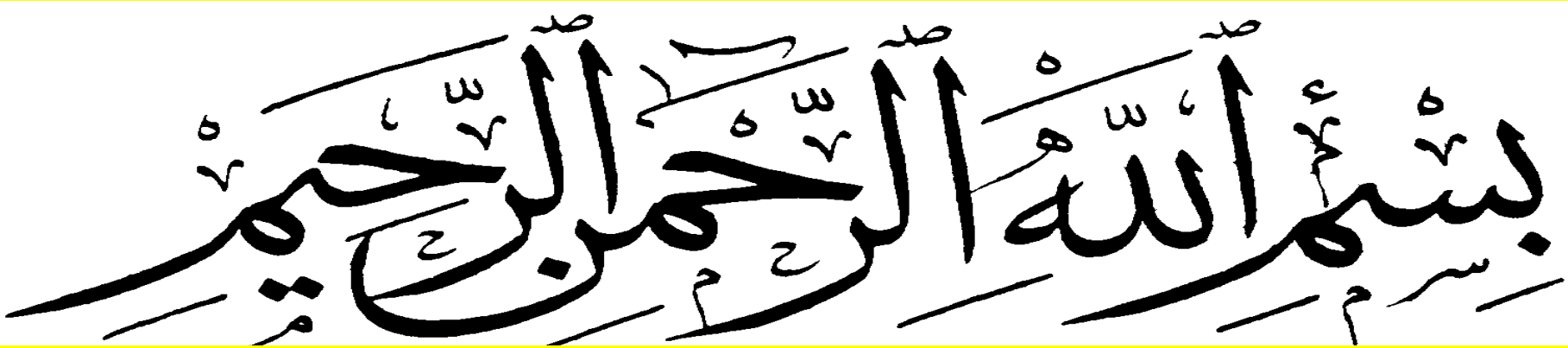

بسم الله الرحمن الرحيم

Second Week of Development: Bilaminar Germ Disc

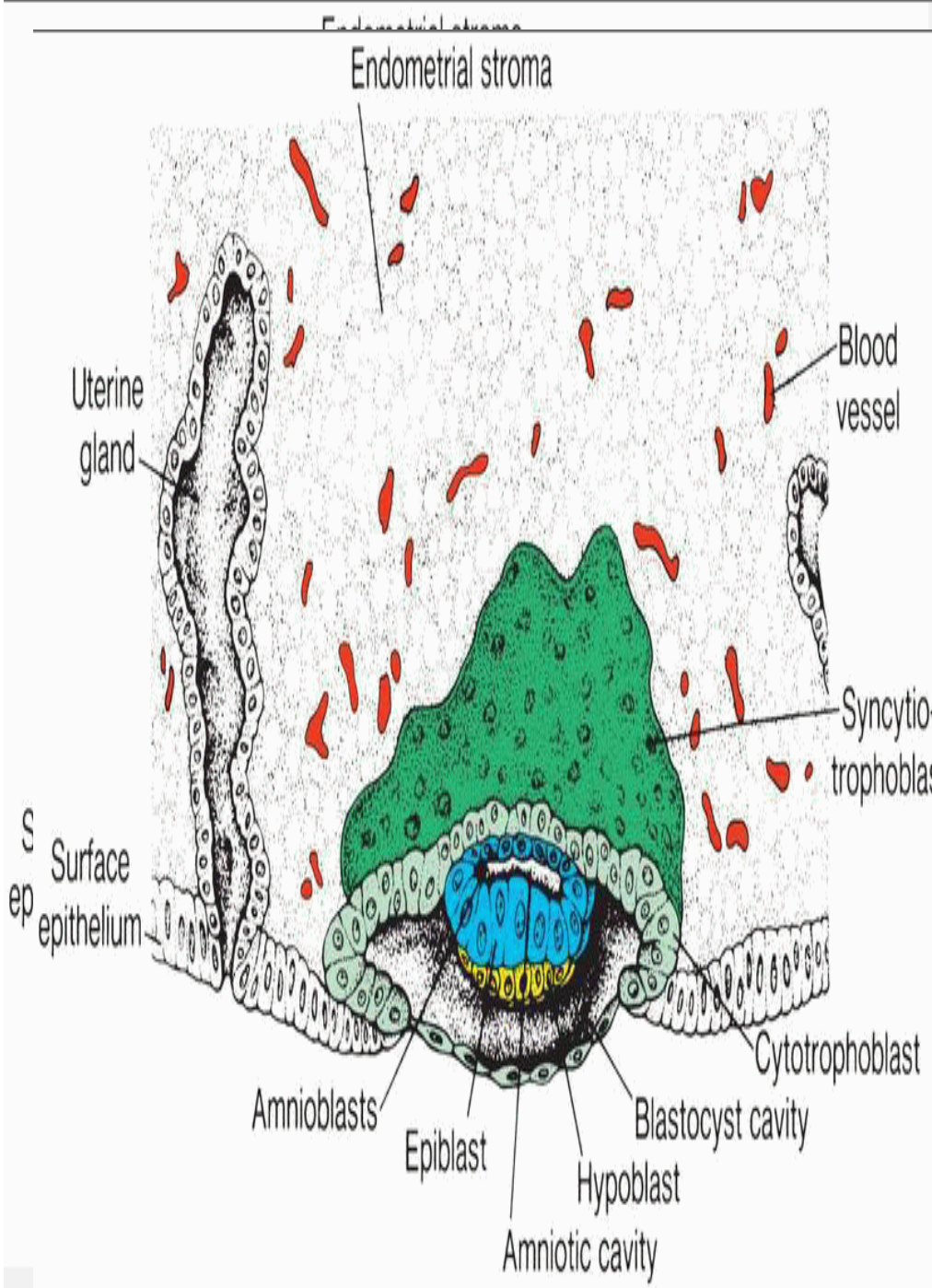
What to do? Cry, cry, cry???

Second Week of Development: Bilaminar Germ Disc

Blastocyst is partially embedded in endometrial stroma and forms

(1) Cytotrophoblast,

(2)Syncytiotrophoblast

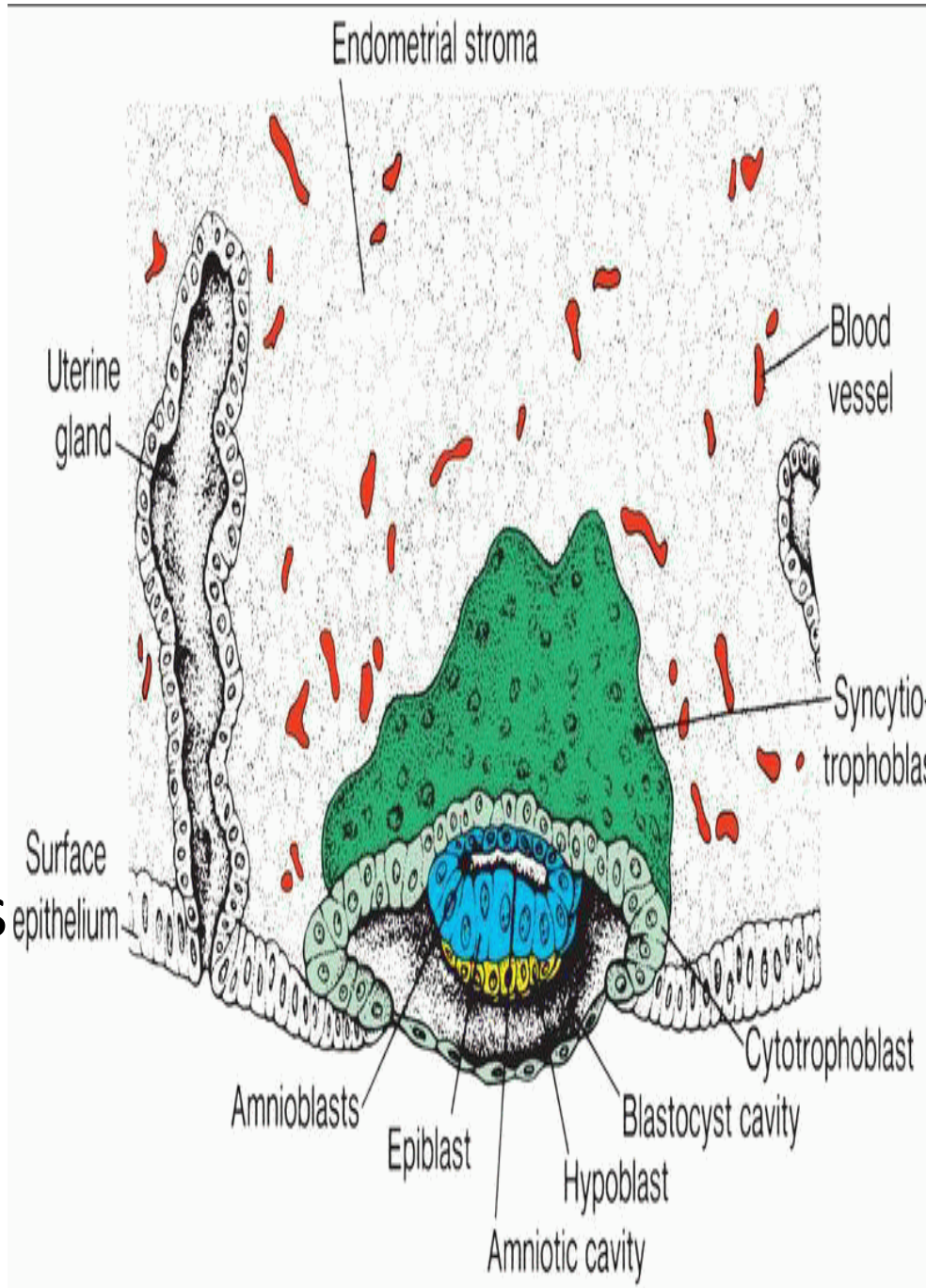


Flat disc.

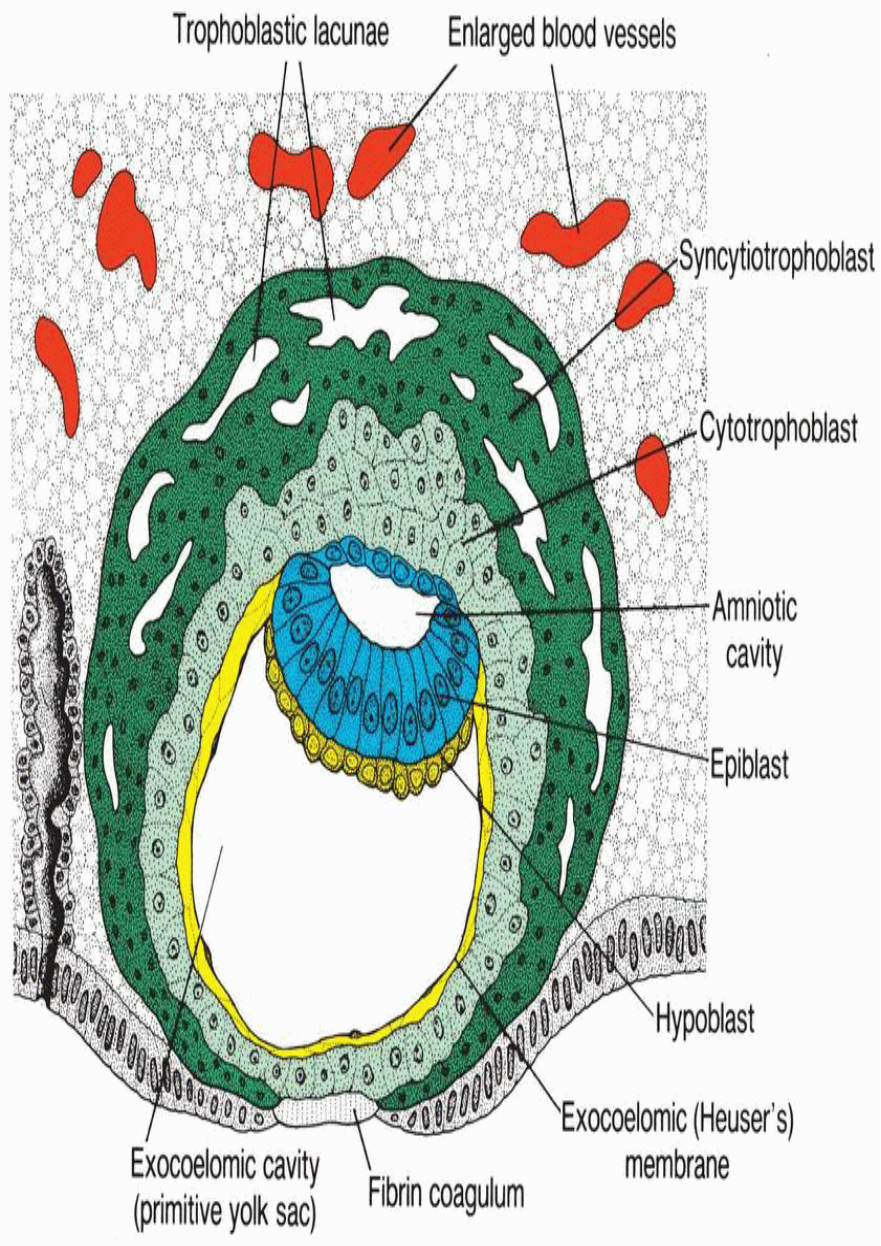
Cavity appears within the epiblast called amniotic cavity.

Amnioblasts line the amniotic cavity .

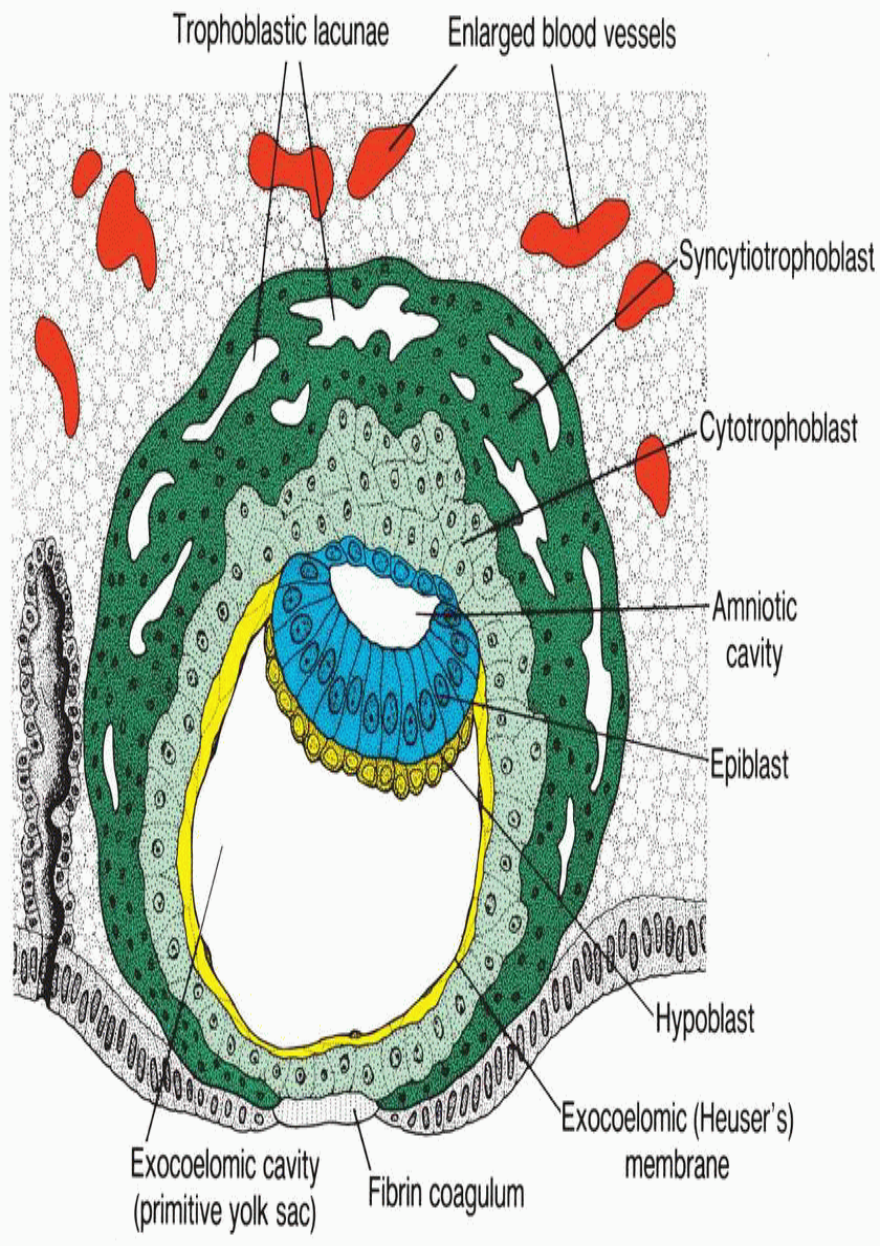
Food; The endometrial stroma with large tortuous glands secrete abundant glycogen and mucus.



- Defect in the surface epithelium is closed by a fibrin coagulum .
- Vacuoles appear in the syncytium which form large lacunae, and this phase is known as
- **the lacunar stage**



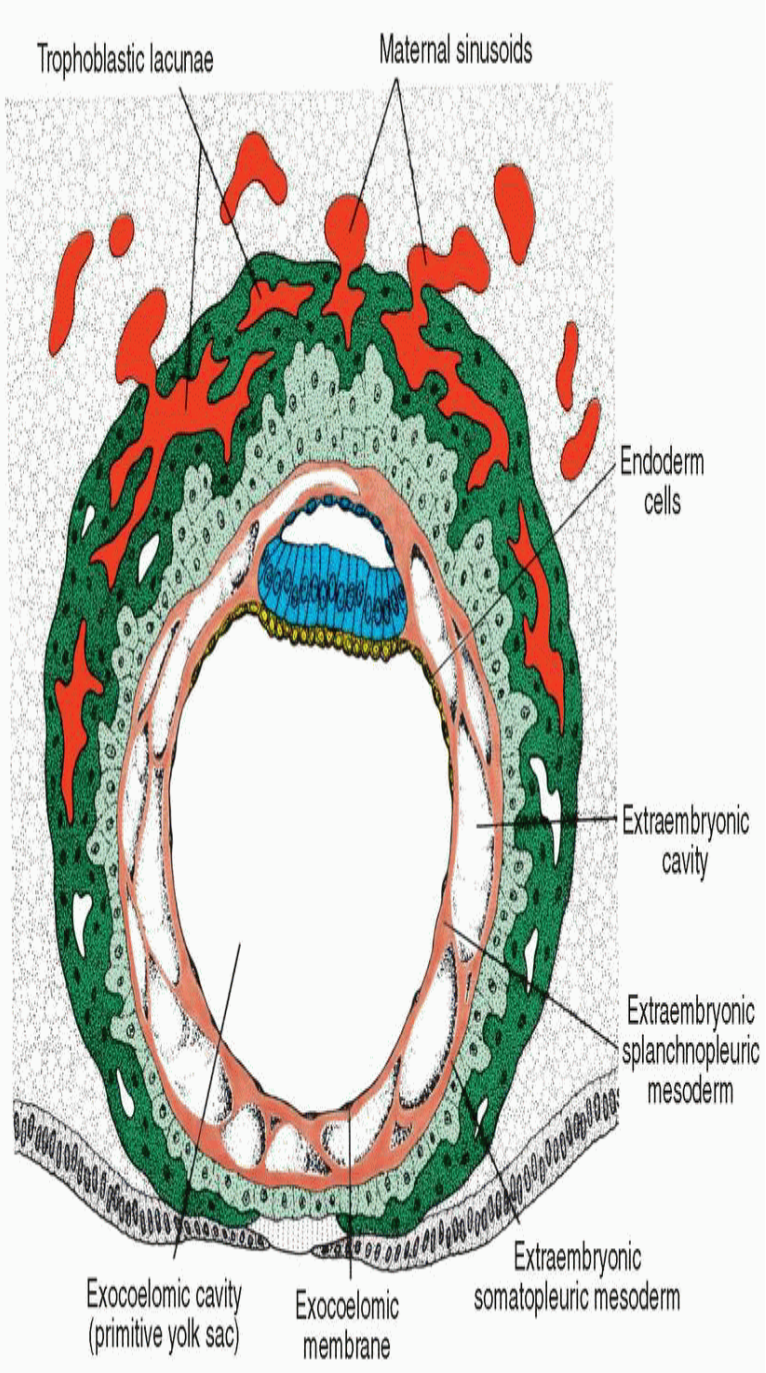
- At the abembryonic pole flattened cells from the hypoblast form a thin membrane, the **exocoelomic (Heuser's) membrane** that forms the lining of the exocoelomic cavity, or **primitive yolk sac**



By 12th day the blastocyst is completely

embedded in the endometrial stroma

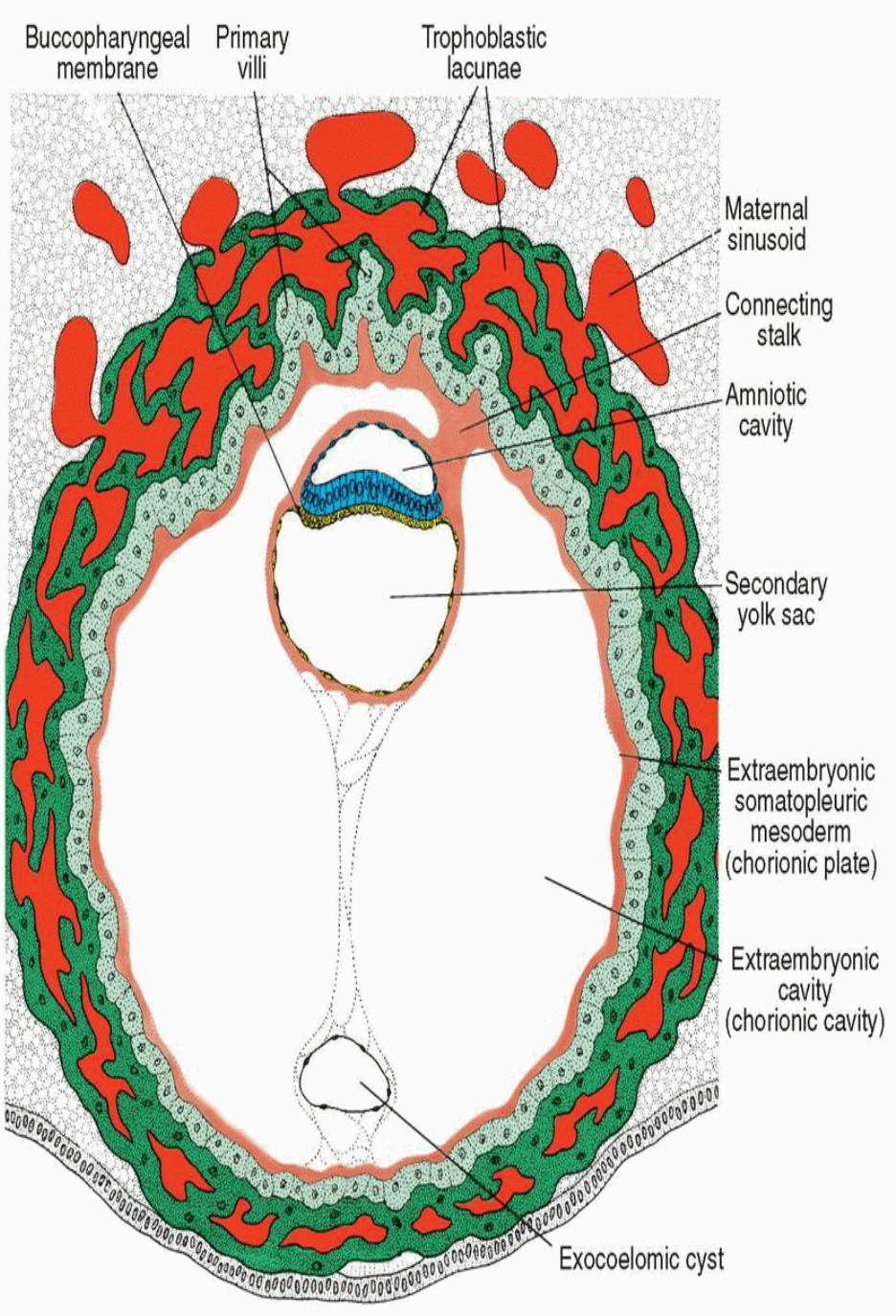
Lacunar spaces in the syncytium is particularly evident at the embryonic pole.



- Syncytiotrophoblast penetrate deeper into the stroma and erode the sinusoids

The syncytial lacunae become continuous with the sinusoids, and maternal blood enters the lacunar system called

Uteroplacental circulation.

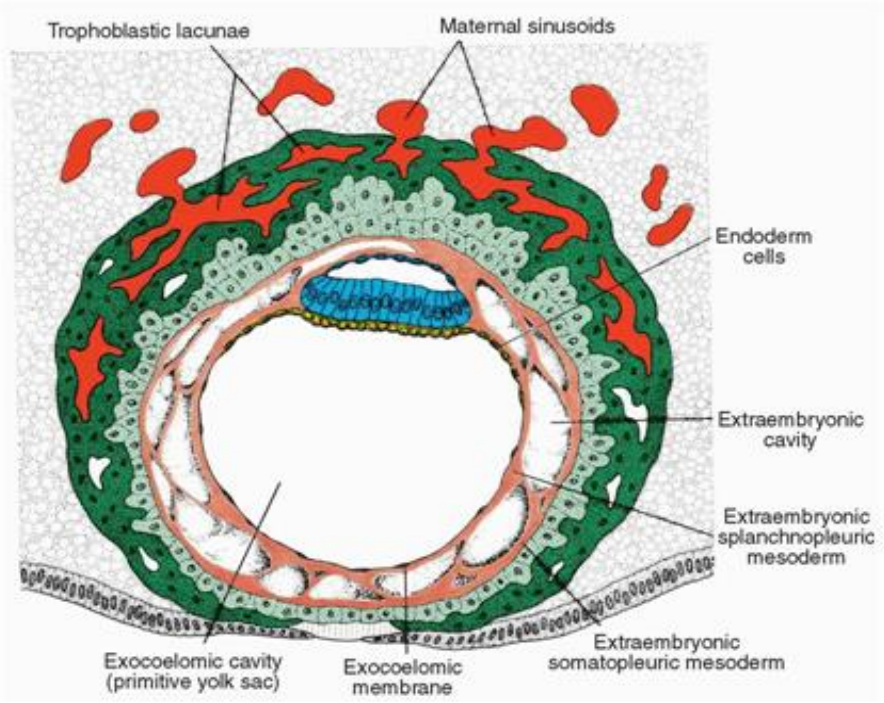


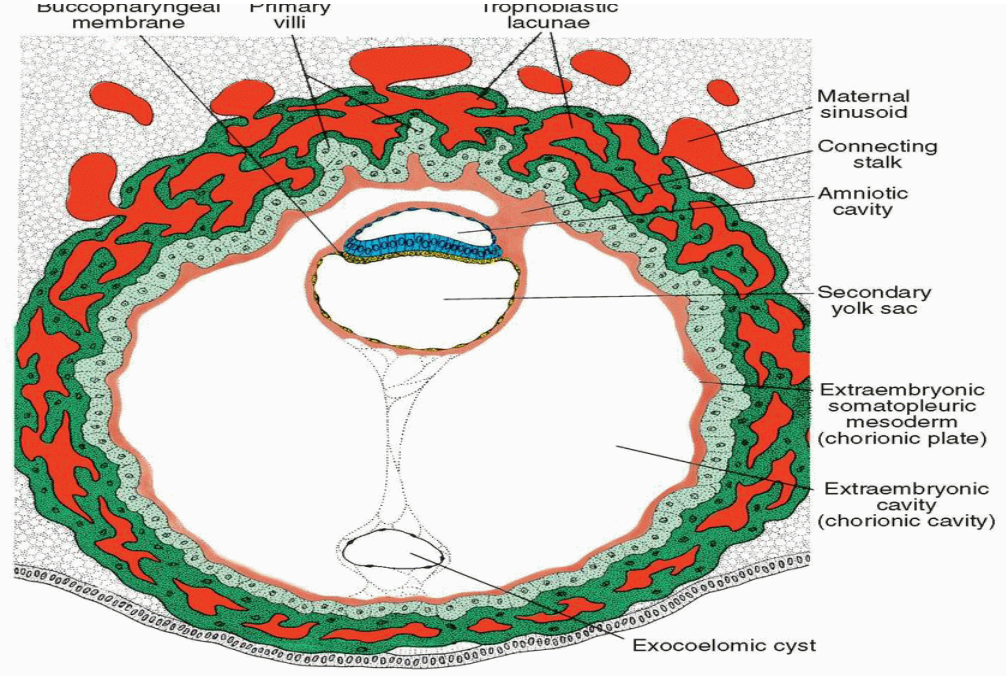
Cells derived from yolk sac cells, form the **extraembryonic mesoderm**.

Extraembryonic coelom, **or chorionic cavity**

Extraembryonic somatopleuric mesoderm

Extraembryonic splanchnopleuric mesoderm .





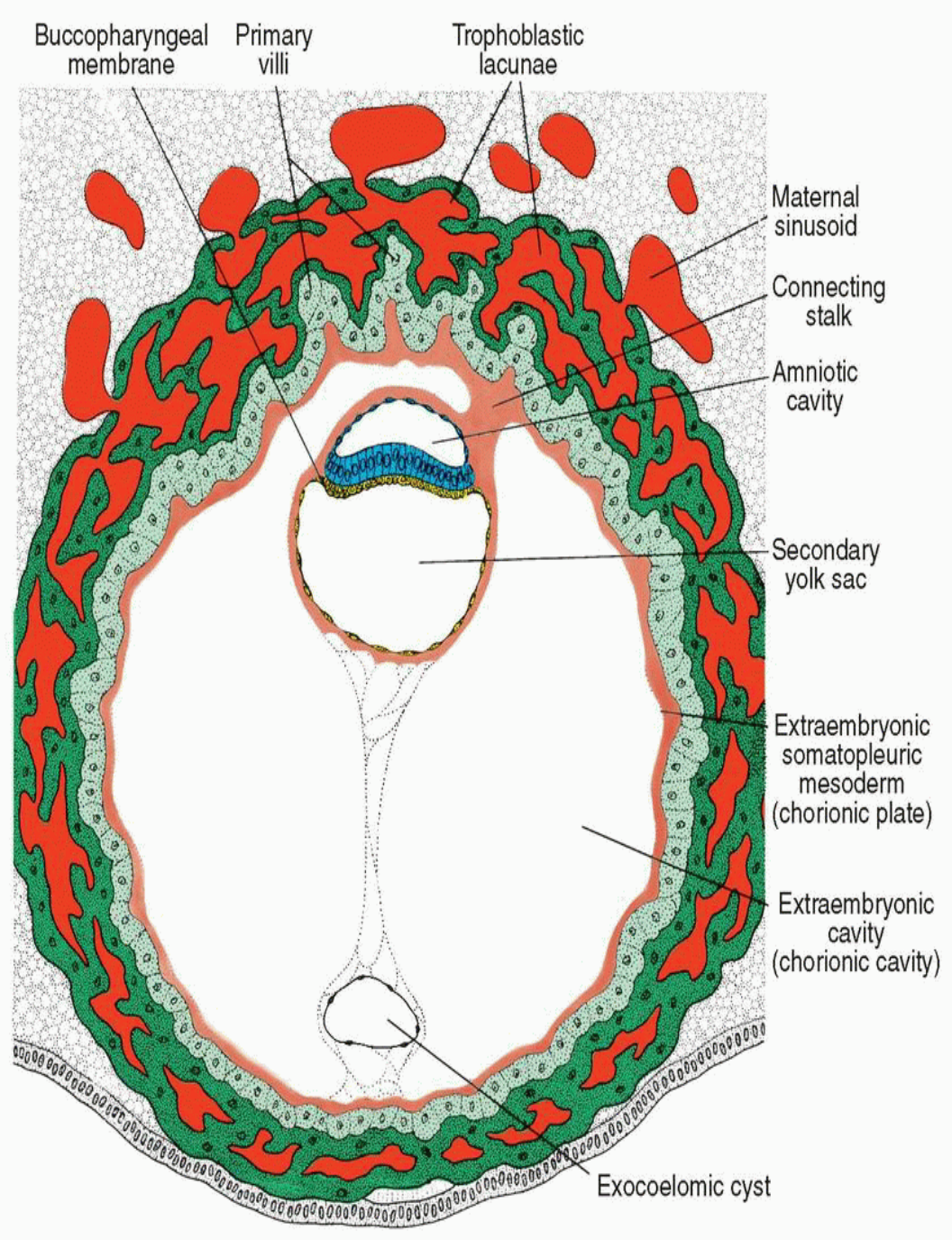
Decidua reaction; Cell with glycogen , lipid and fluid collection in endometrium for feeding

- By the 13th day wound healed.

- **Bleeding?**
- **Proteolytic enzymes.**

Primary villi

- Cells of the cytotrophoblast proliferate locally and penetrate into the syncytiotrophoblast, forming cellular columns surrounded by syncytium.



The Hypoblast produces additional cells to form a cavity, known as the

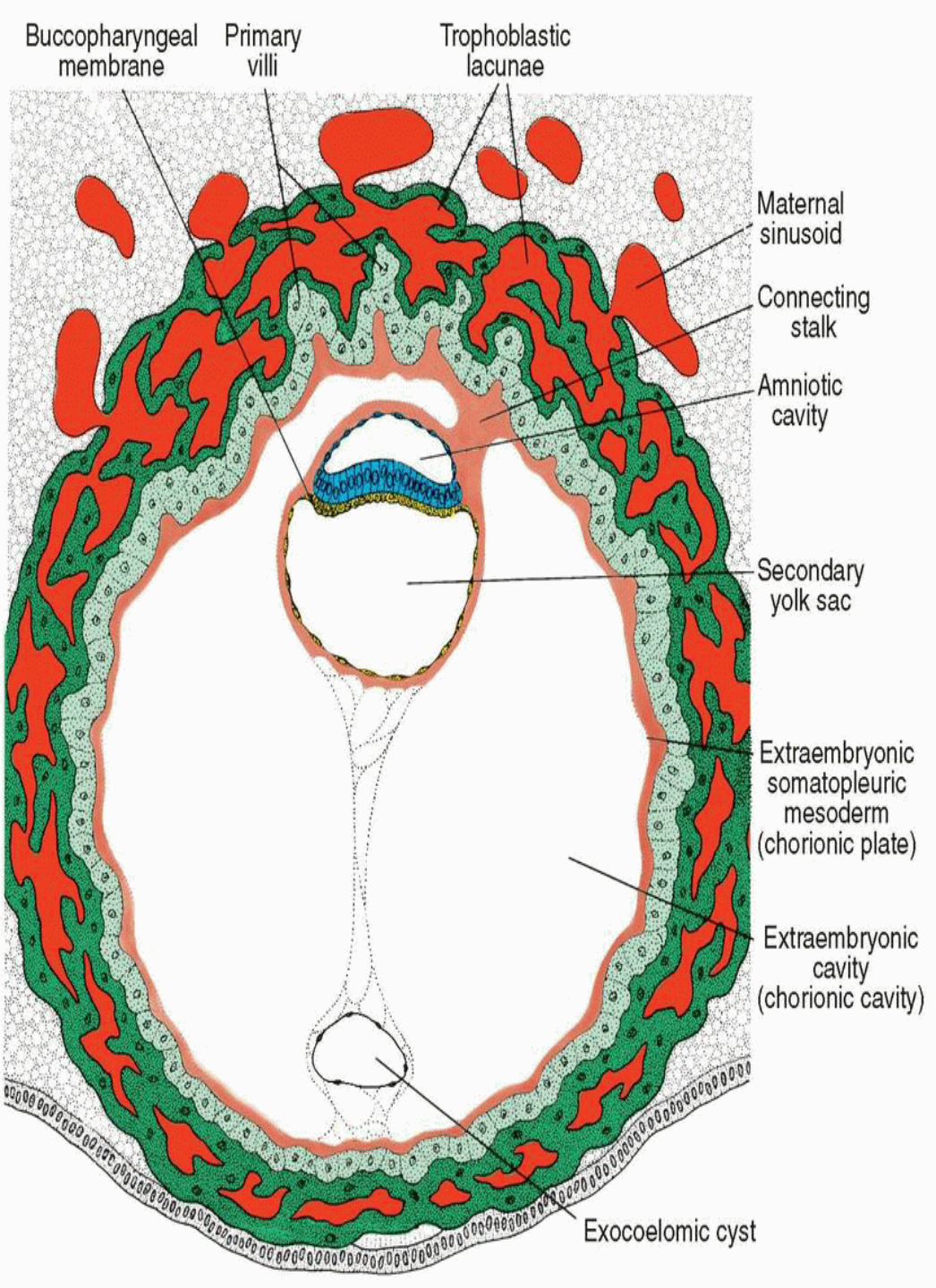
Secondary yolk sac

or

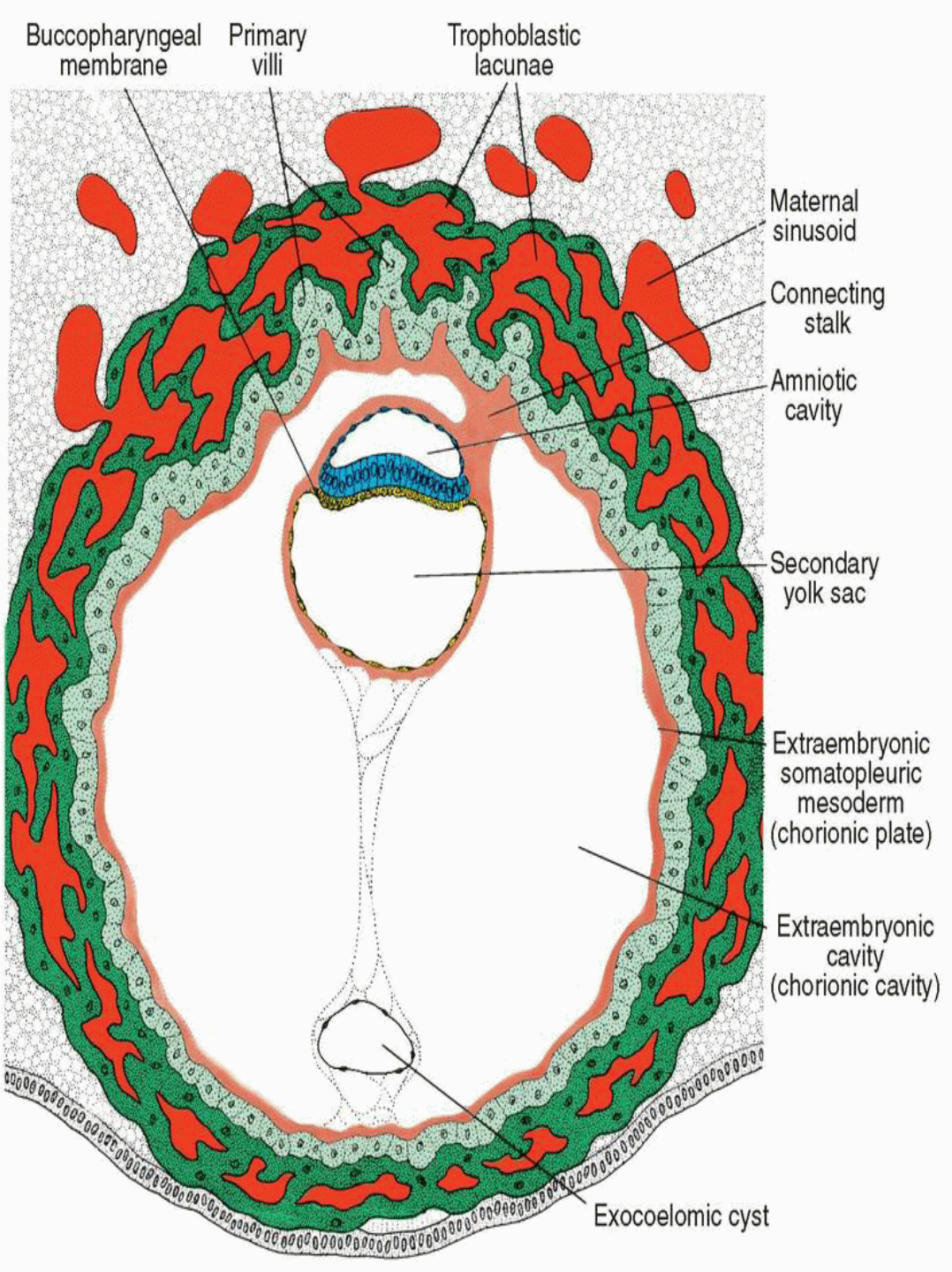
Definitive yolk sac .

Pinched off part called

Exocoelomic cysts



- **Extraembryonic coelom expands and forms a large cavity.**
- **Chorionic plate.**
- **The connecting stalk The only place where extraembryonic mesoderm traverses the chorionic cavity .**
- **With development of blood vessels, the stalk becomes the**
- **Umbilical cord.**



Week of twos

- Cytotrophoblast and Syncytiotrophoblast.
- The Epiblast and Hypoblast.
- The Somatopleure and Splanchnopleure.
- The Amniotic and Yolk sac cavities.

THANKS