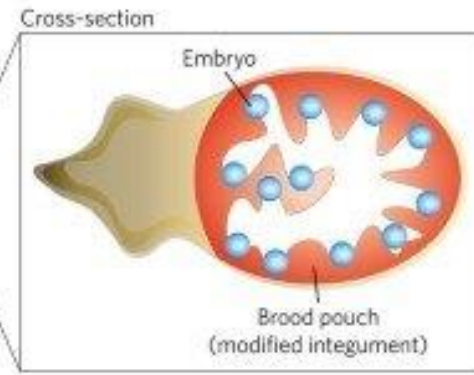
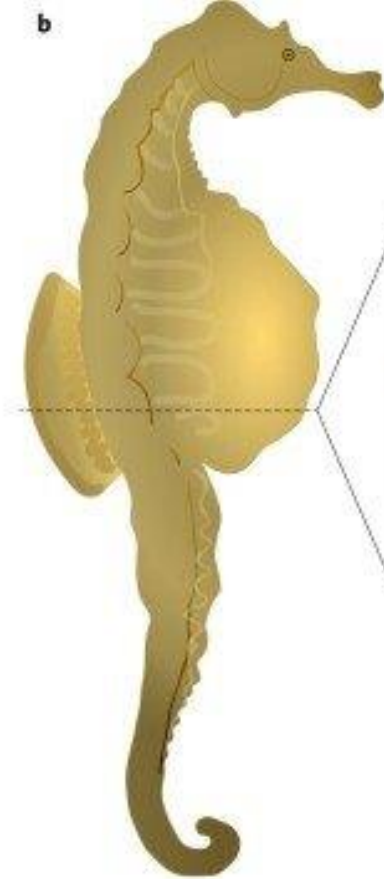


- A. Cordón umbilical y saco de la yema en elasmobranquios vivíparos
- B. Aletas medial y dorsal hipertrofiadas en teleósteos
- C. Trofotenias en peces teleósteos
- D. Amnios y corion pericardiales en peces teleósteos – poecílicos
- E. Saco nuchal-anterior abdominal – poecílicos
- F. Saco de la pared ventral en teleósteos
- G. Agallas saculares en anfibios (cecilias)



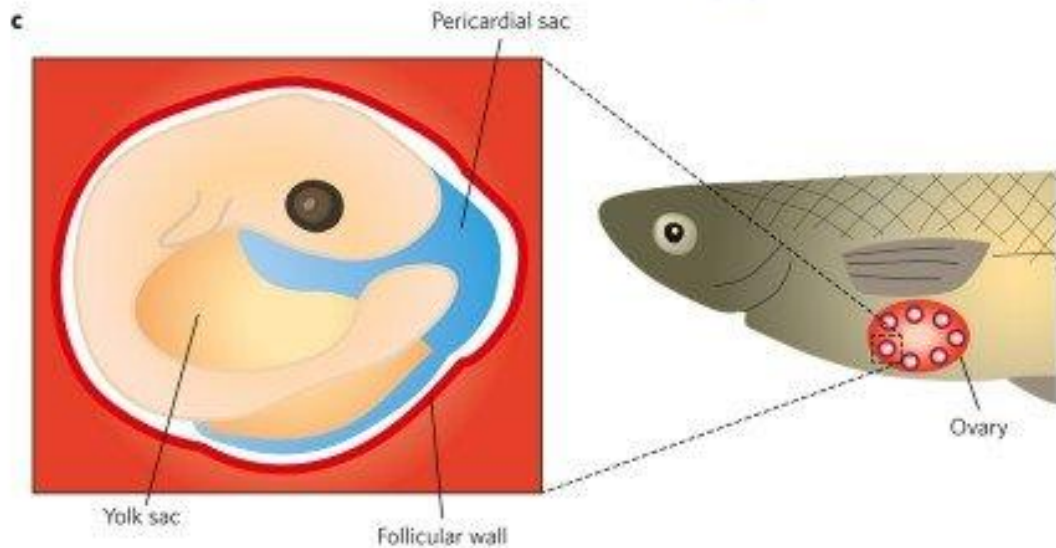


Incubación en marsupio



Incubación intrafolicular ovárica

Saco pericardial



trofonenias



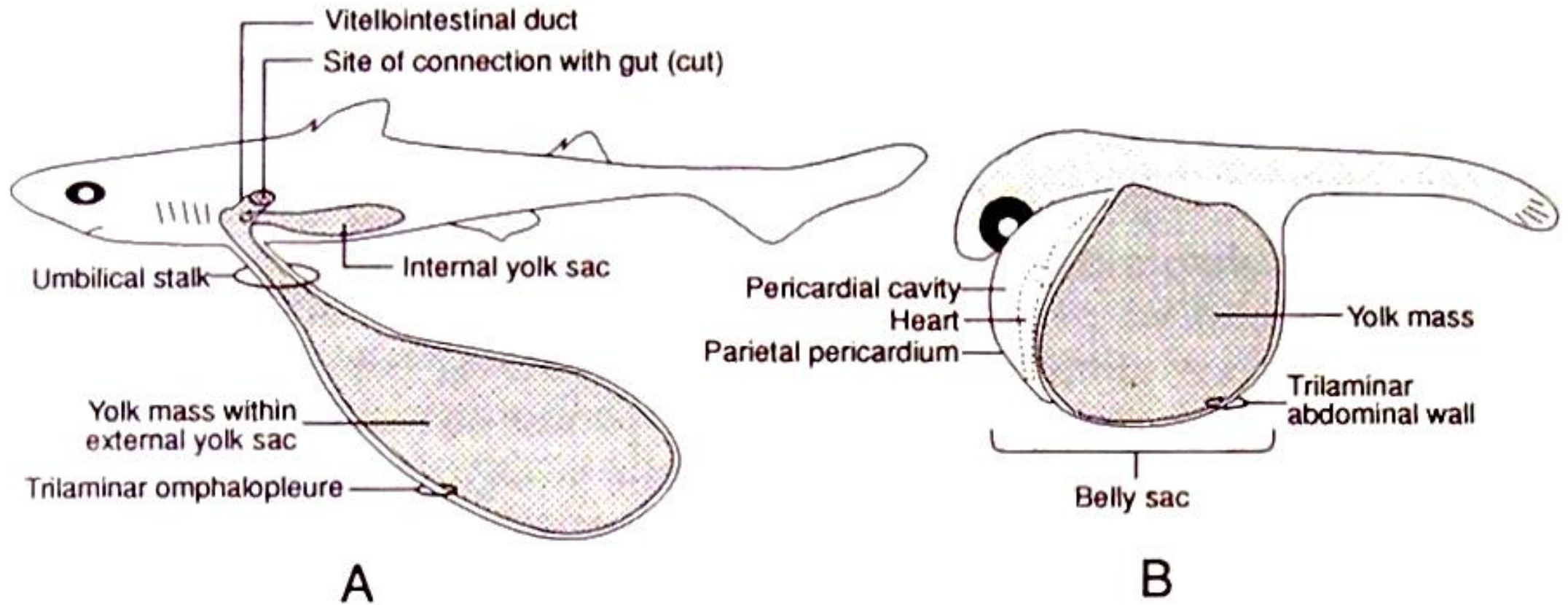
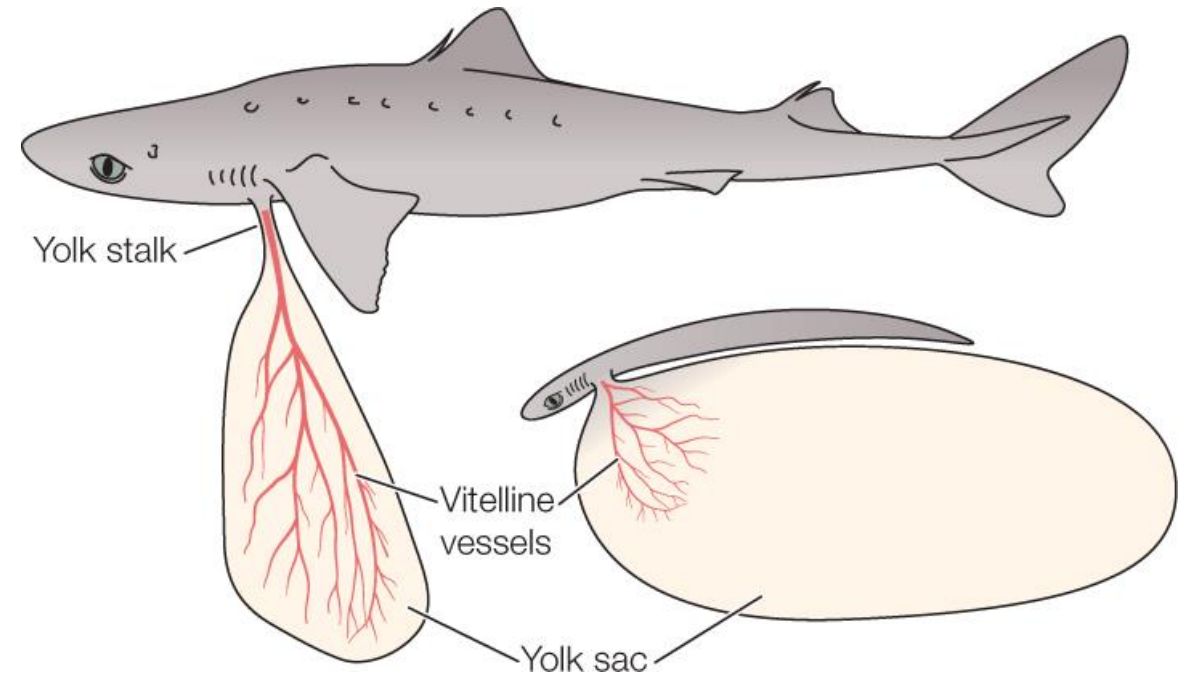


Figure 8.6 Configuration of the yolk sac in fishes. A, shark. B, teleost.



Ovíparos



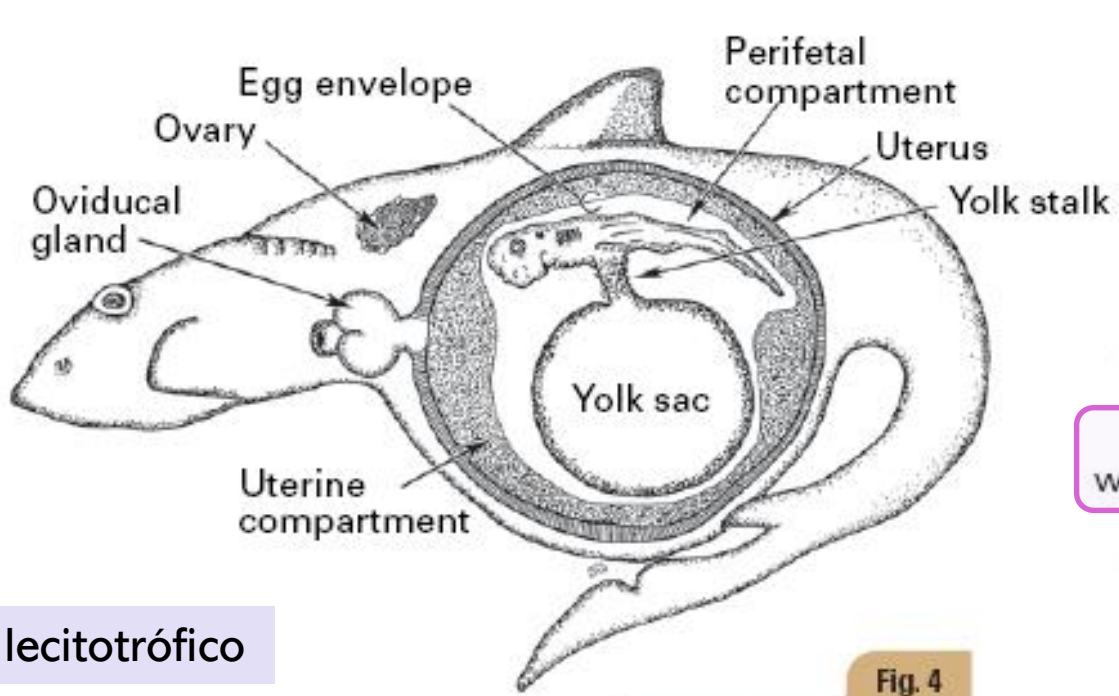


Fig. 4

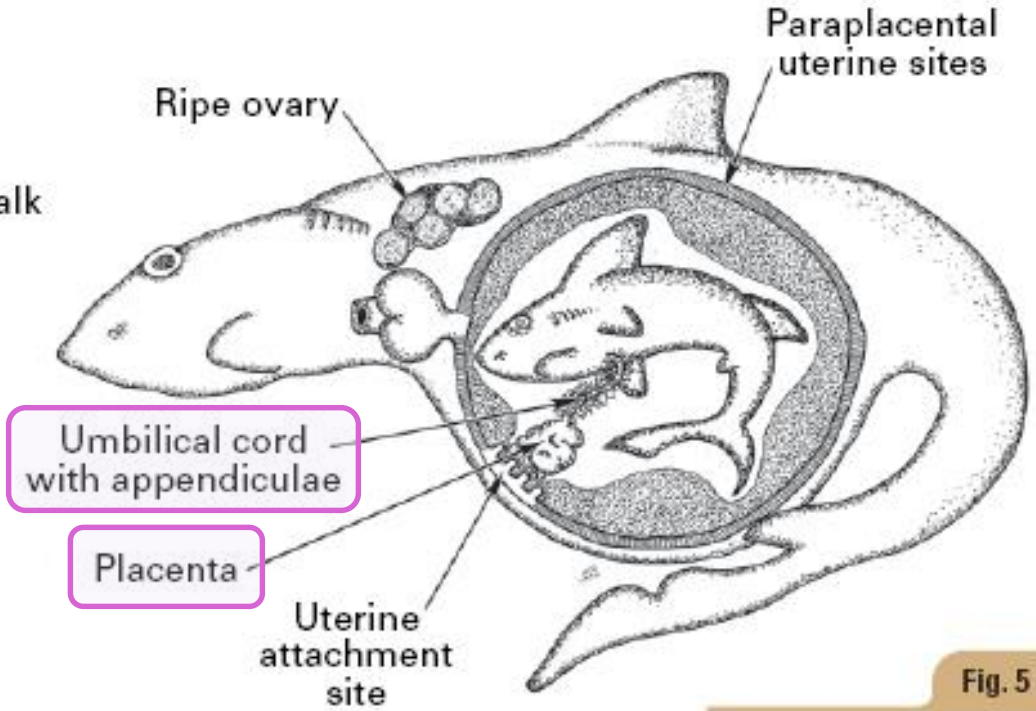
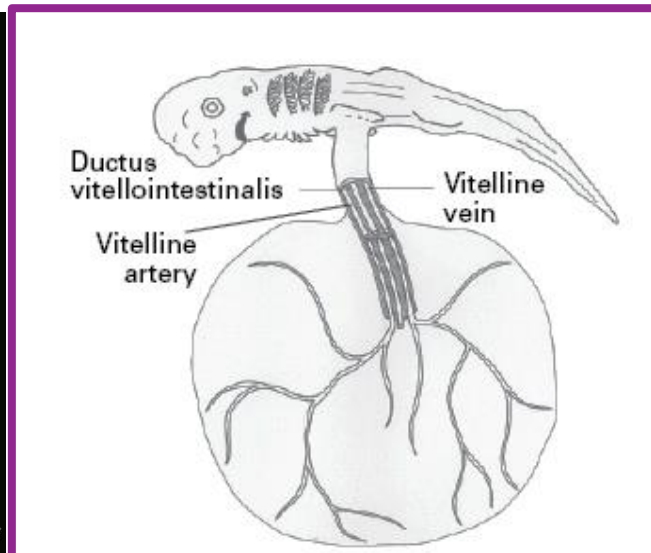


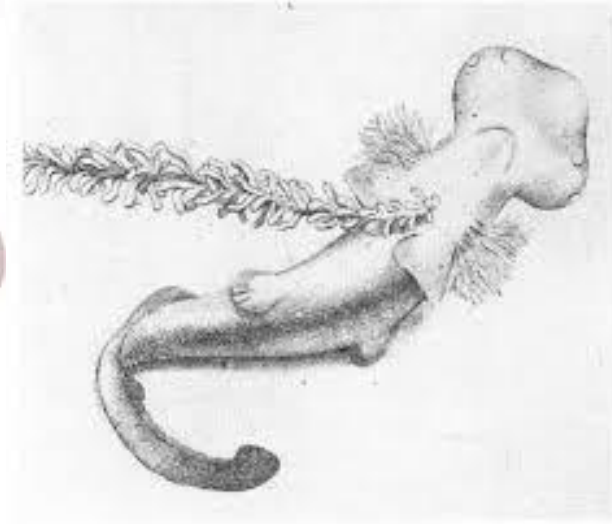
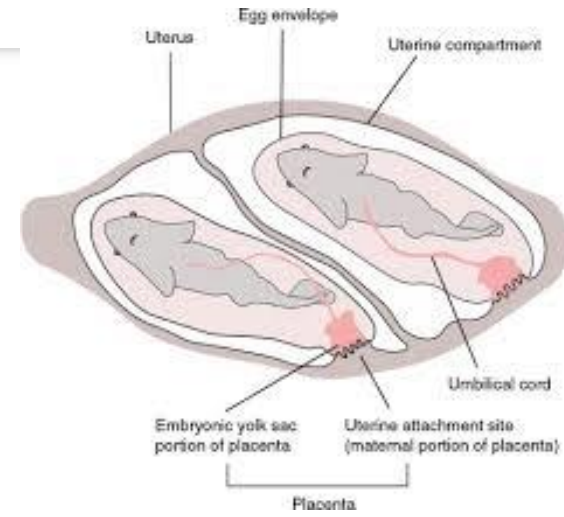
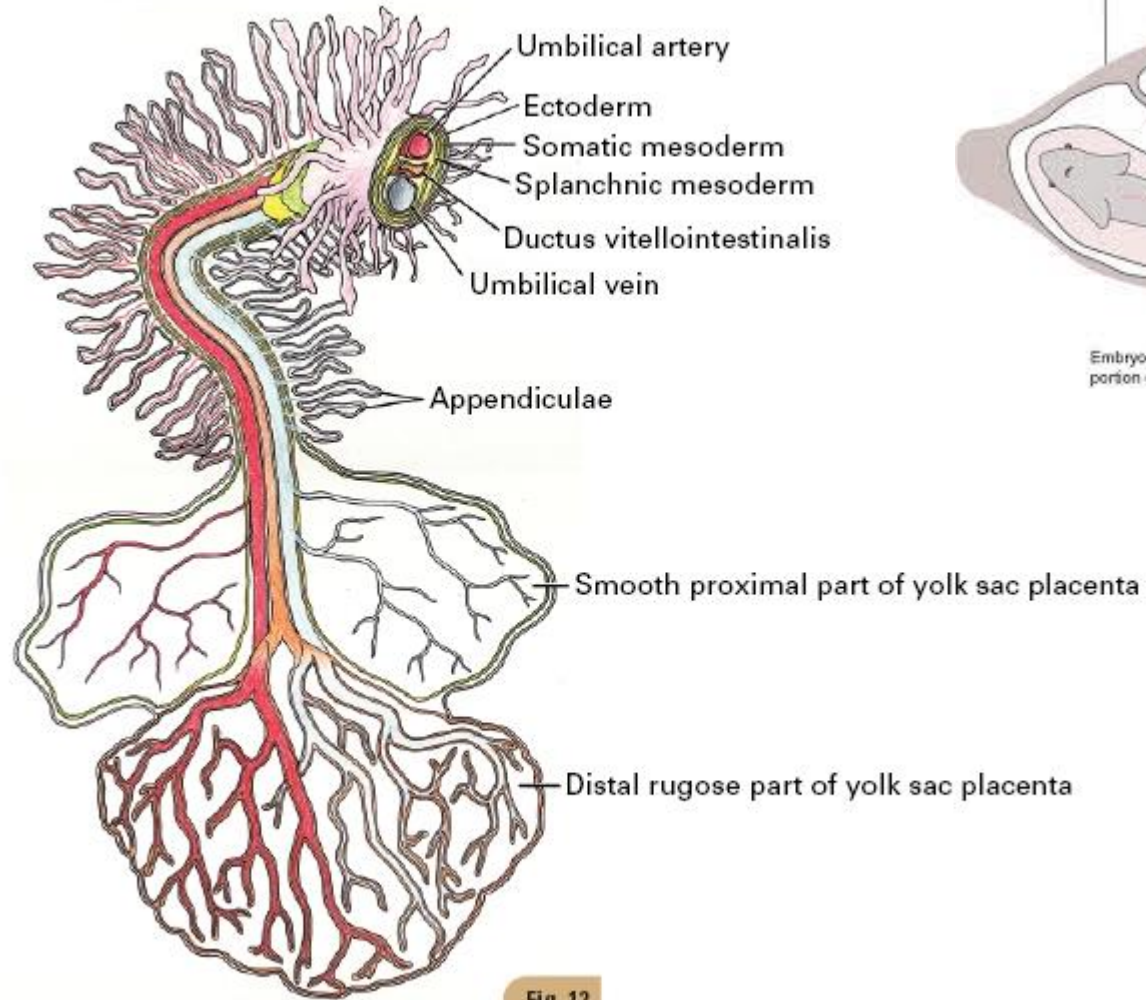
Fig. 5

Vivíparo lecitotrófico

Vivíparo matrotrófico



Vivíparo matrotrófico





Caecilian Gill Structure



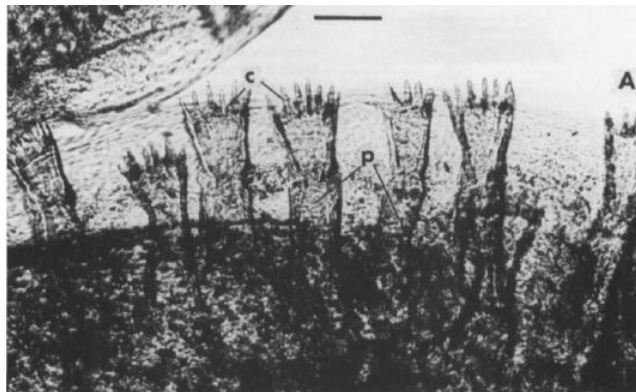
Typhlonectes natans



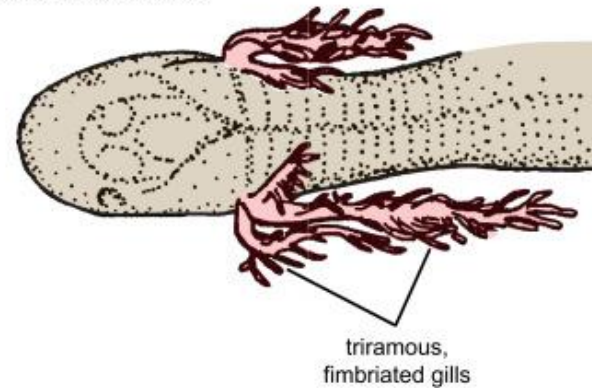
saclike gills

Cecilias vivíparas matrotróficas

Agallas saculares de intercambio



Dermophis mexicanus



triramous,
fimbriated gills

Agallas ramificadas de intercambio

Dentición embrionaria especializada
histotrofia



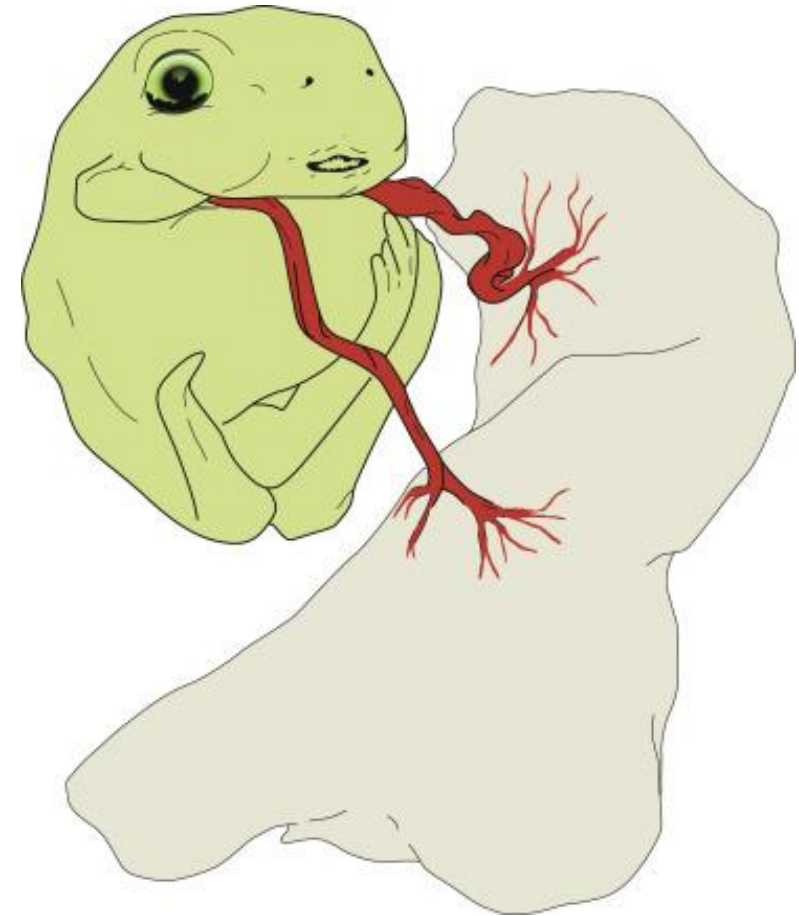


Ranas marsupiales



horned marsupial frog
(*Gastrotheca cornuta*)
female

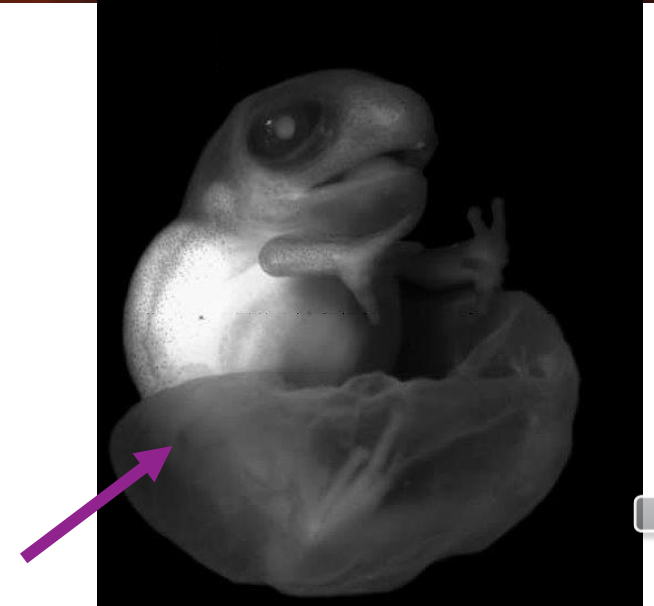
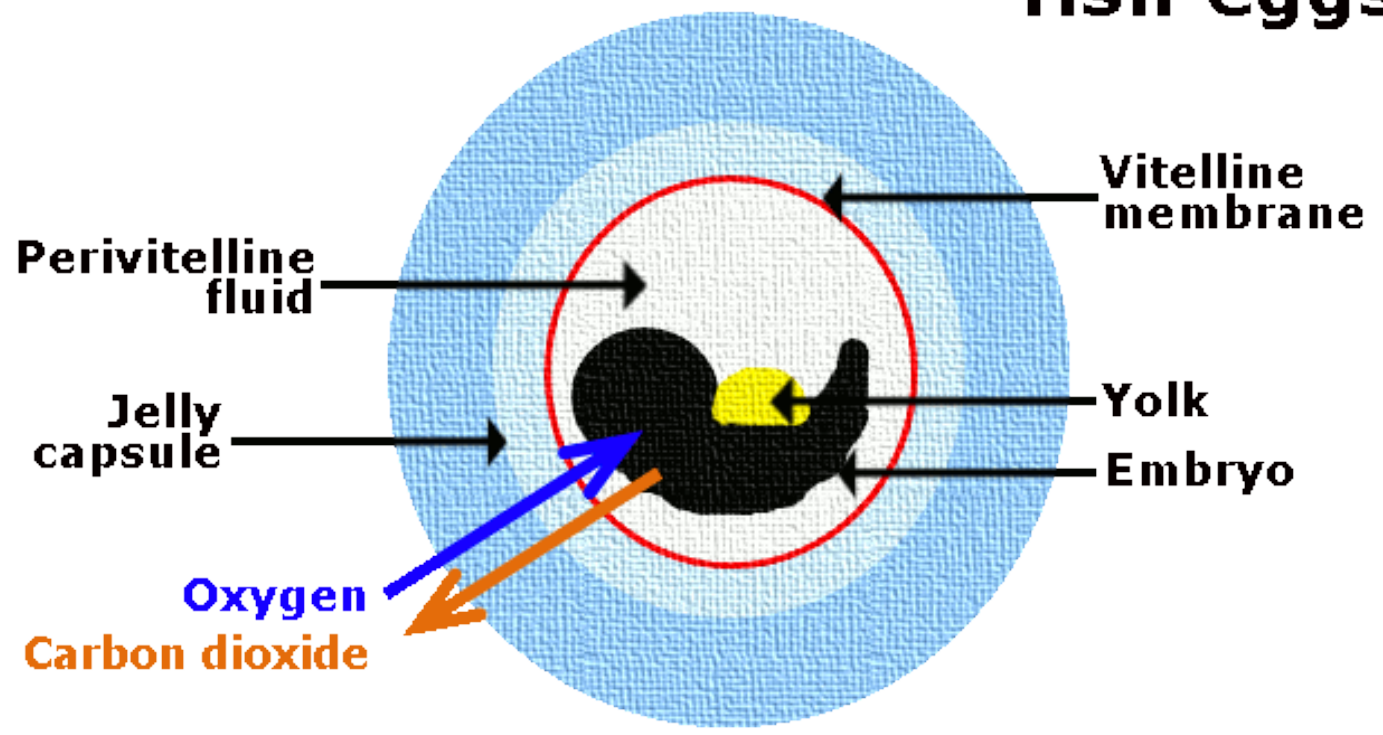
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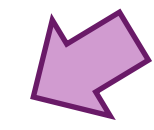
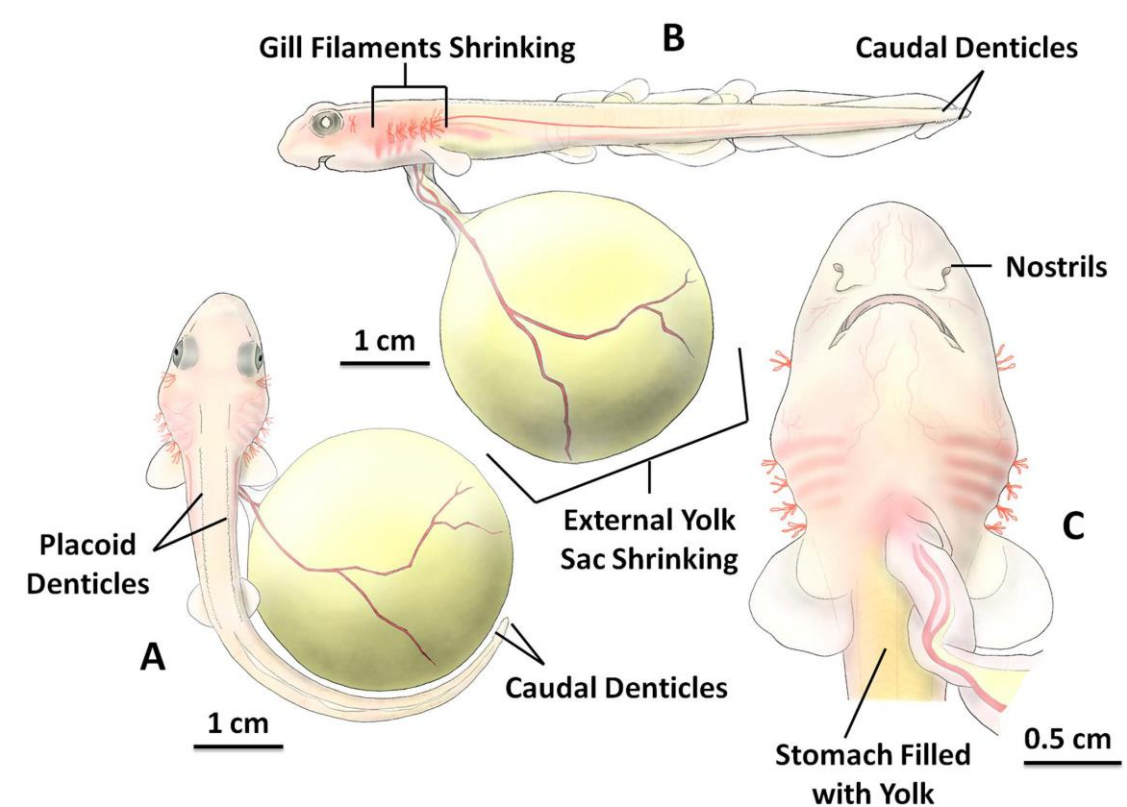
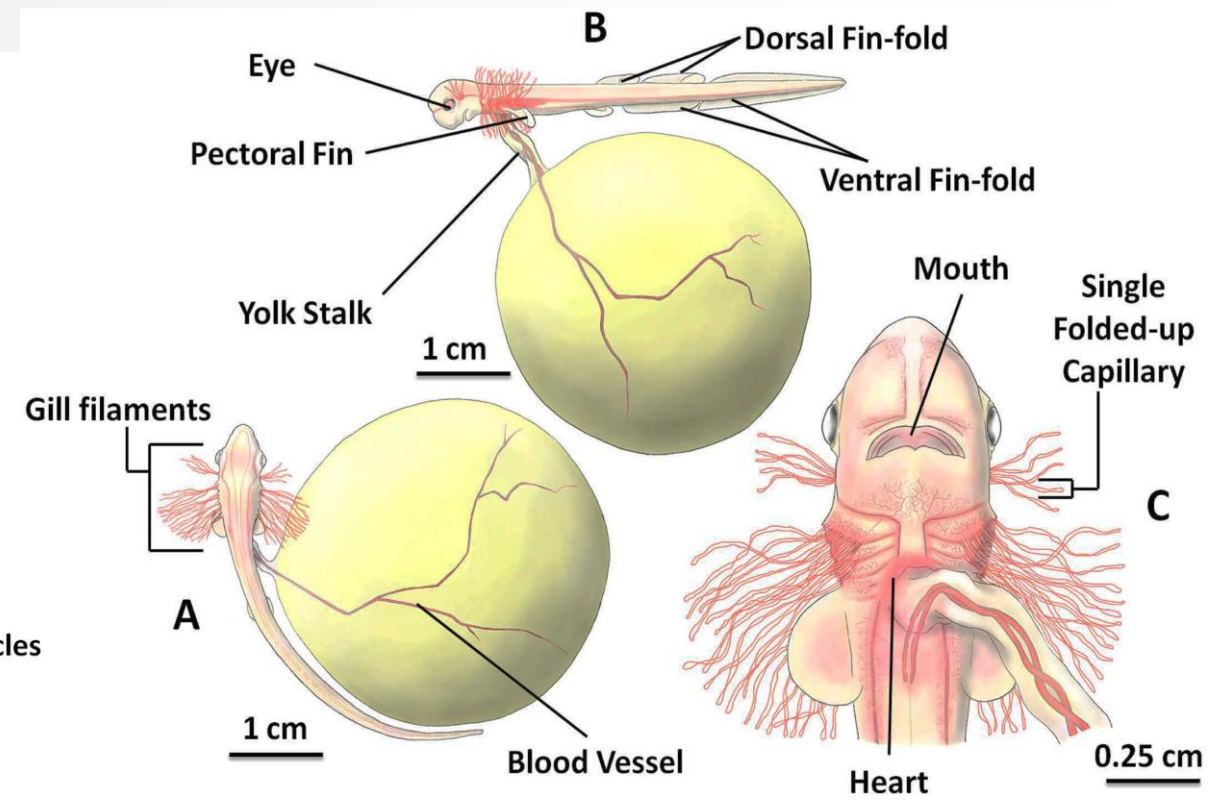
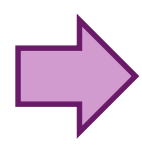
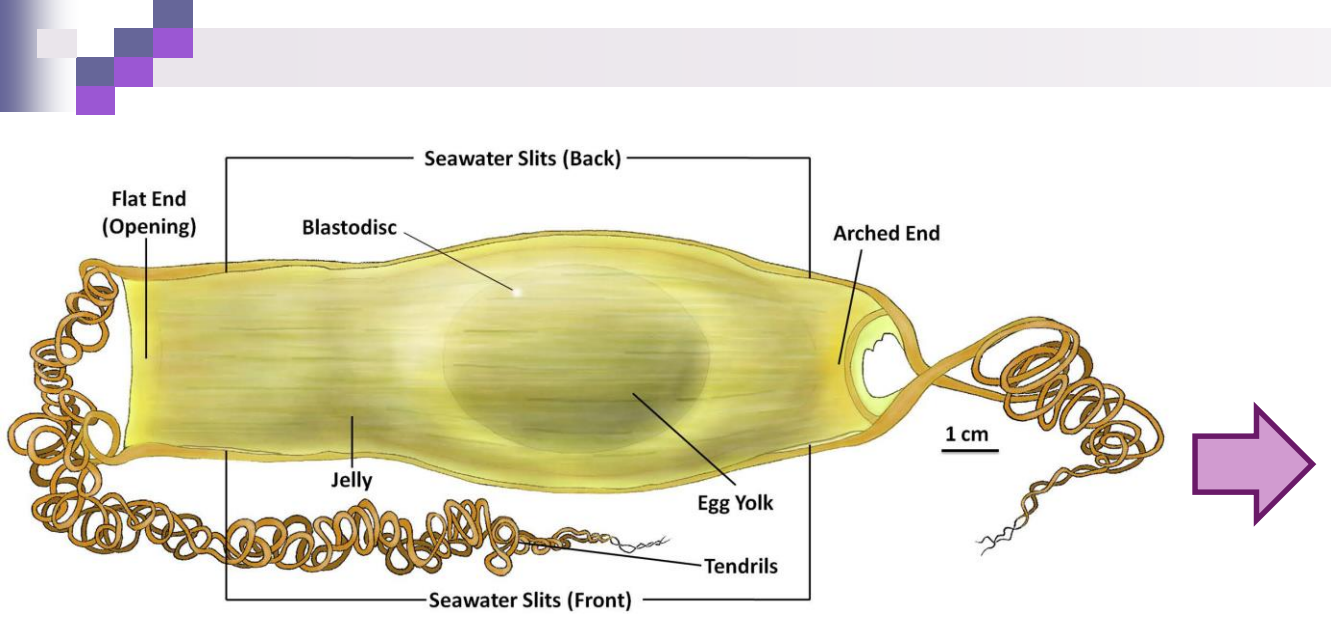


Agallas acampanuladas



Gas exchange in amphibian and fish eggs





Huevos de amniotas

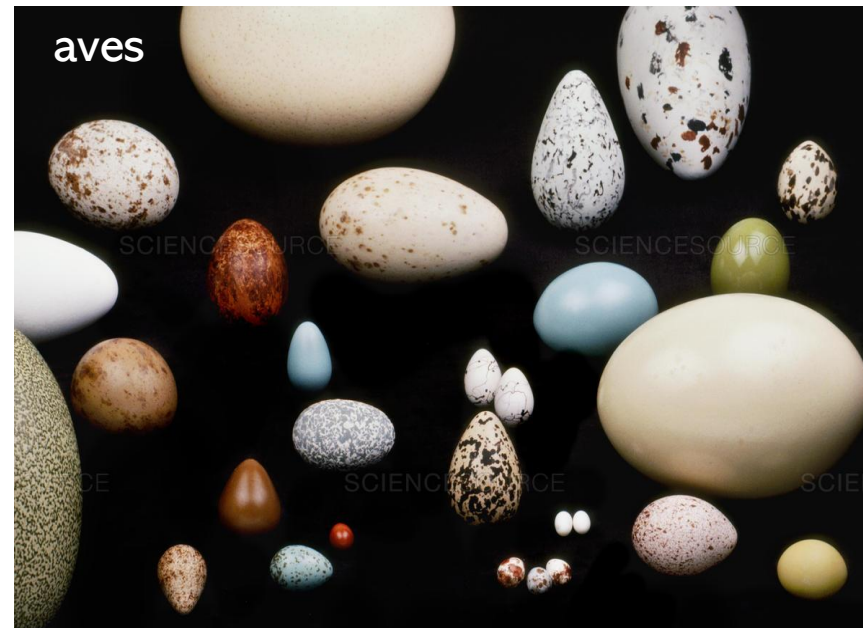
elasmobranquios



teleósteos



aves



Anfibios



Sin cáscara o cáscara
protéica en anamniotas

escamados



monotremas

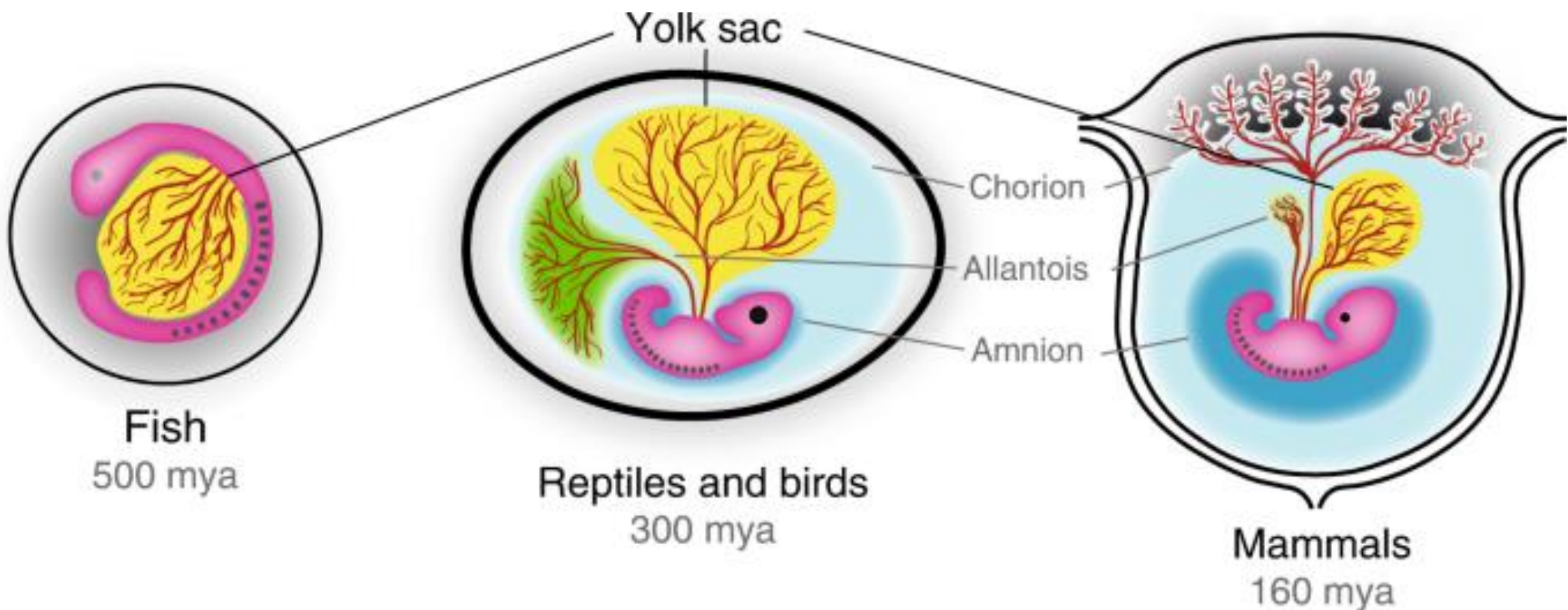


tortugas



cocodrilos





Fish
500 mya

Reptiles and birds
300 mya

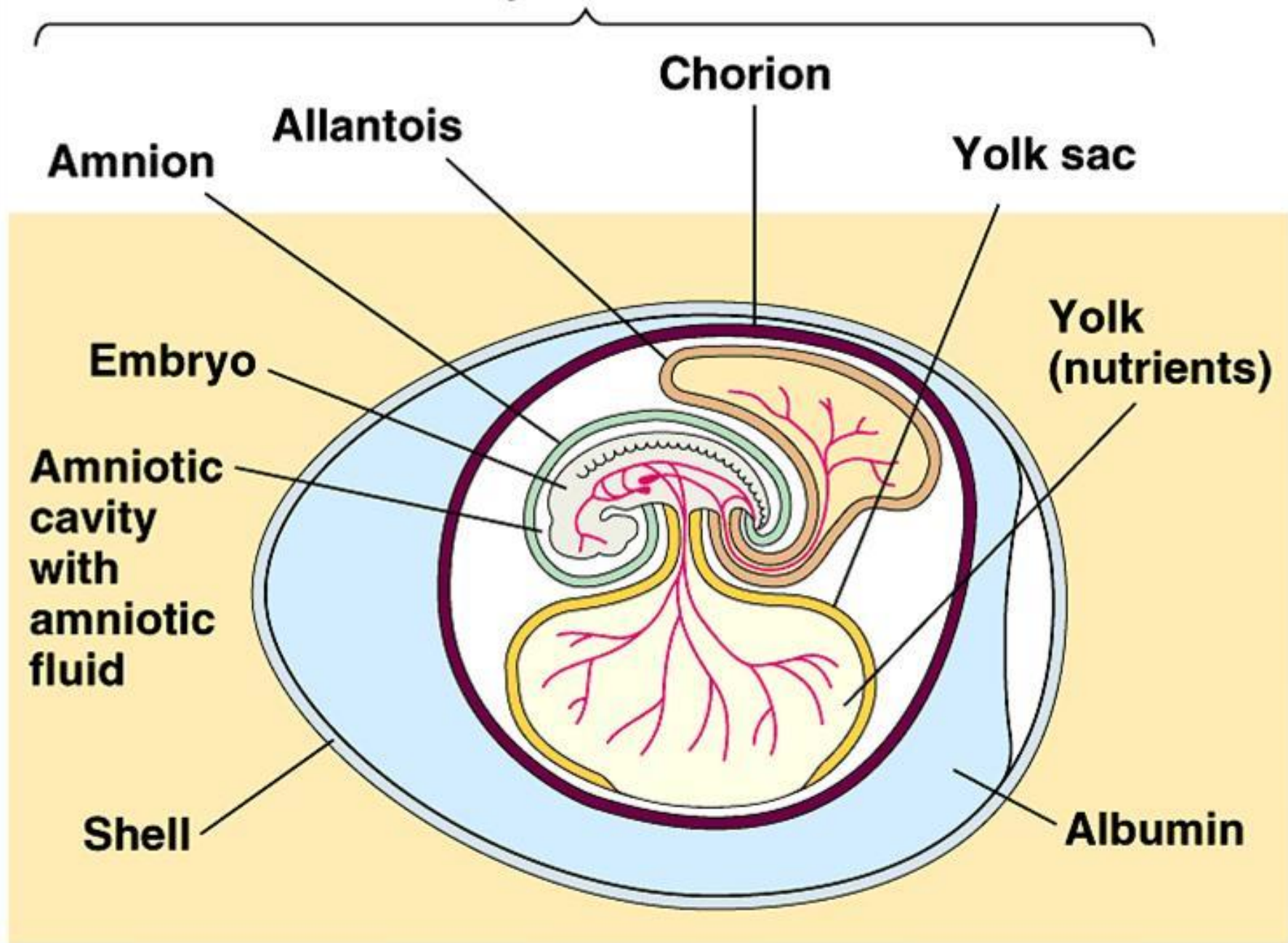
Mammals
160 mya



Membranas extraembrionarias en amniotas



Extraembryonic membranes





Amnios

- Ectodermo
- Mesodermo lateral somático extraembrionario



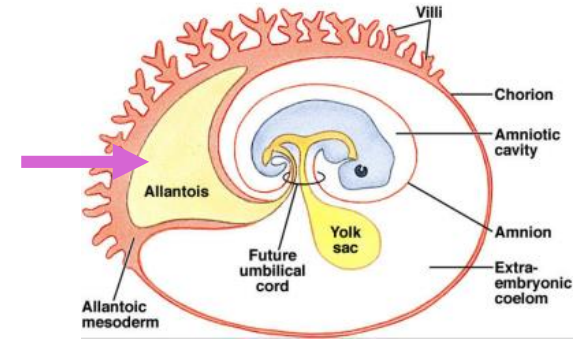
Corion

- Ectodermo
- Mesodermo lateral somático extraembrionario



Saco de la yema

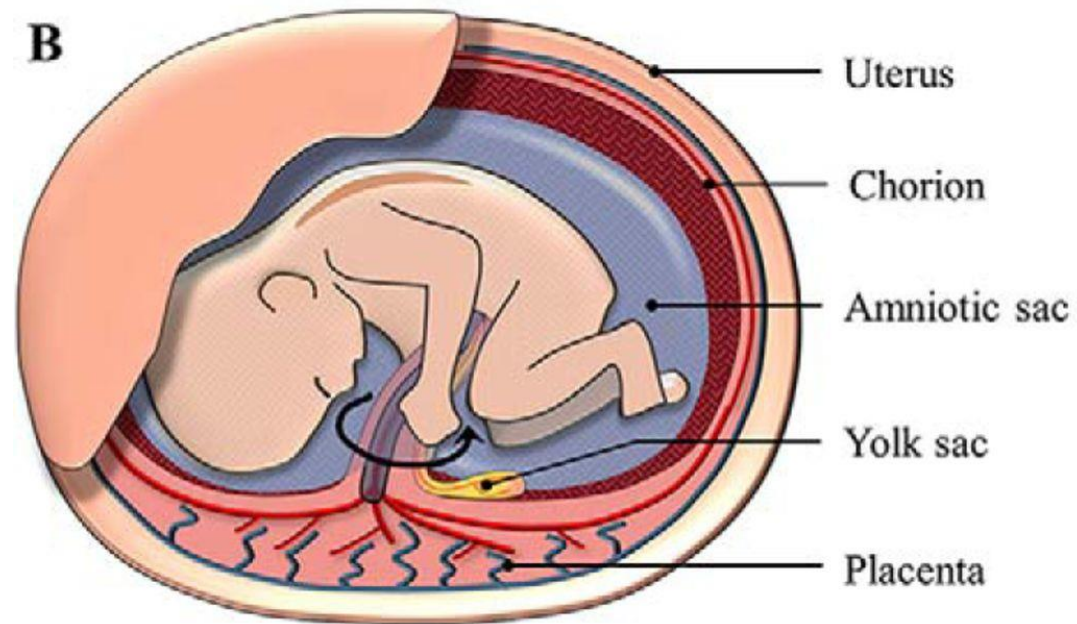
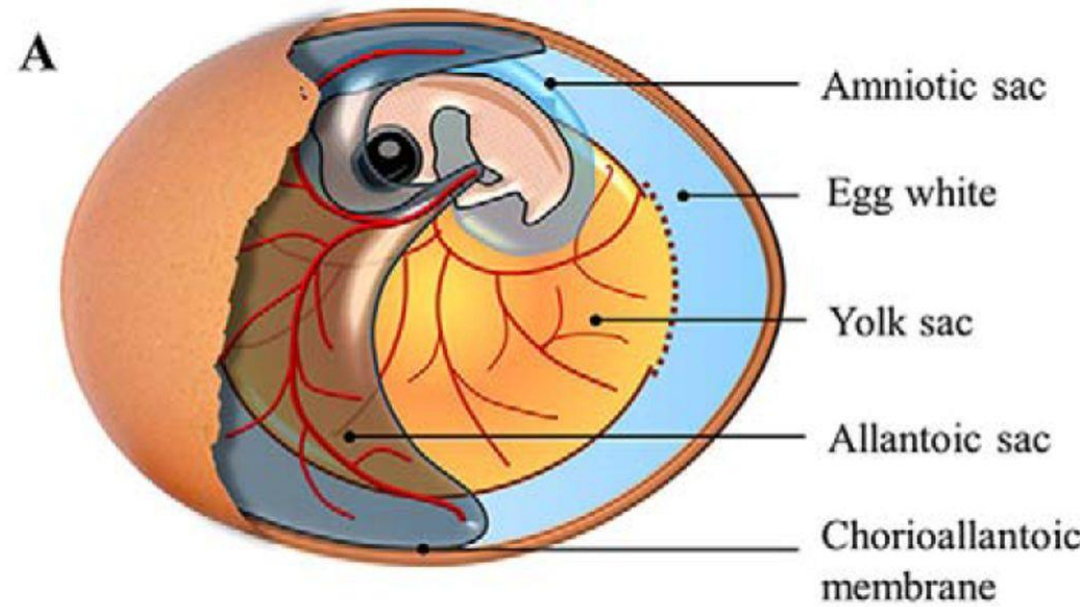
- Hipoblasto
- Mesodermo lateral esplácnico extraembrionario



Alantoides

- Endodermo embrionario
- Mesodermo lateral esplácnico extraembrionario

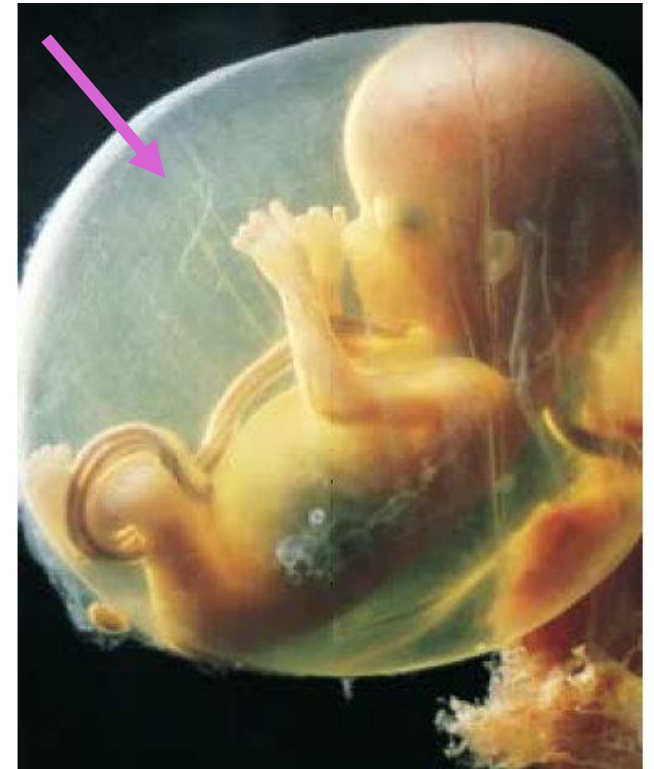
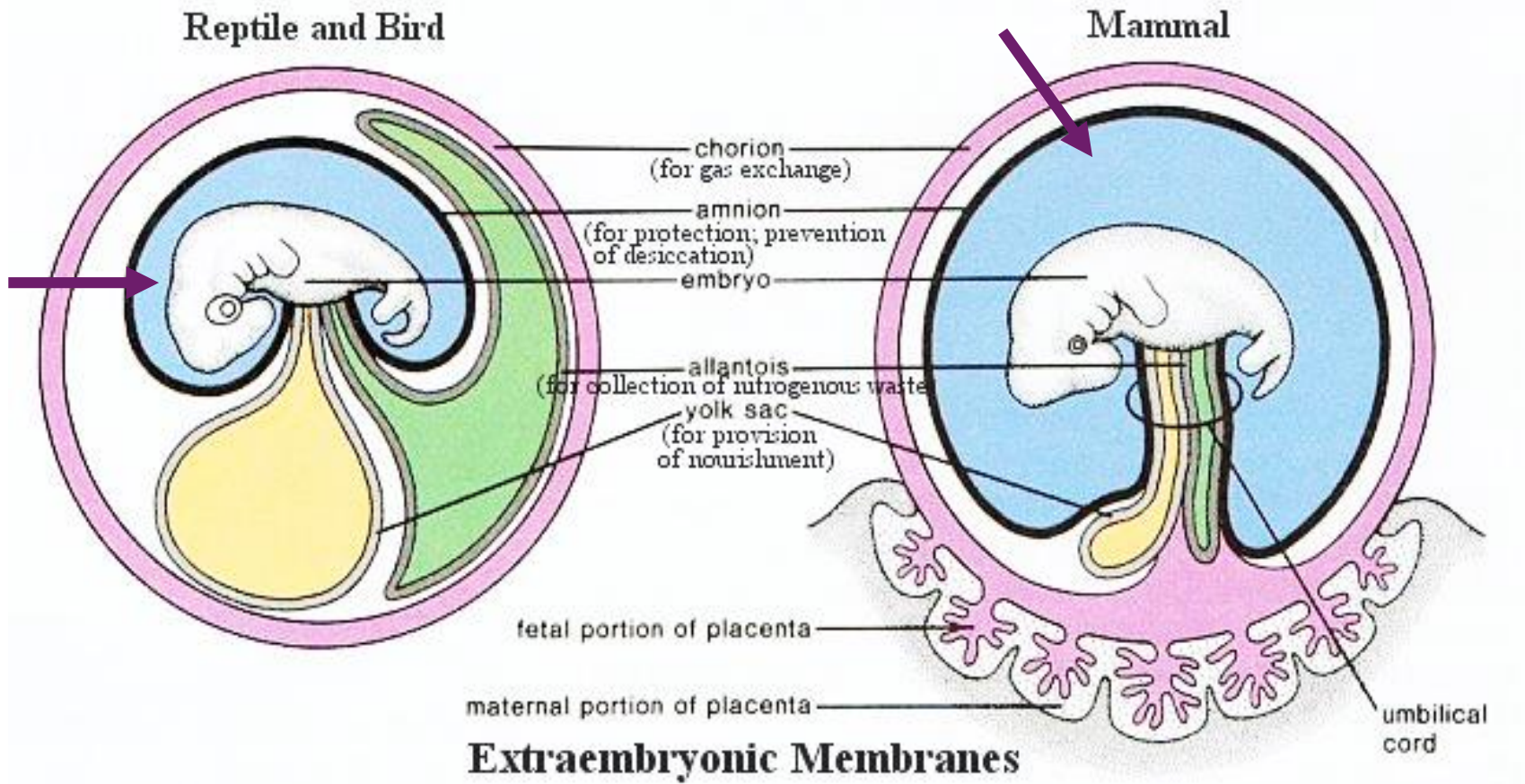




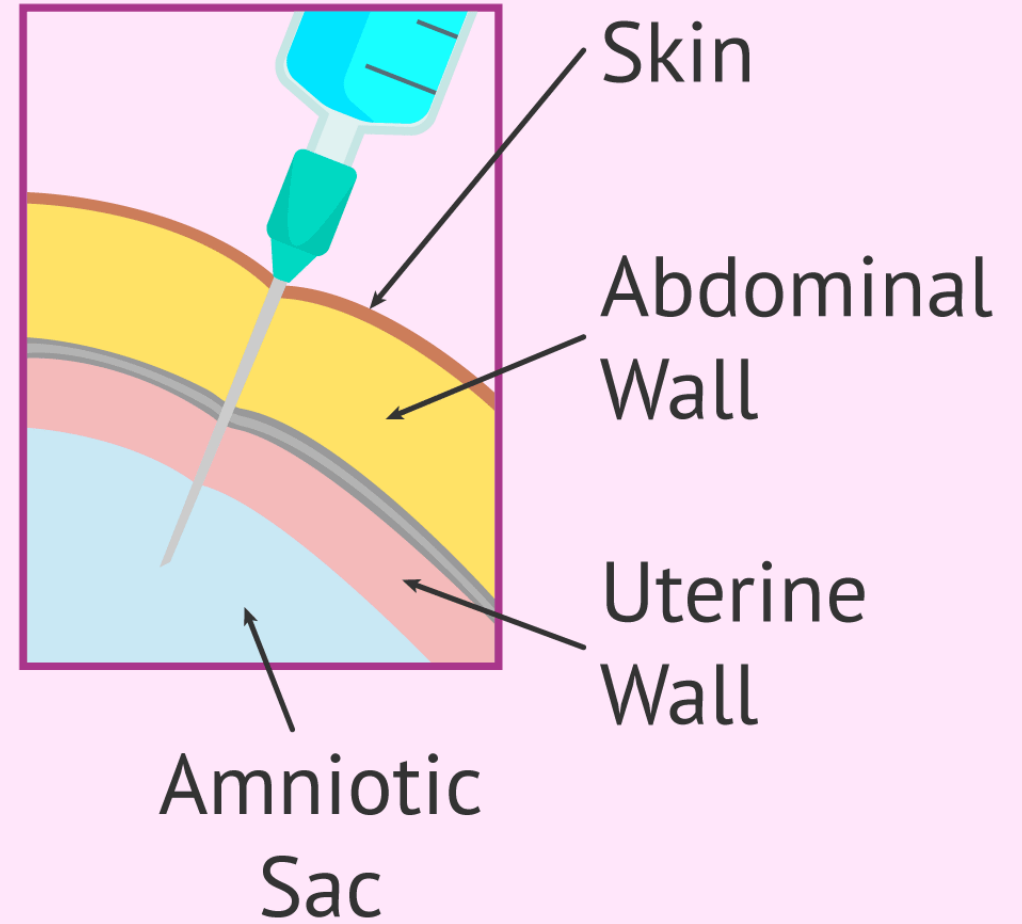
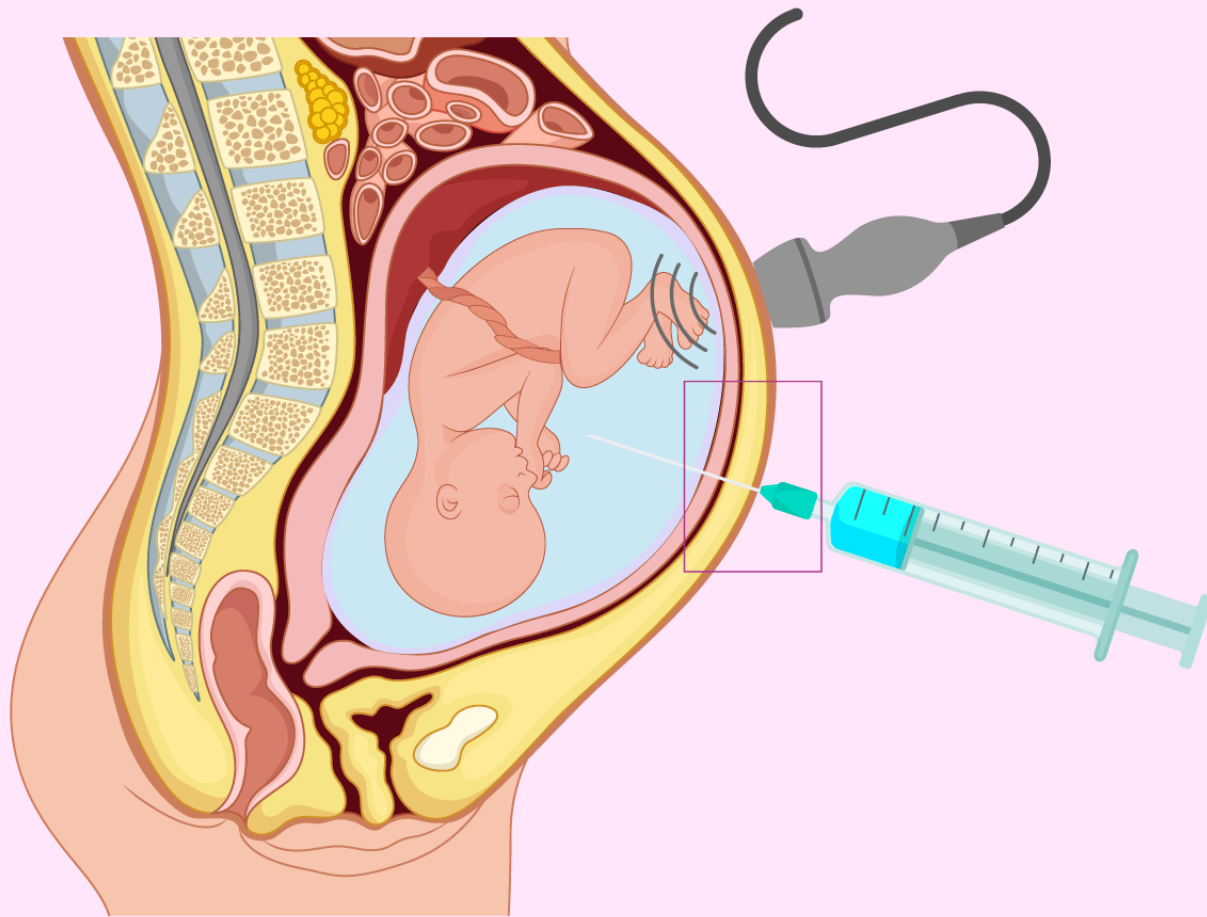
↪ Umbilical cord (allantoic and yolk sacs)



Amnios



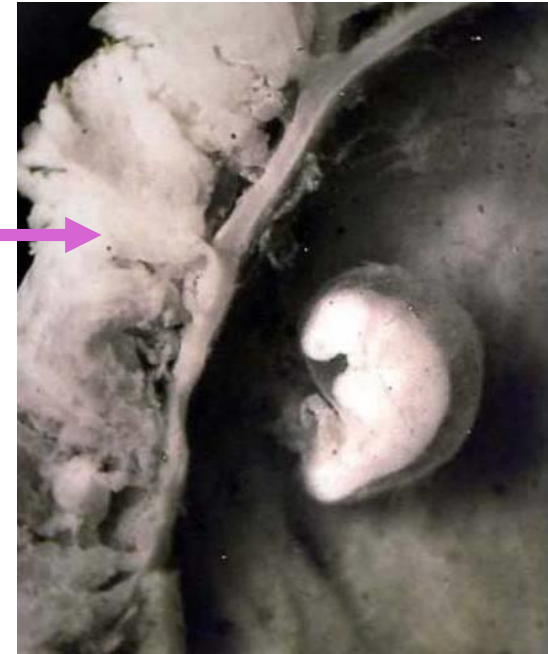
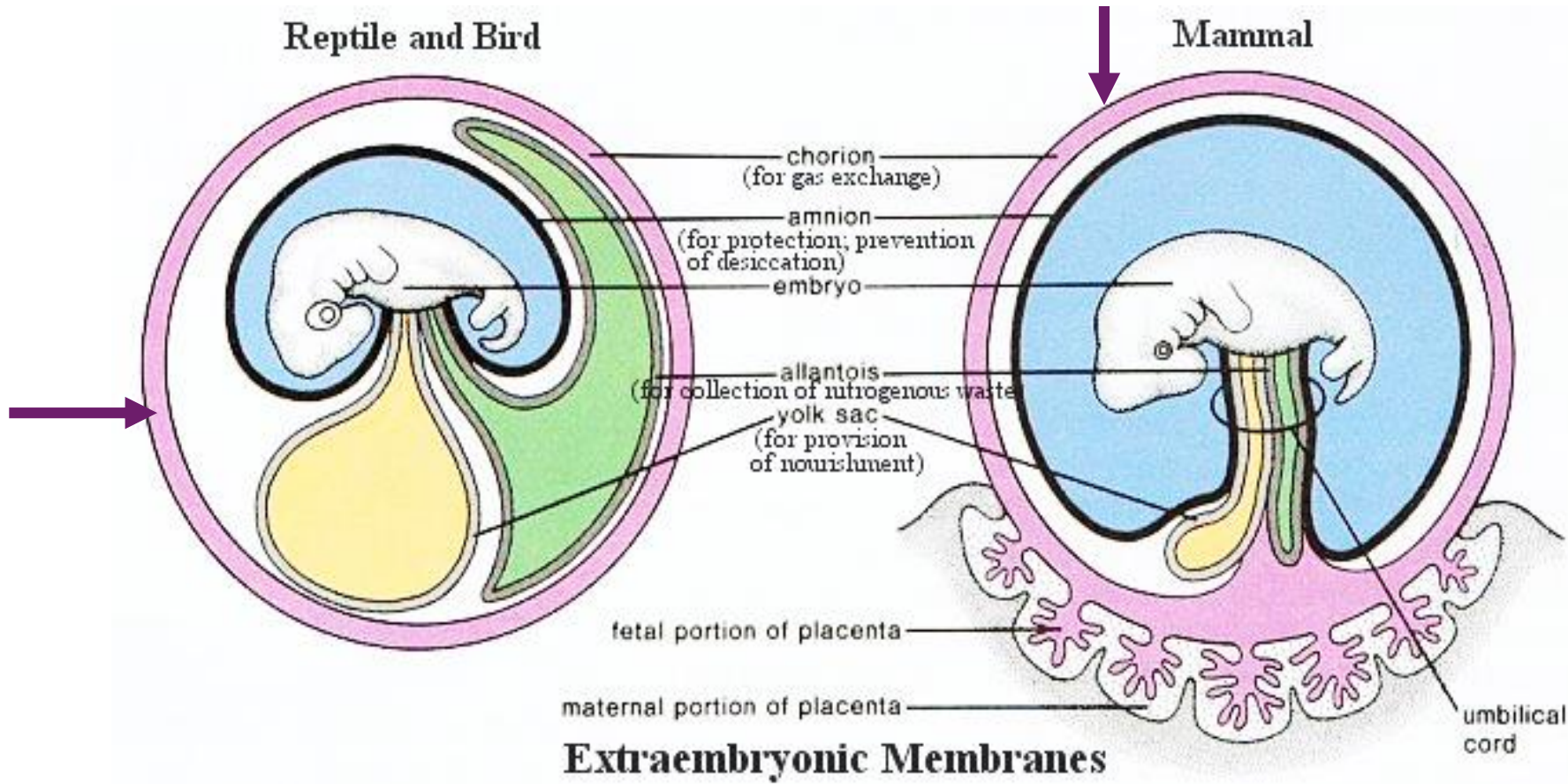
Amnios



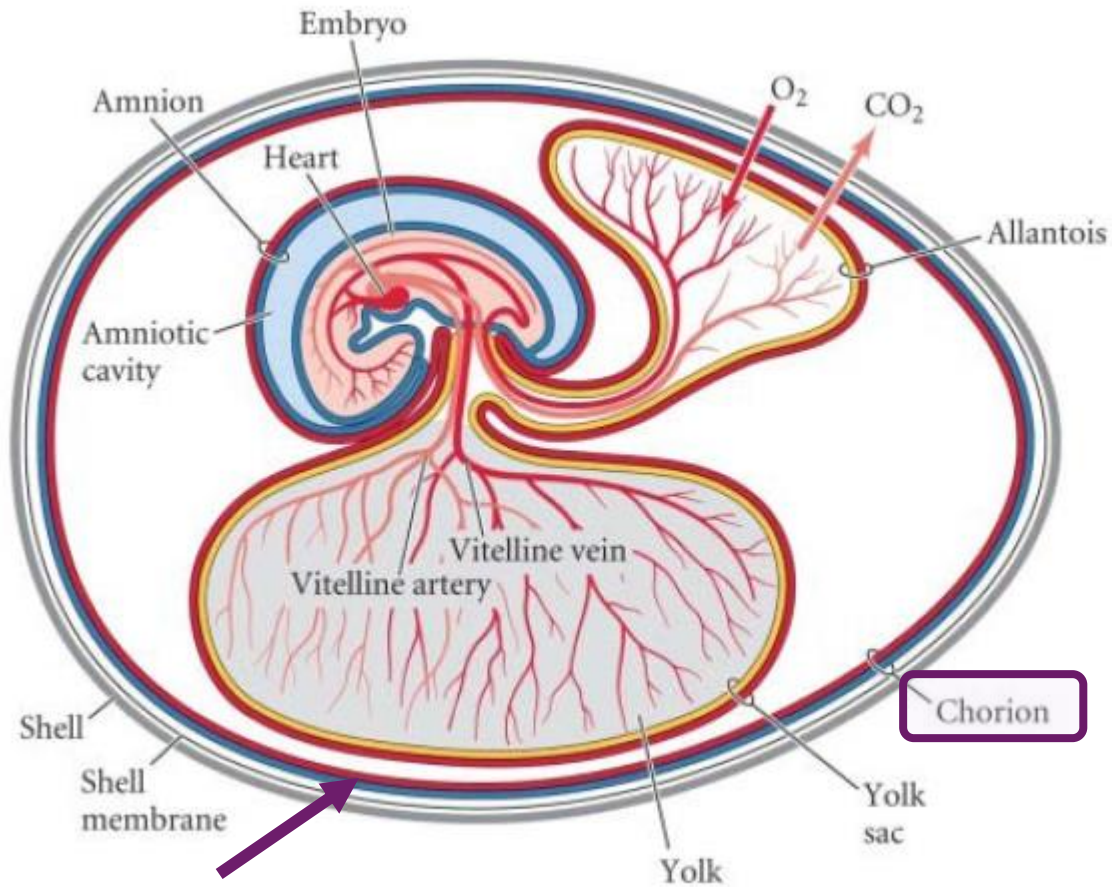
Corion

Reptile and Bird

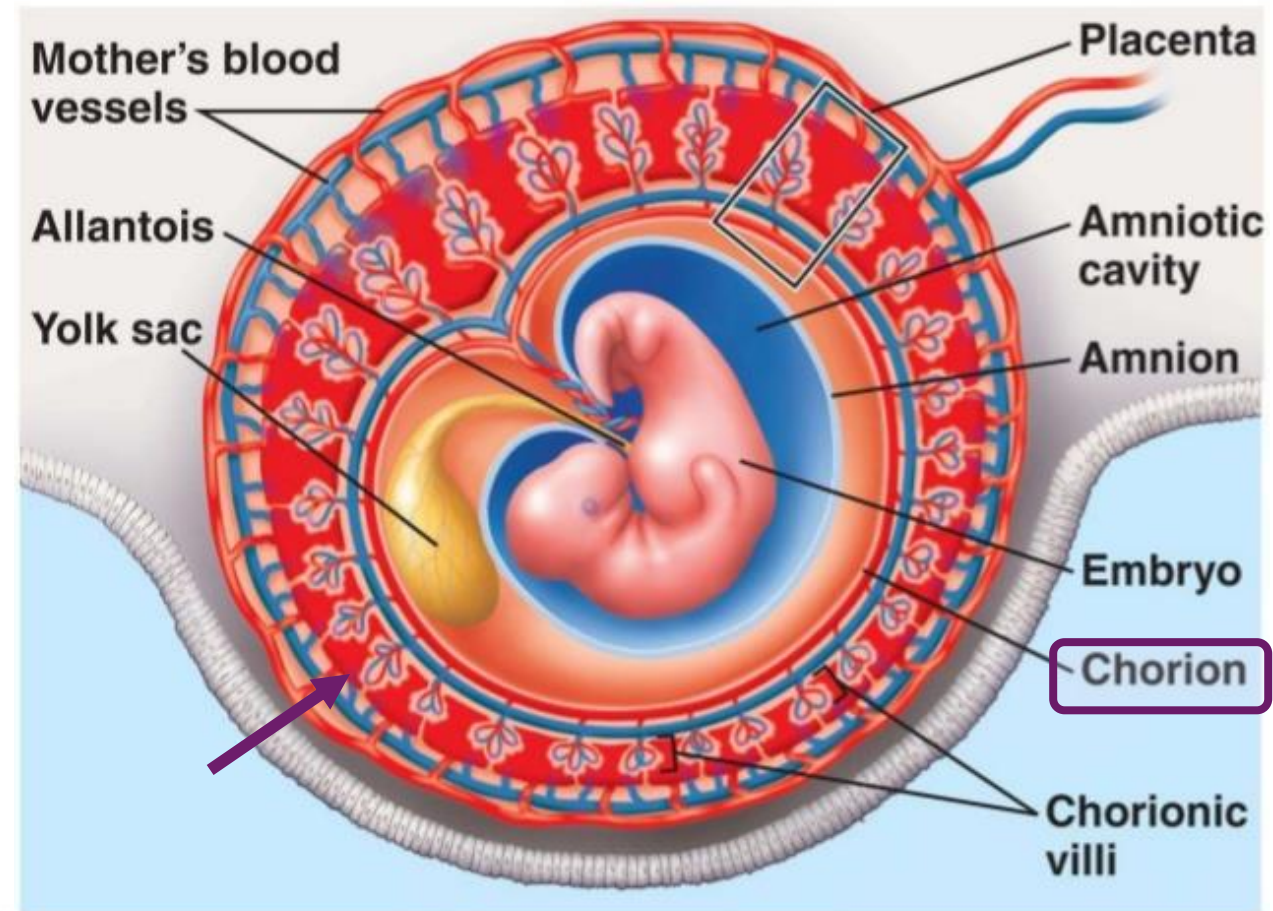
Mammal



Corion



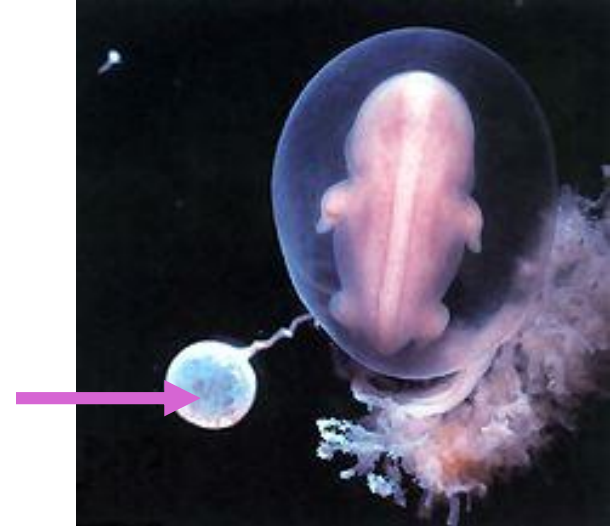
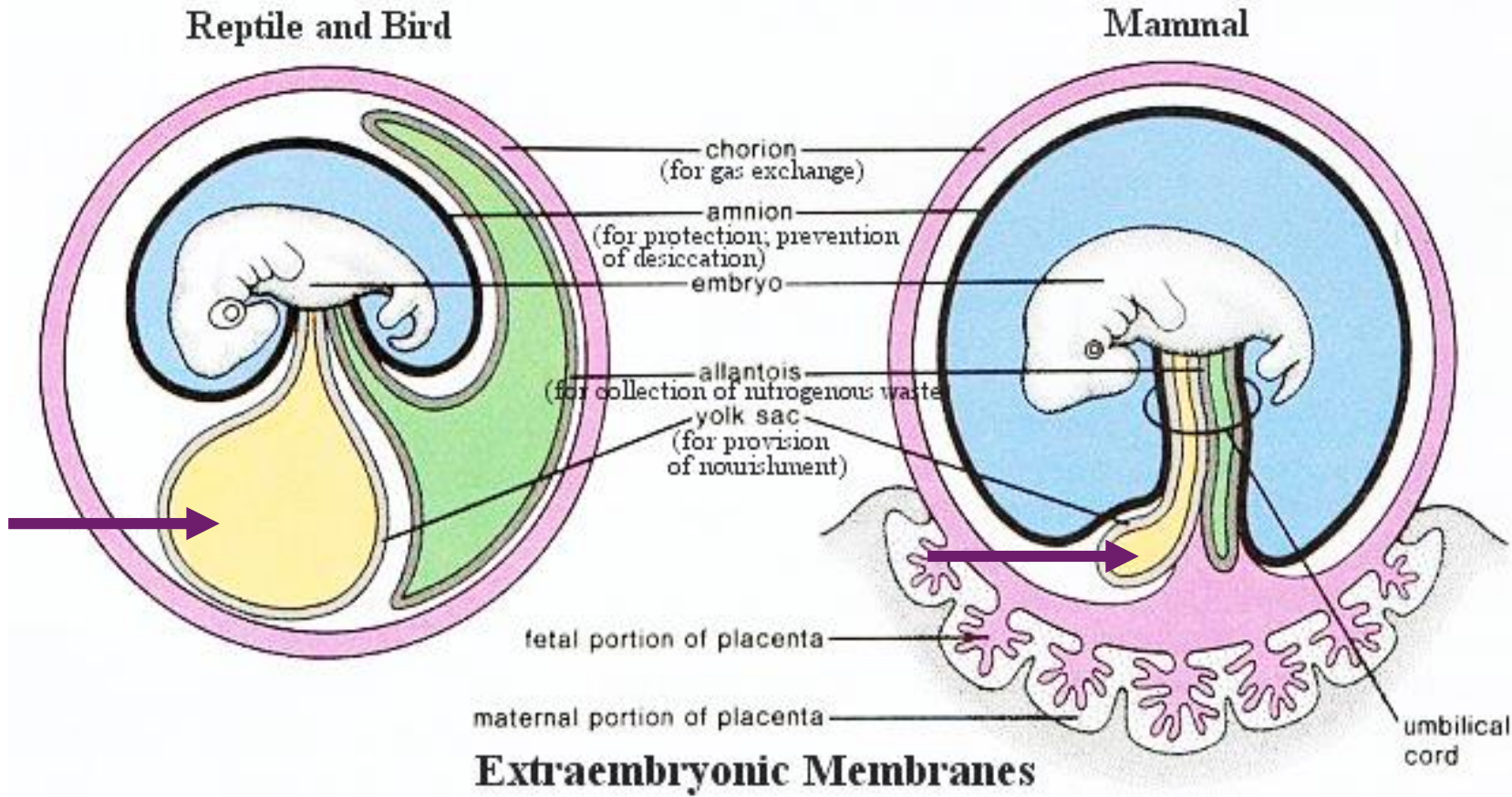
Ovíparos



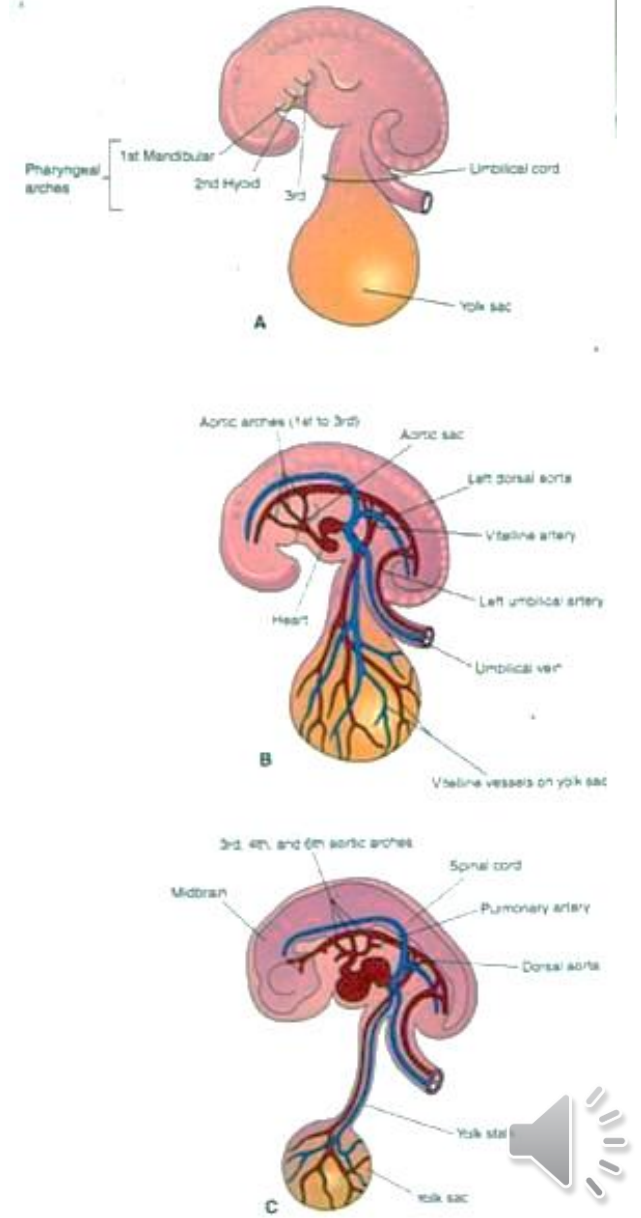
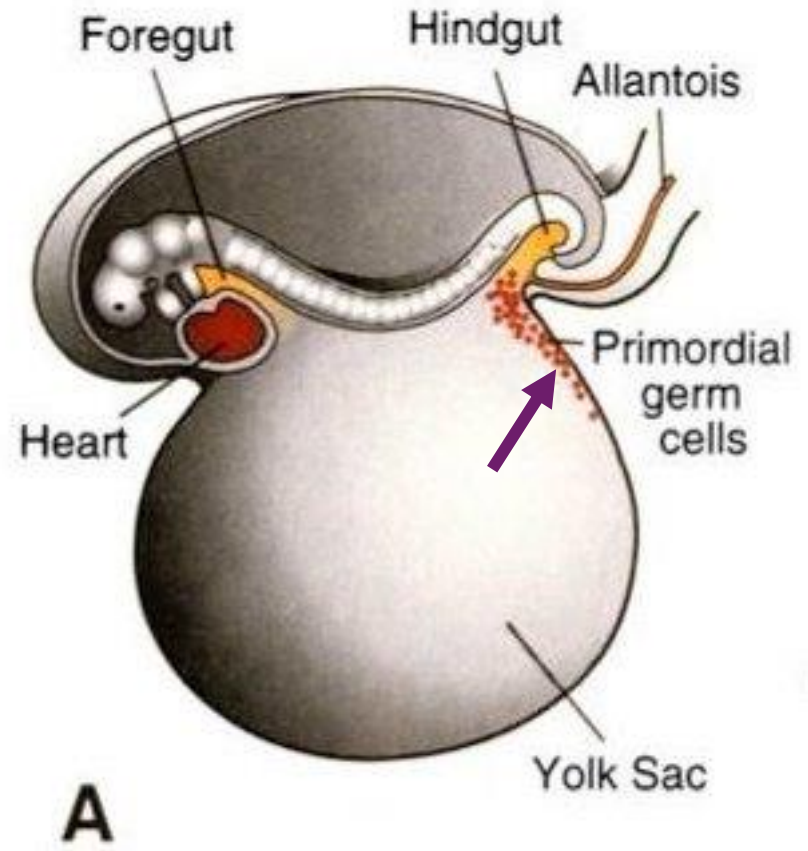
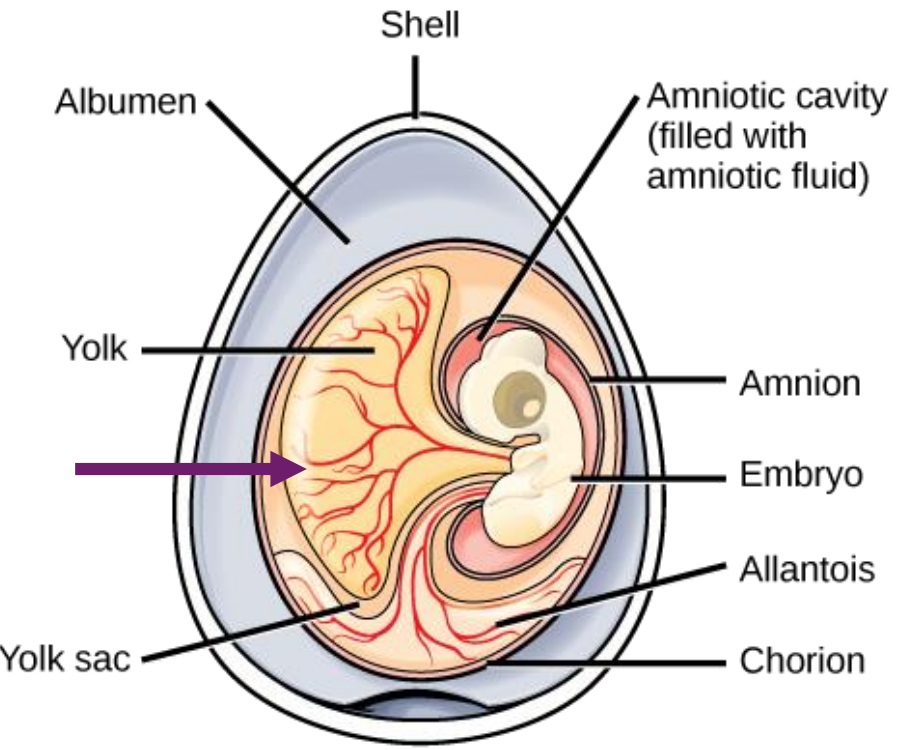
Vivíparos matrotróficos, mamíferos



Saco de la yema



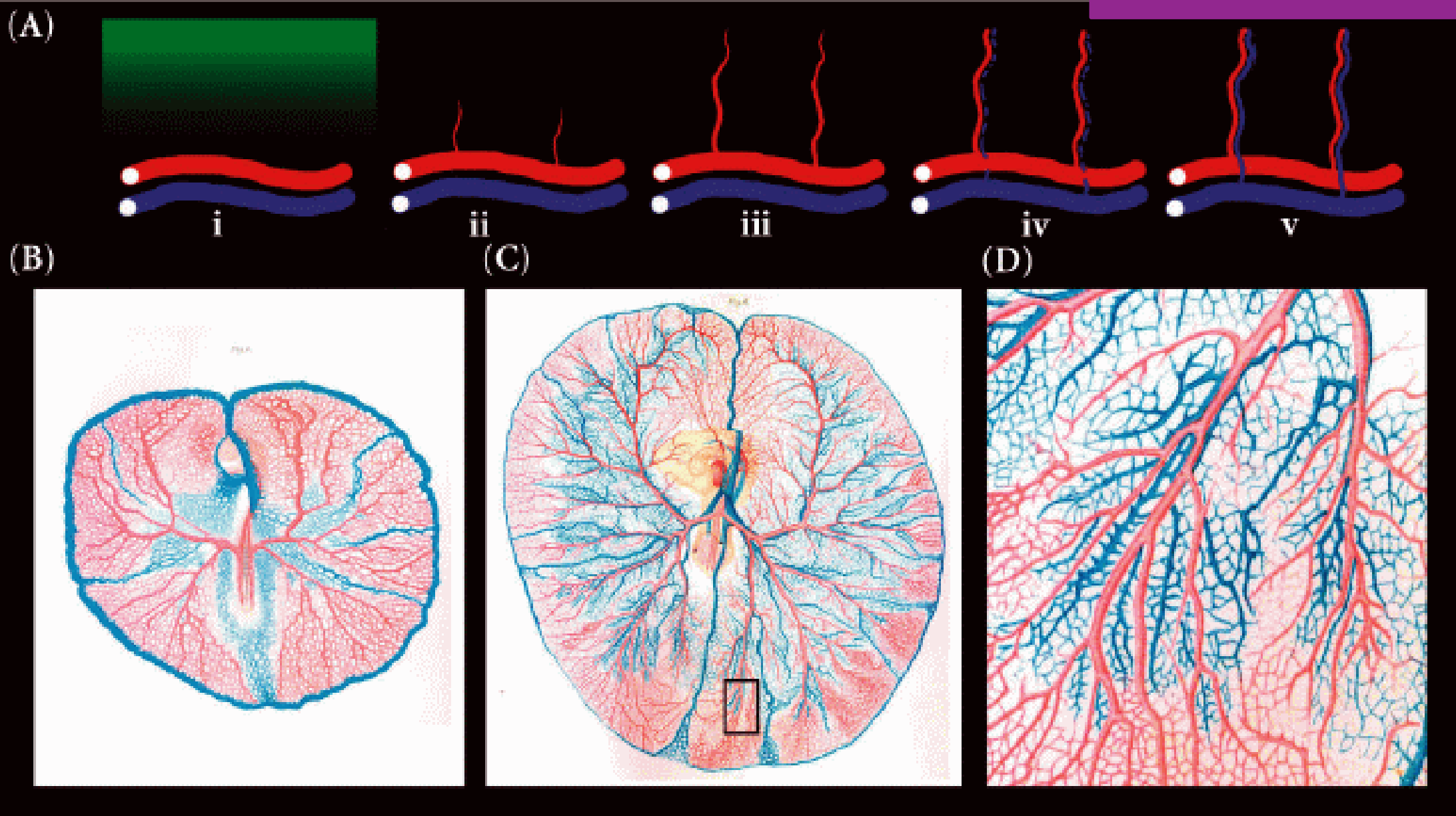
Saco de la yema



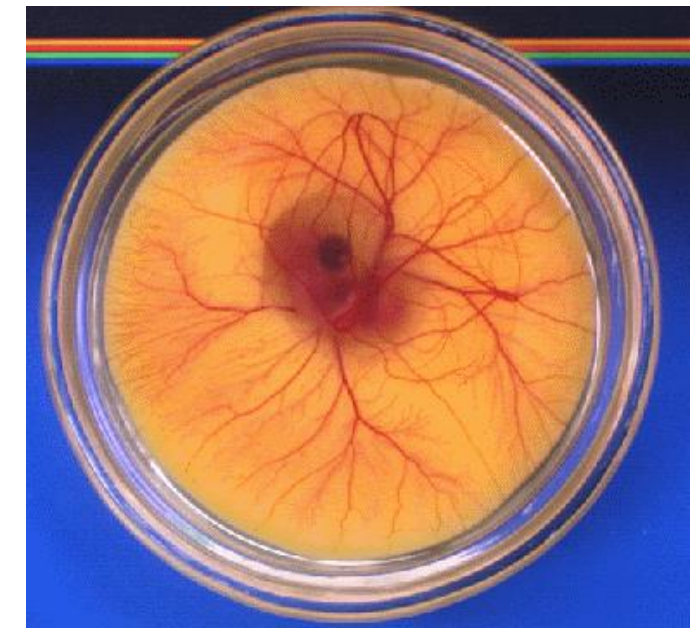
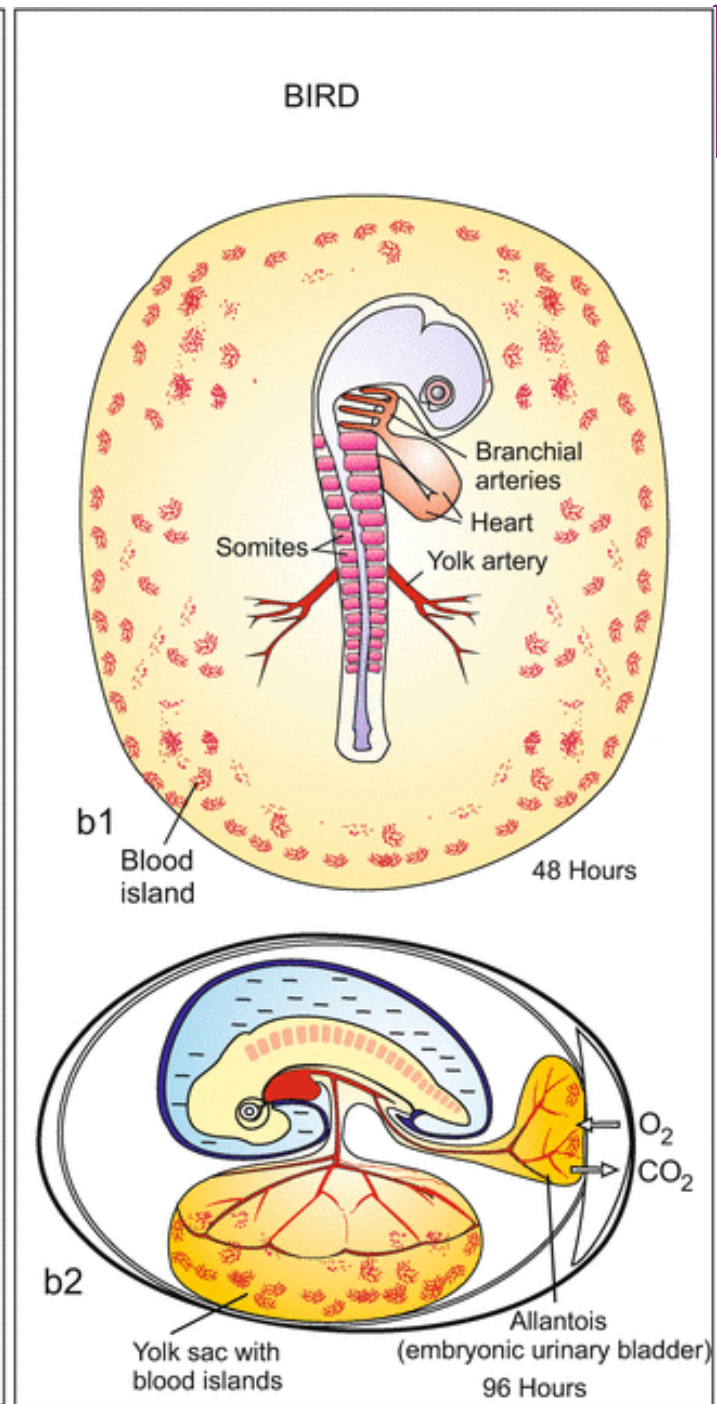
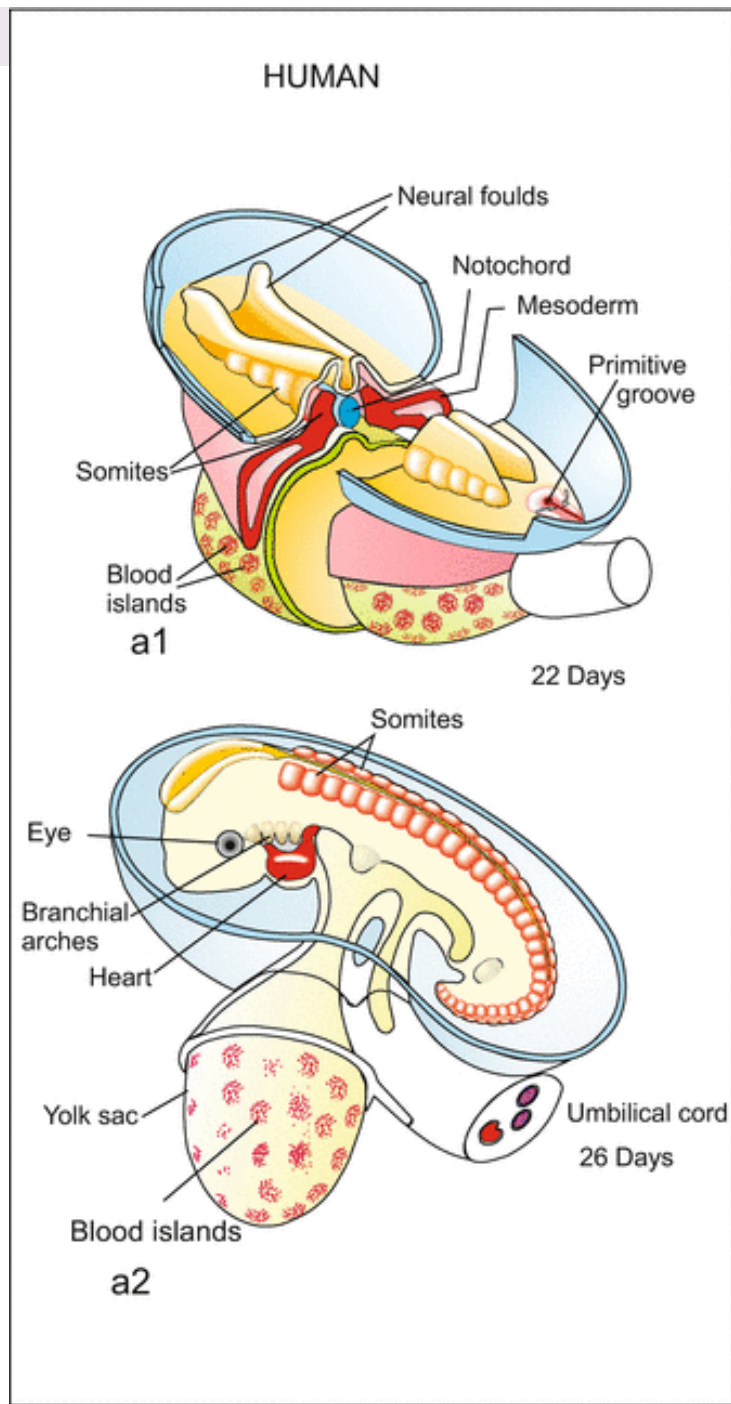
Saco de la yema



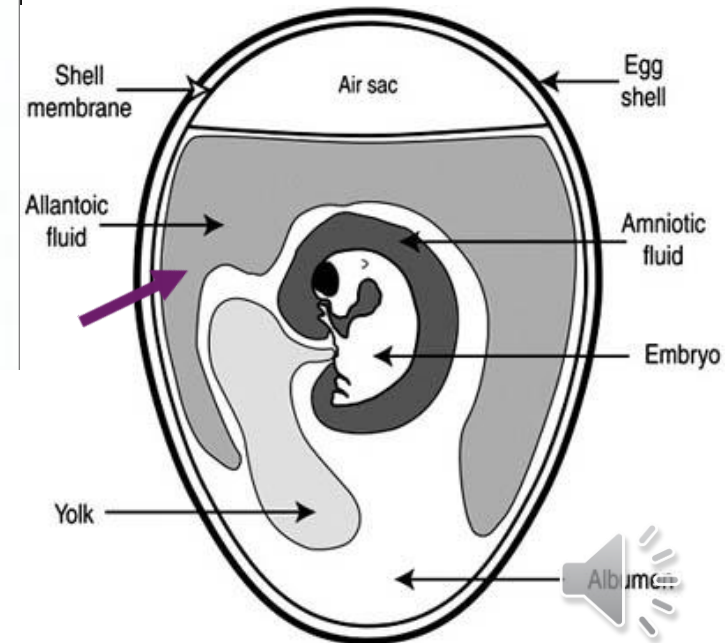
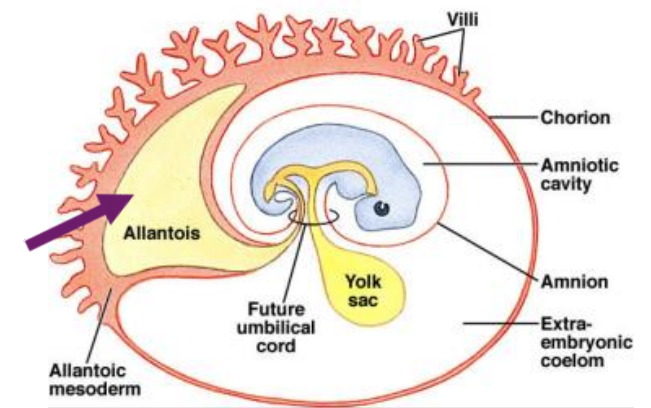
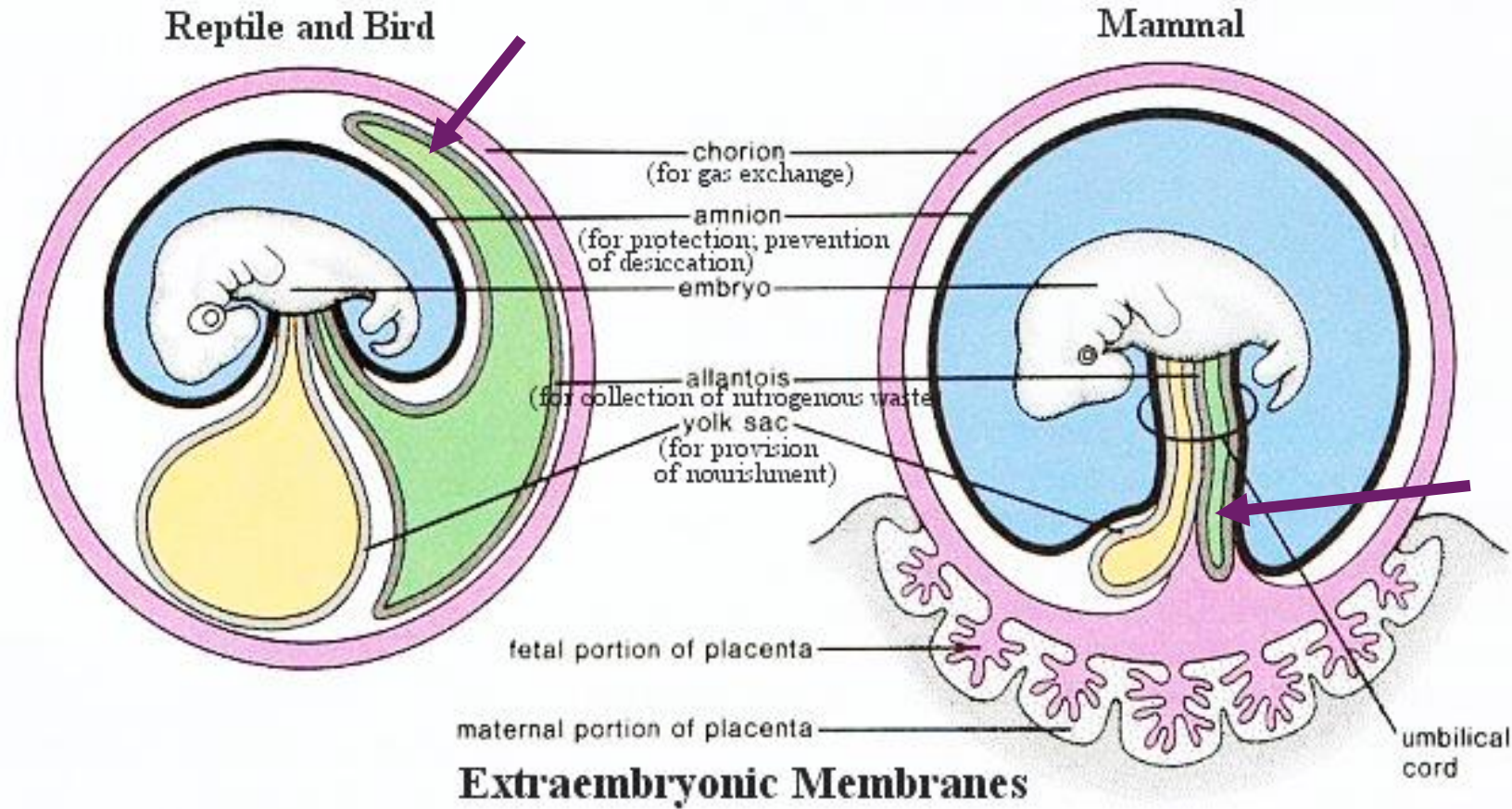
Saco de la yema



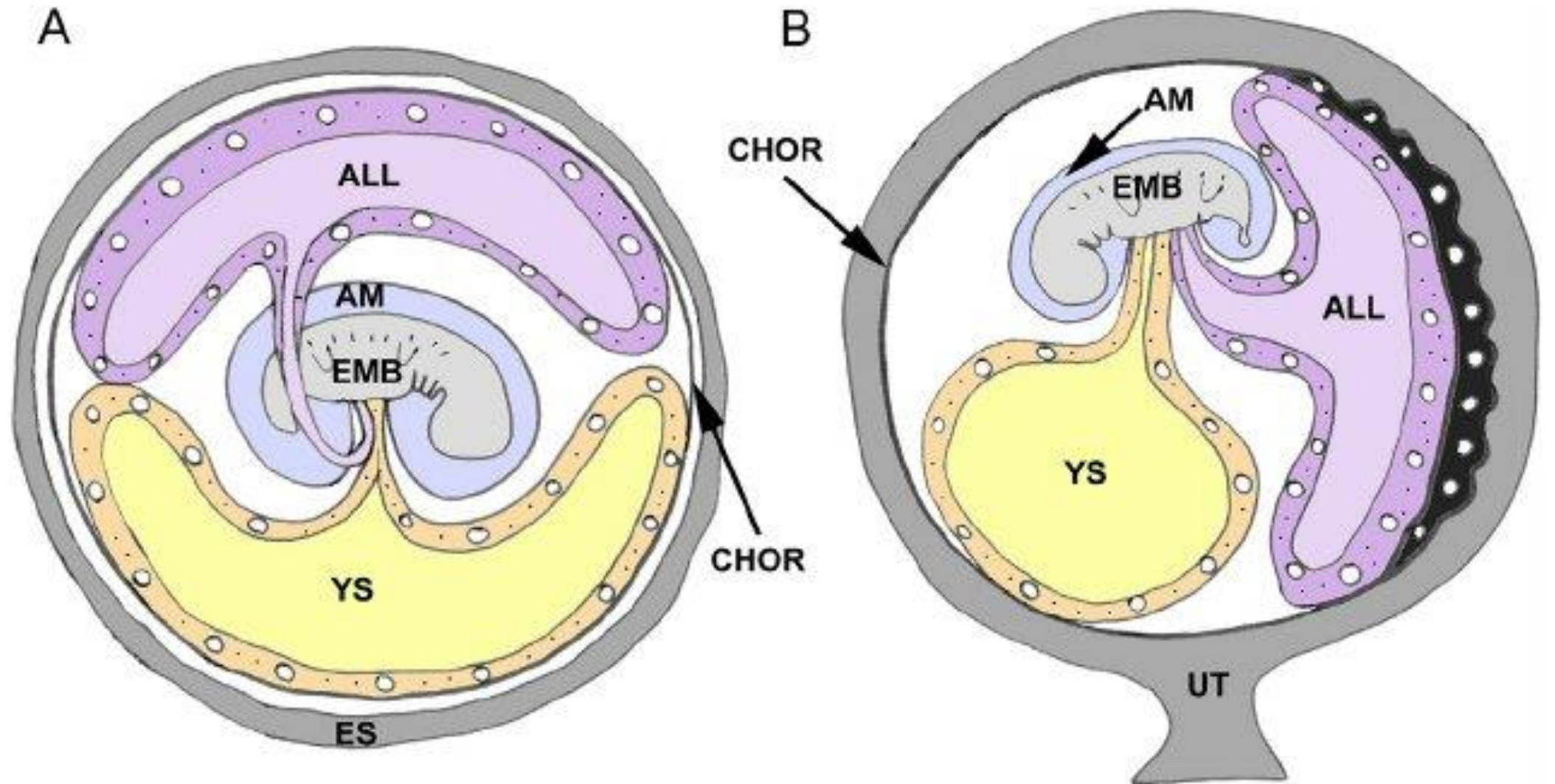
Saco de la yema



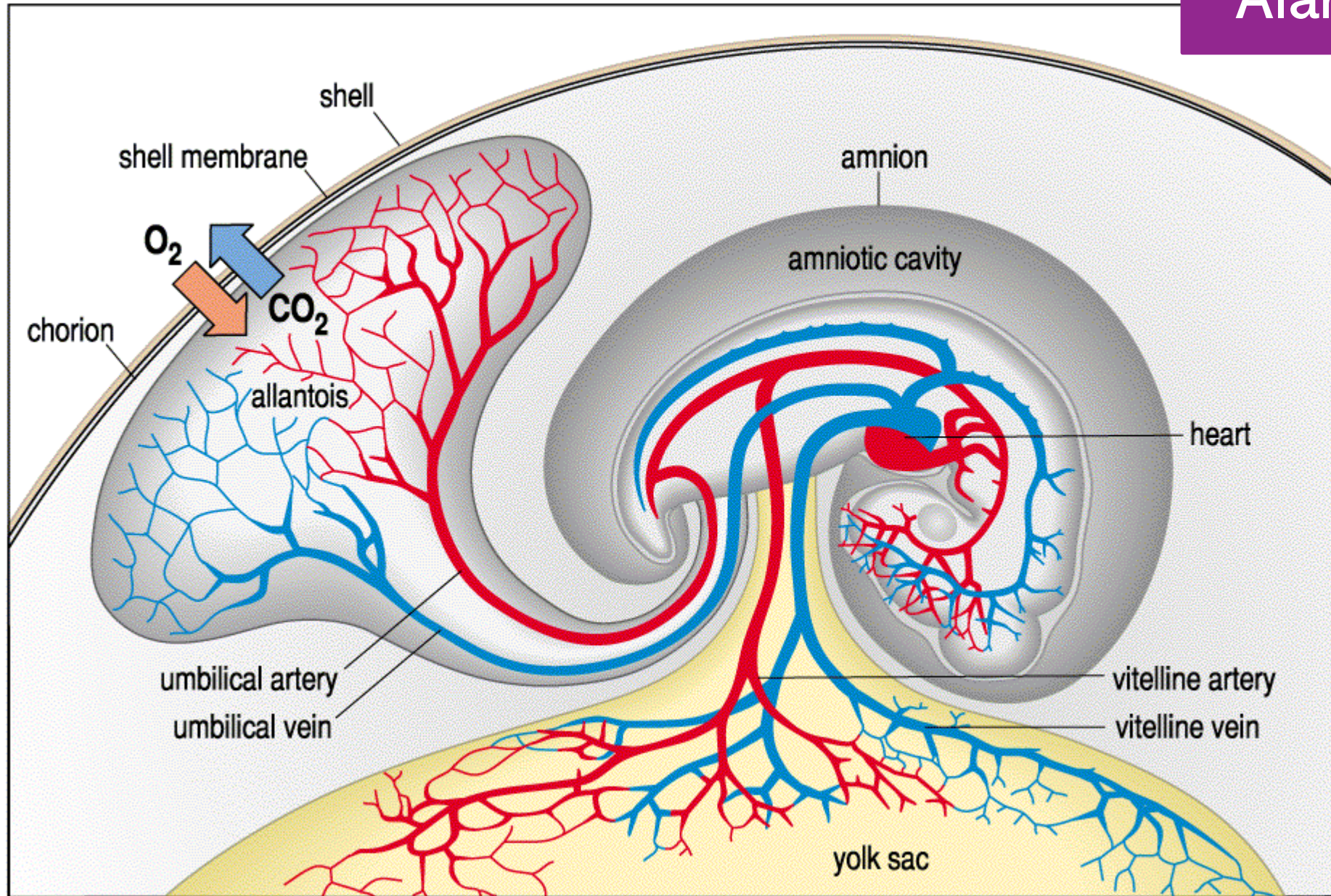
Alantoides



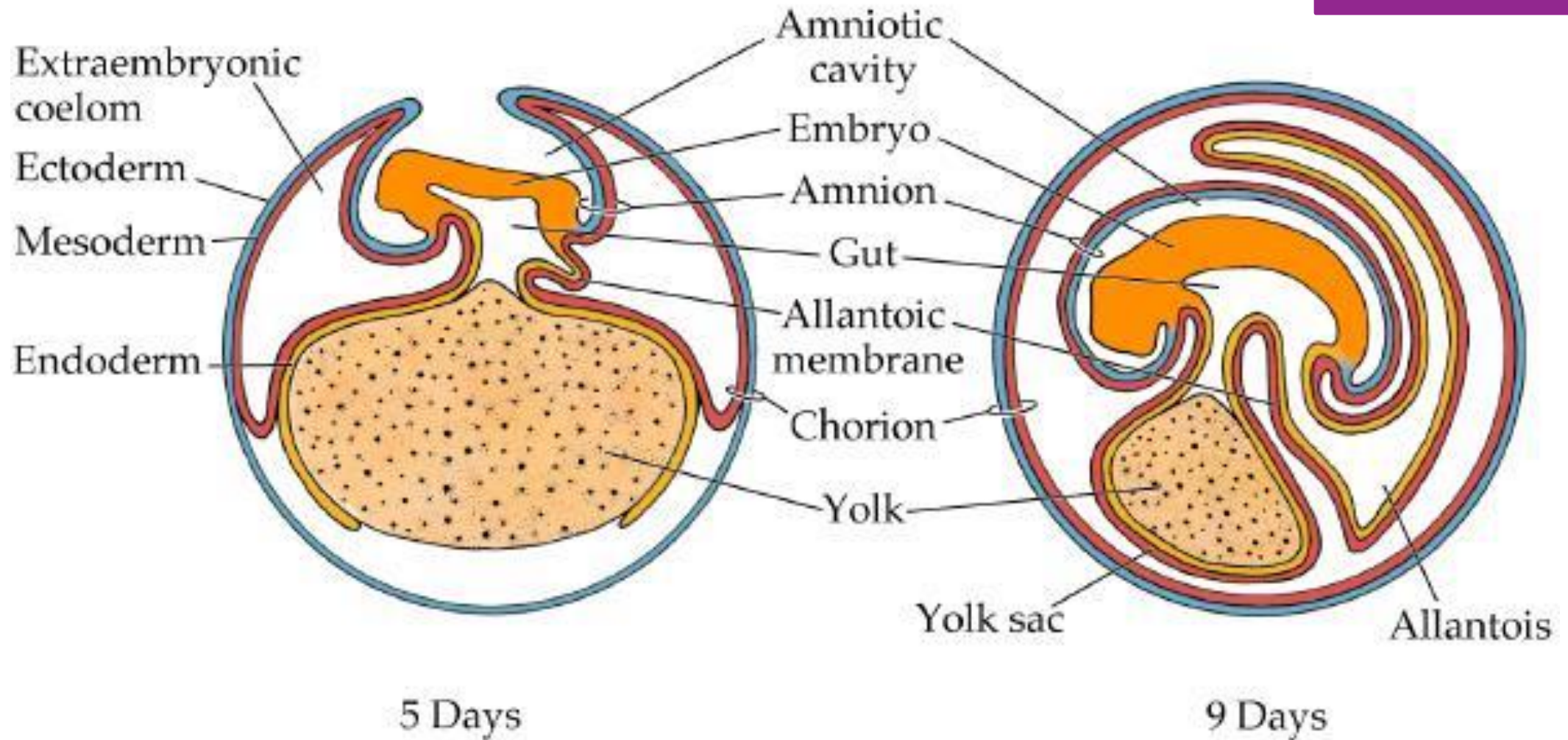
Alantoides



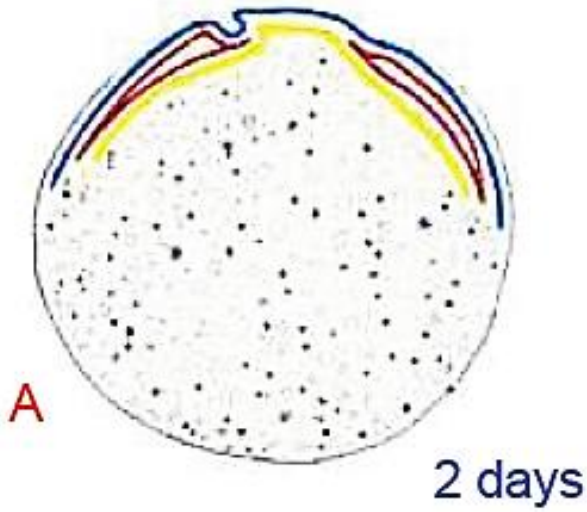
Alantoides



Alantoides

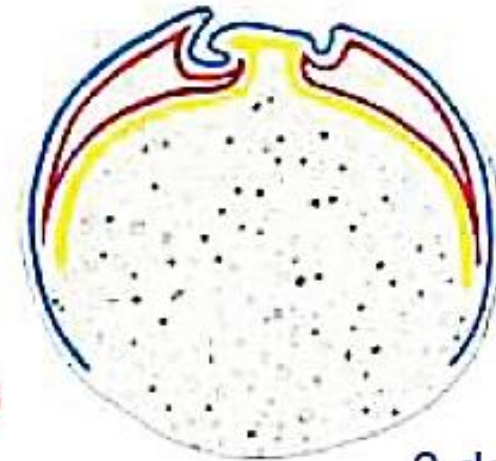


Alantoides



A

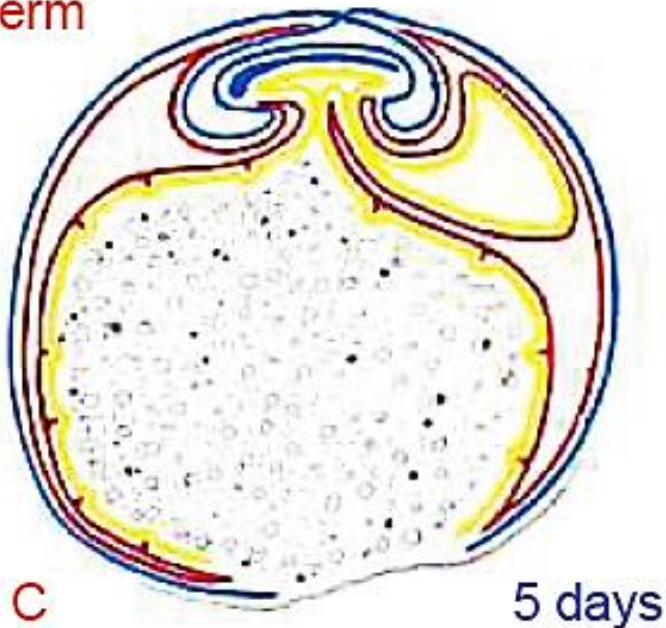
2 days



B

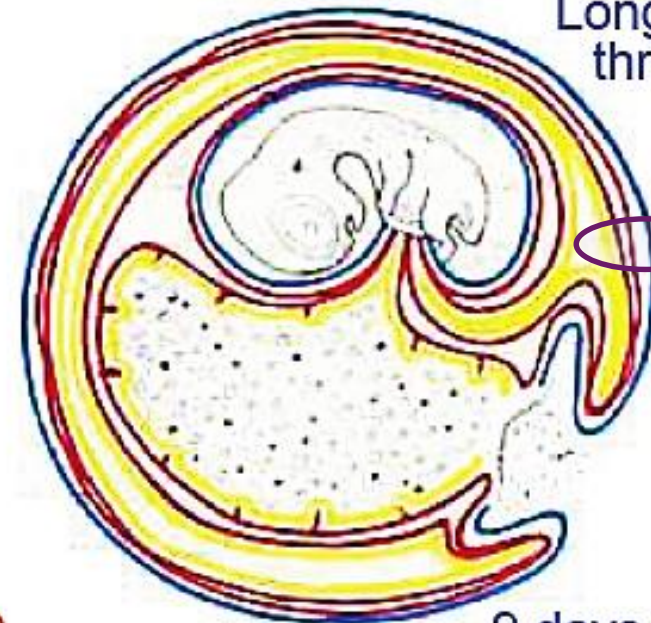
3 days

Blue = ectoderm
Red = mesoderm
Yellow = endoderm



C

5 days



D

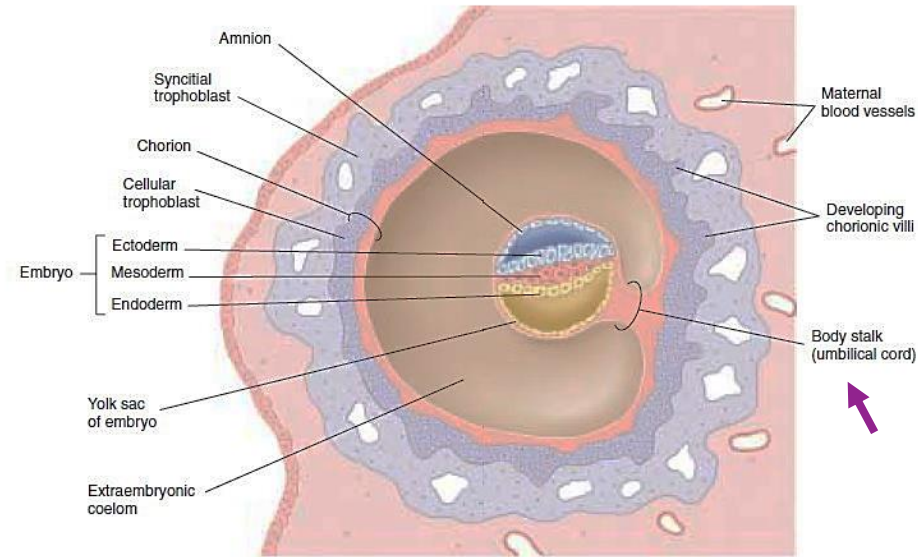
9 days

Longitudinal sections
through the chick

Membrana
corioalantoica



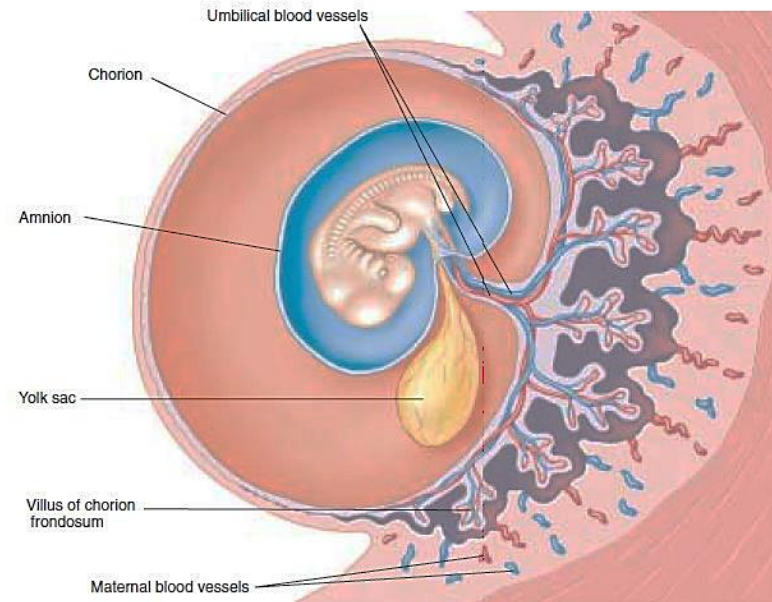
Alantoides



Durante la gastrulación

Mesodermo lateral somático
extraembrionario

Trofoblasto no vascularizado



A partir de la neurulación

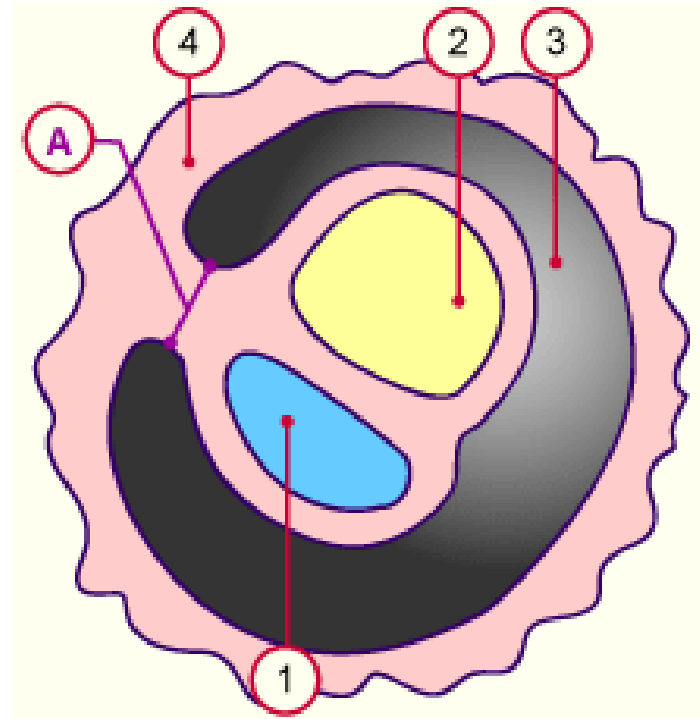
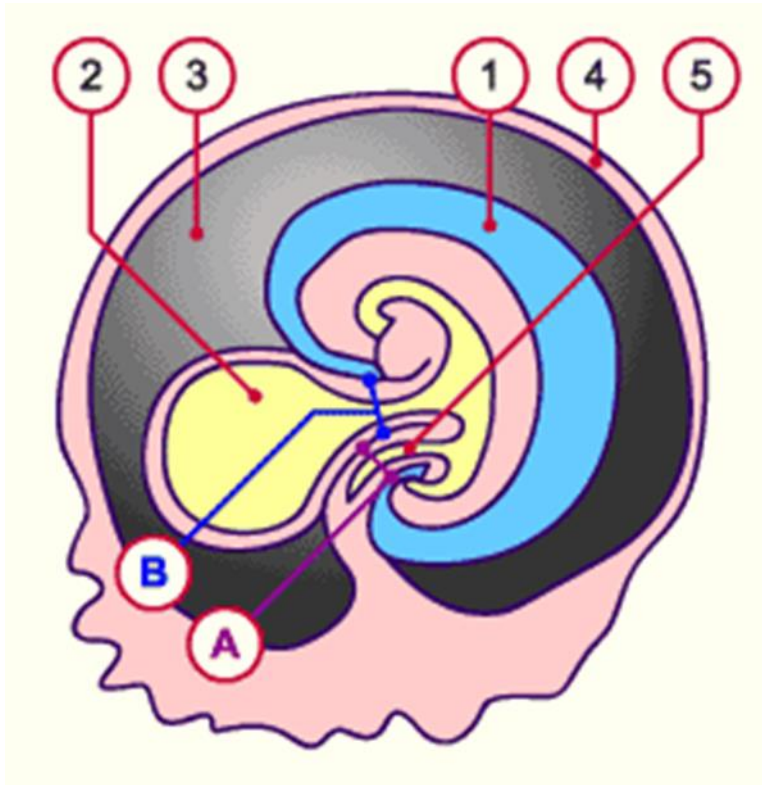
Mesodermo lateral esplácnico
extraembrionario cubre el
mesodermo lateral somático
extraembrionario vascularizándolo

Trofoblasto vascularizado

FIGURE 60.20

The extraembryonic membranes of a mammalian embryo. (a) After the embryo implants into the mother's endometrium (6–7 days after fertilization), the trophoblast becomes the chorion, and the yolk sac and amnion are produced. (b) The chorion develops extensions, called villi, that interdigitate with surrounding endometrial tissue. The embryo is encased within an amniotic sac.

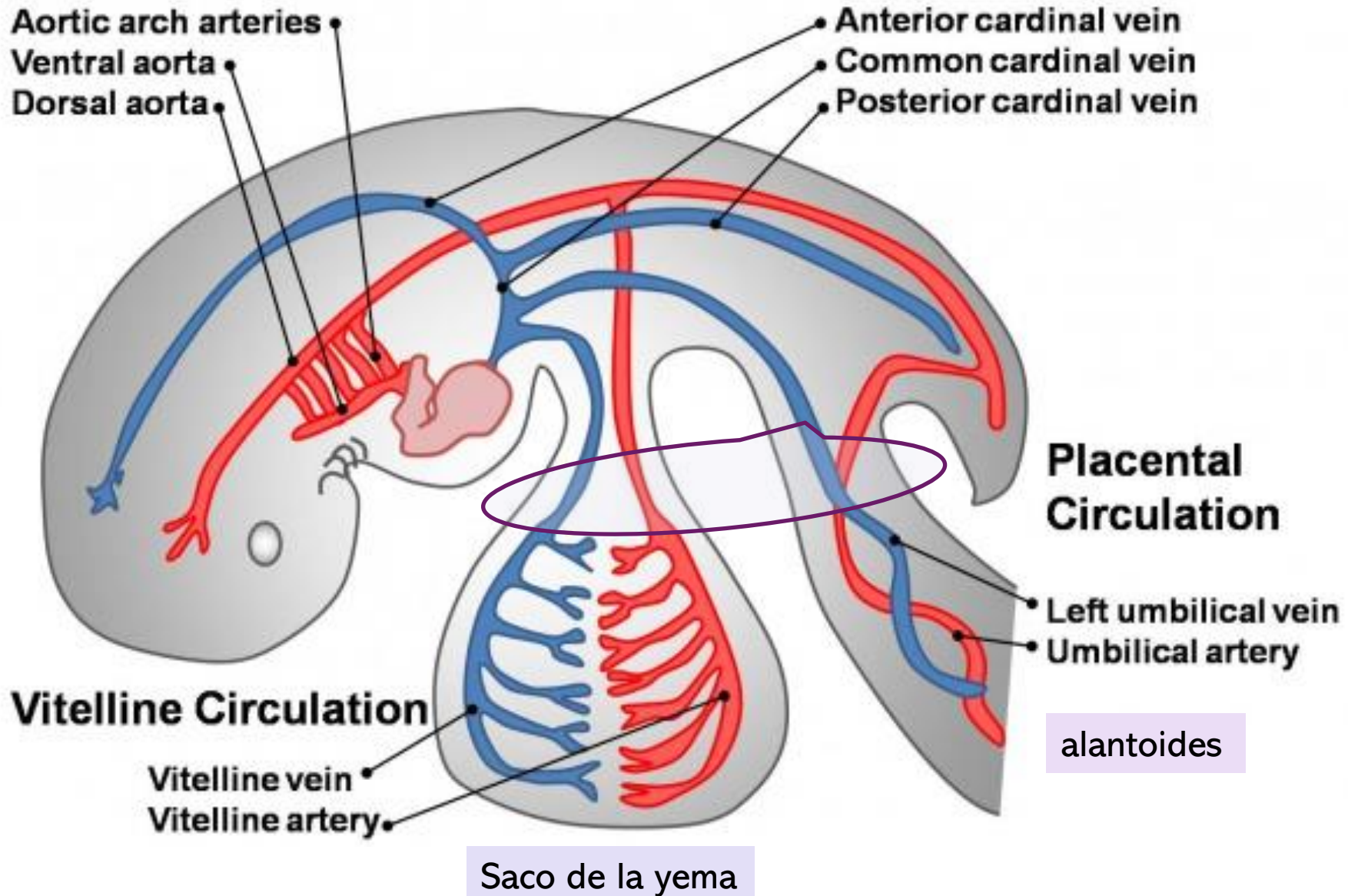


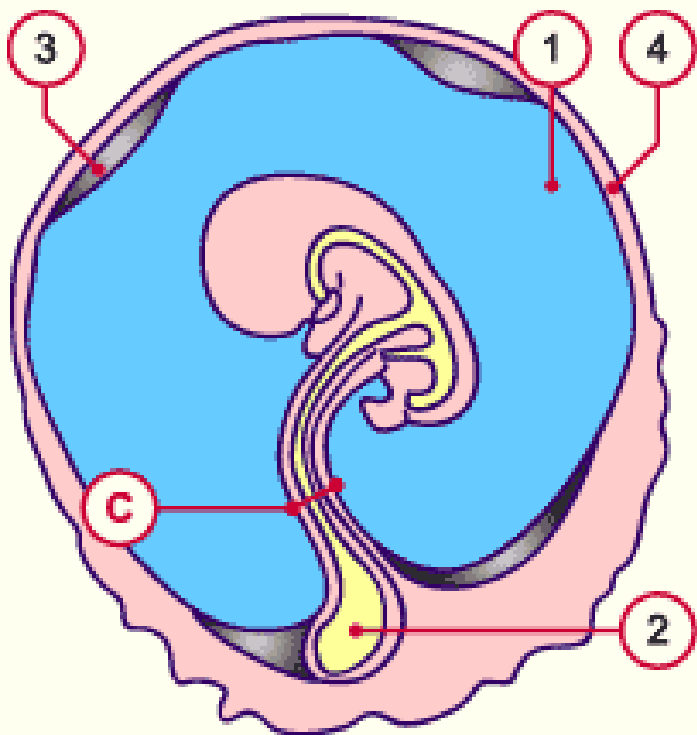


1. Cavidad amniótica
2. Saco de la yema
3. Exoceloma
4. Vellosidad coriónica
5. Alantoides
- A. Pedicelo alantoico
- B. Pedicelo vitelino

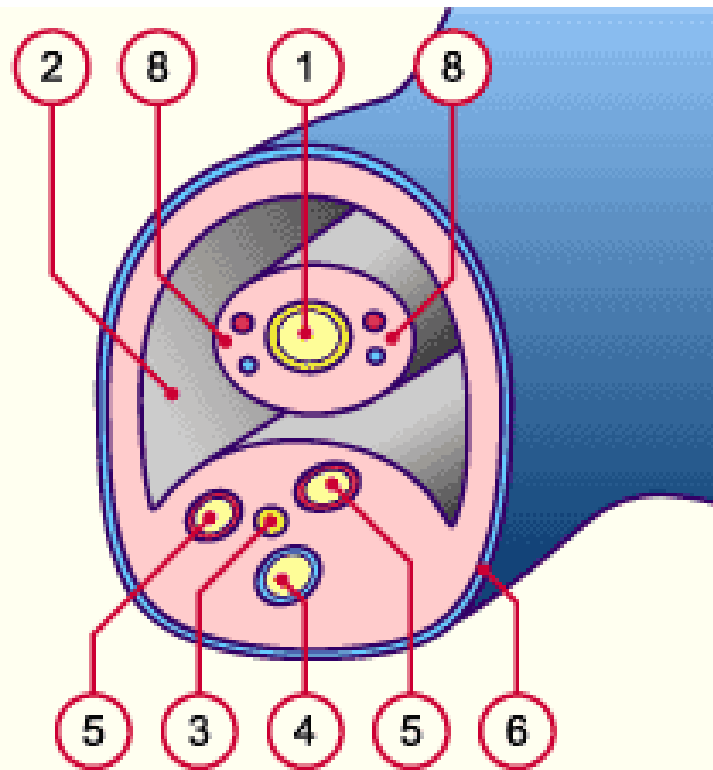


Embryonic Circulation

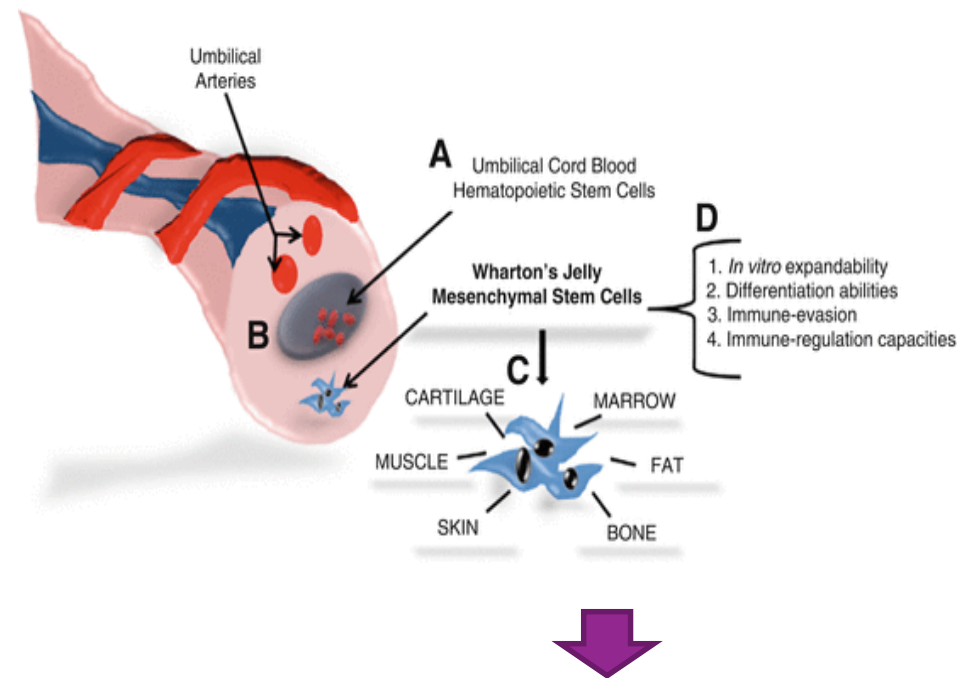




1. Cavidad amniótica
2. Saco de la yema
3. Exoceloma
4. Corioalantoides

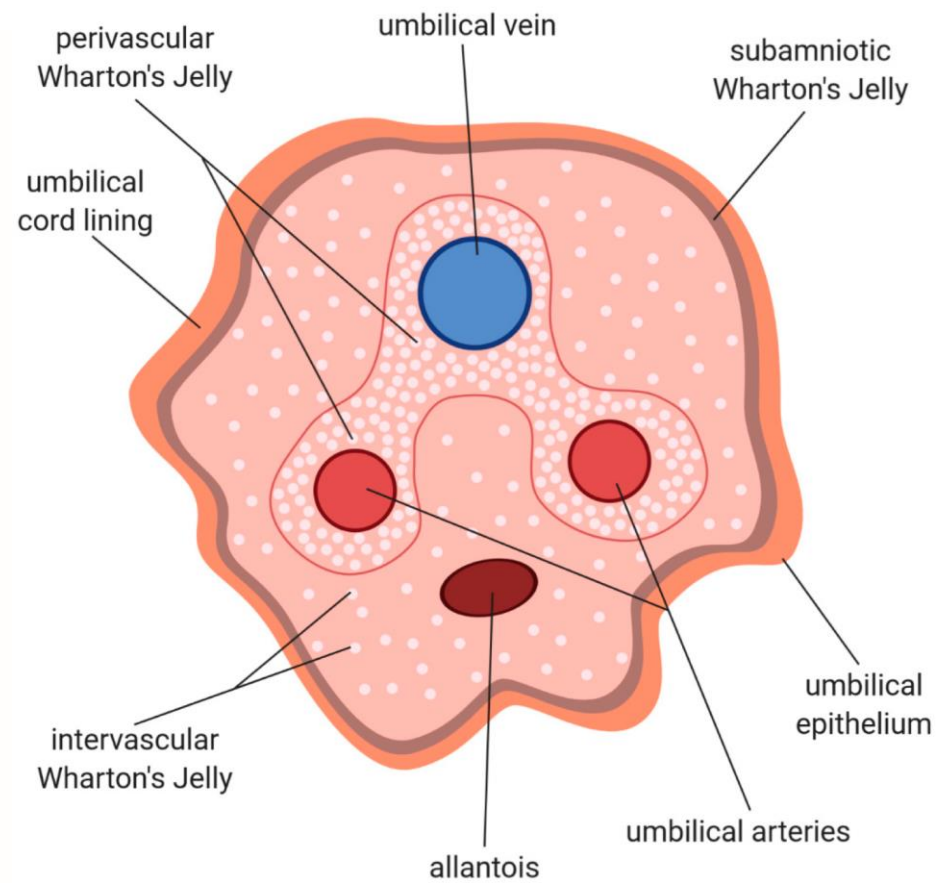
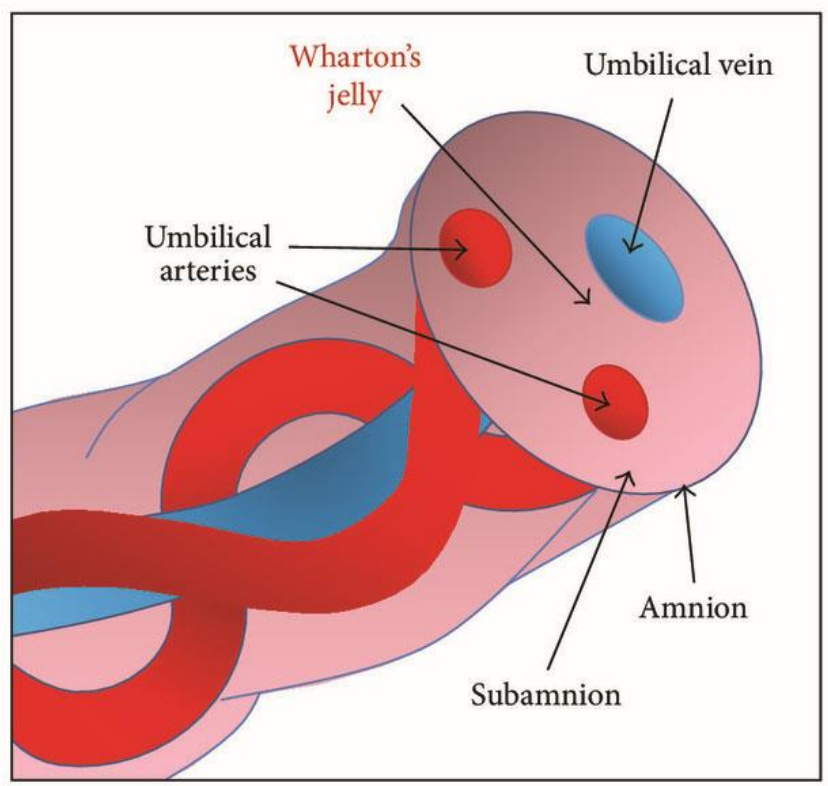


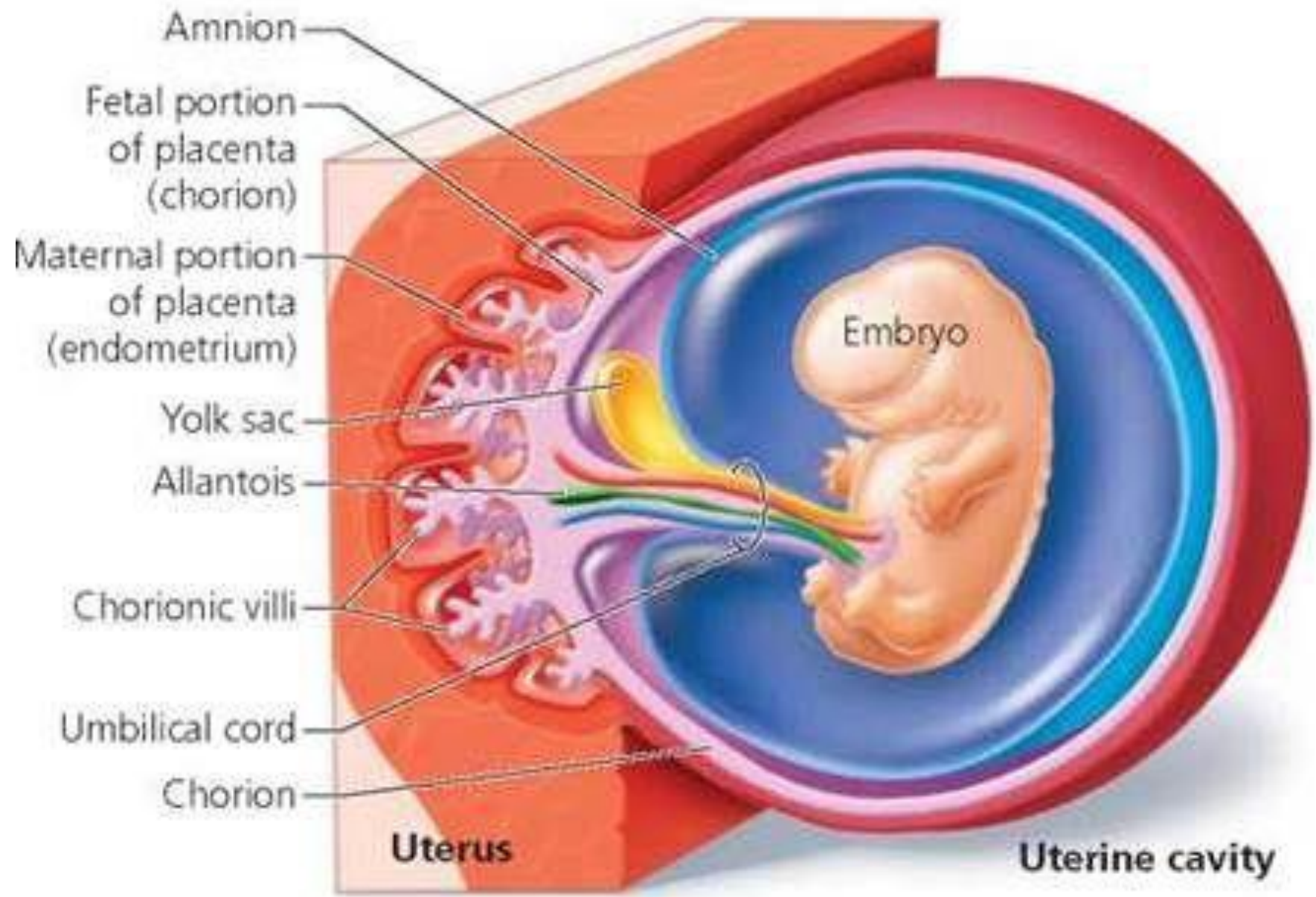
1. Lumen del saco de la yema
2. Celoma umbilical
3. Vena umbilical
4. Alantoides
5. Arterias umbilicales
6. Amnios
8. Arterias y venas vitelinas



Banco de cordones umbilicales







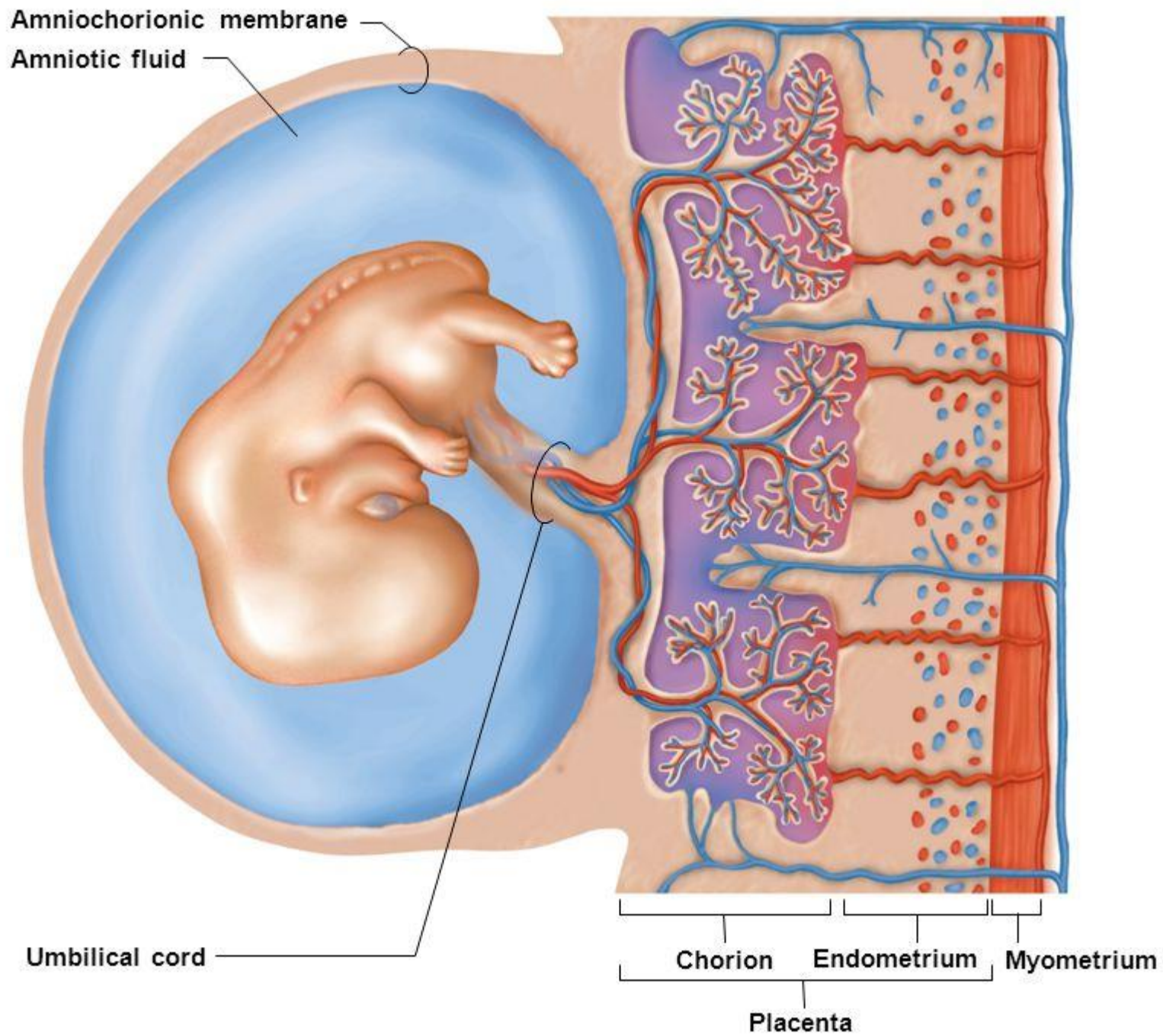
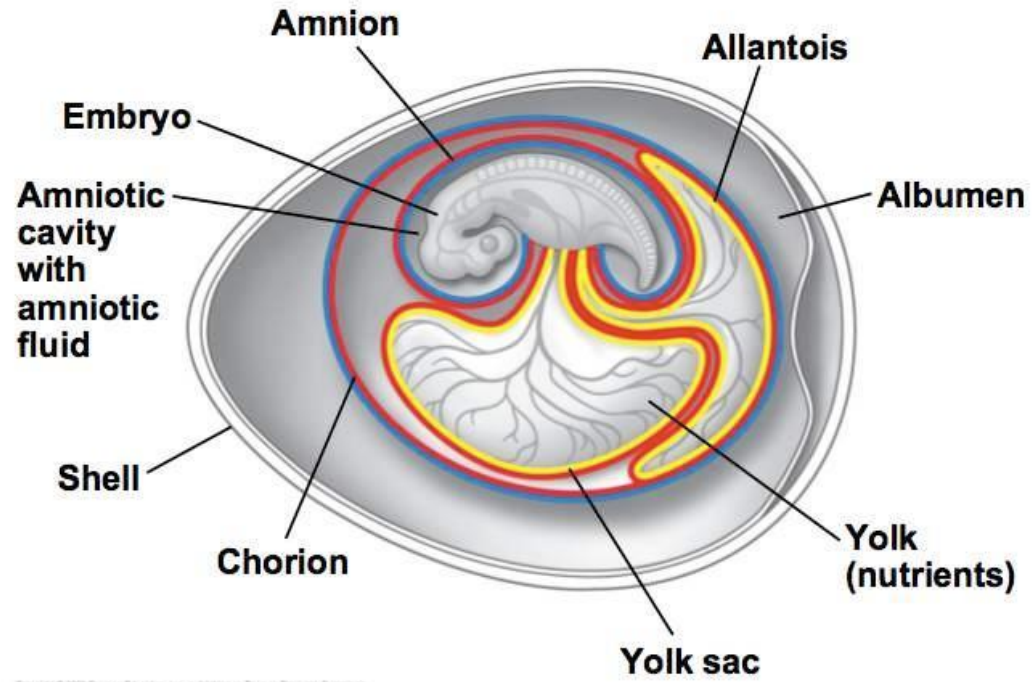
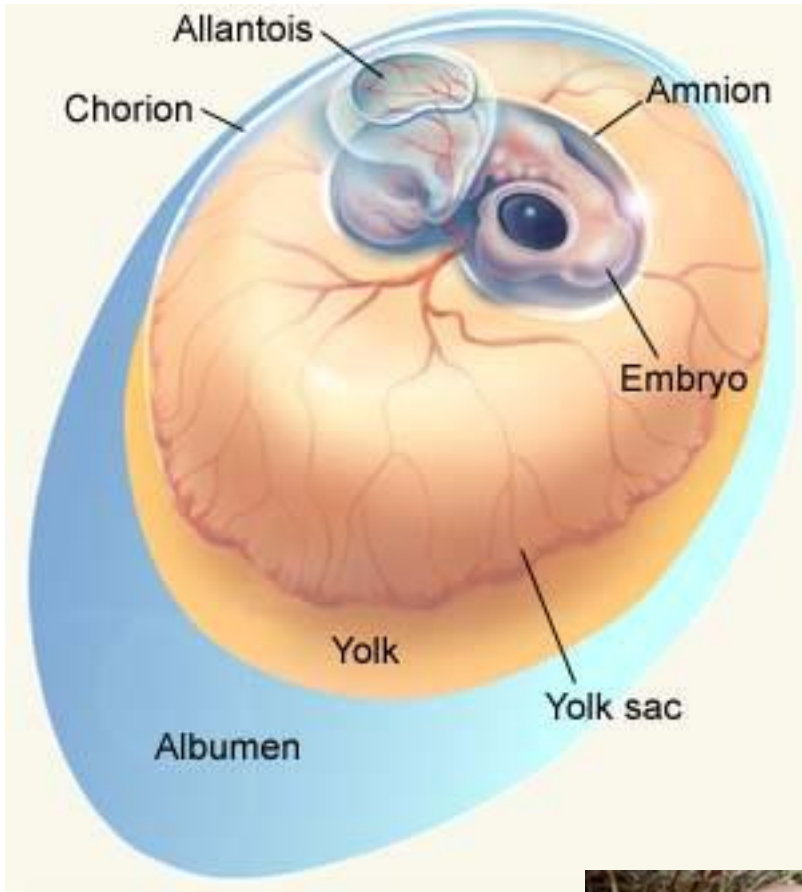
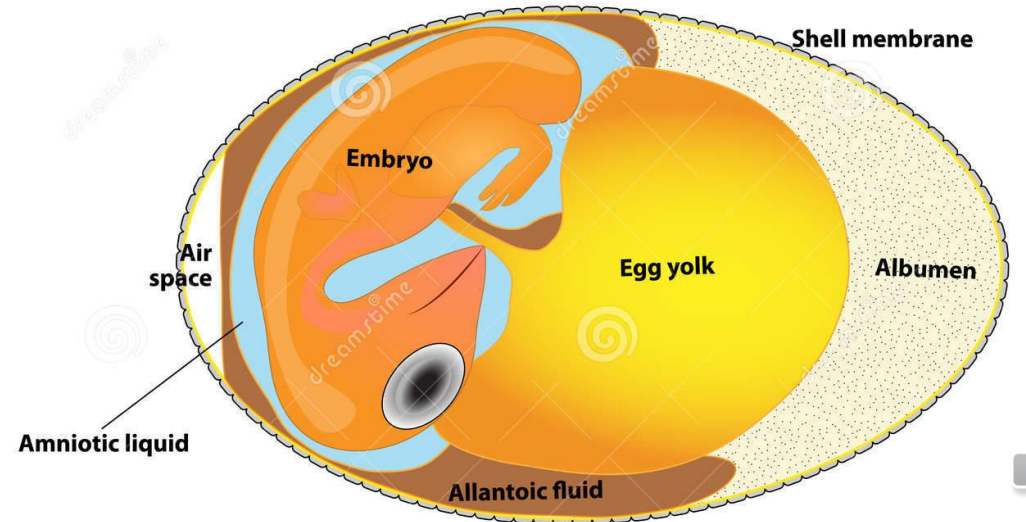


Fig. 47-15



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Membranas extraembrionarias en amniotas



