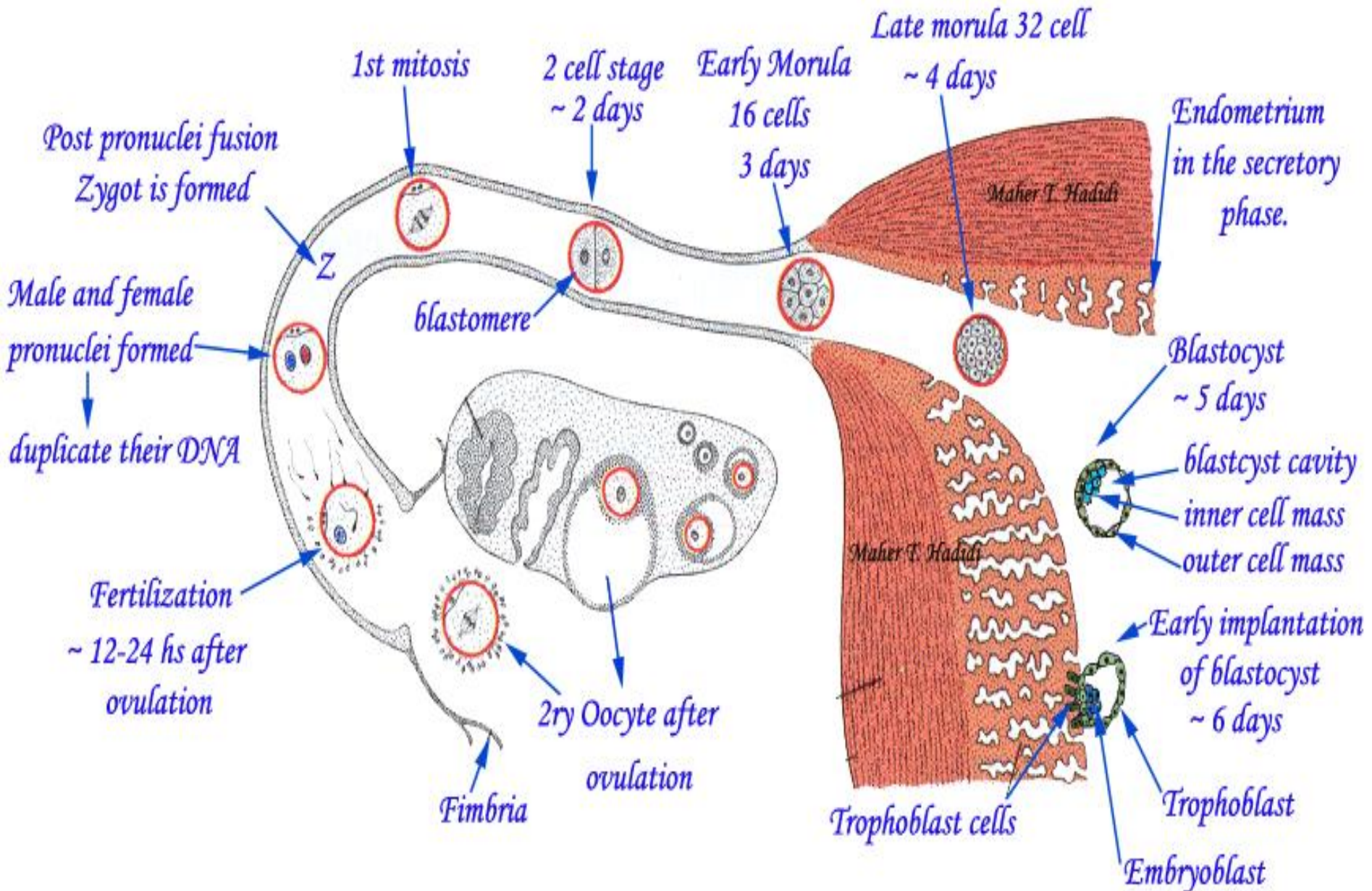


Events during first week of development



SECOND WEEK OF DEVELOPMENT

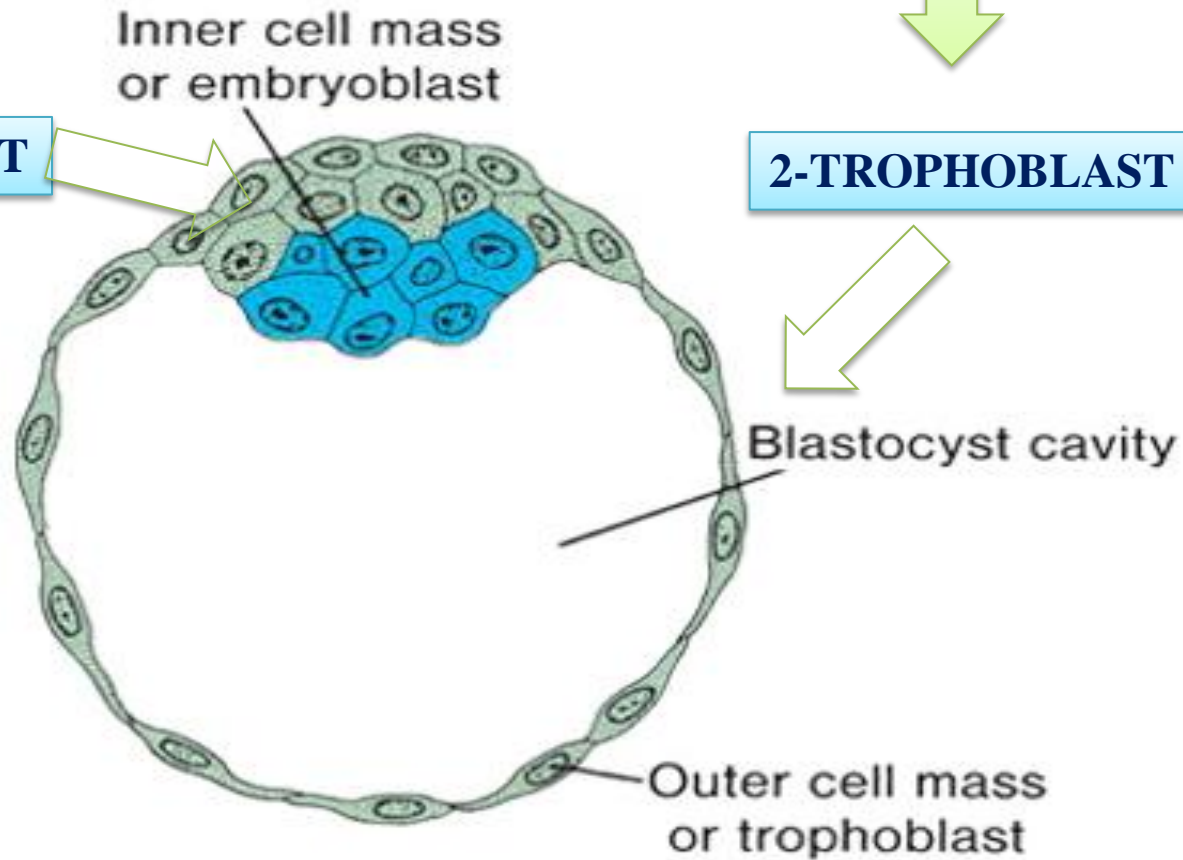
➤ The blastocyst is made of:



1- EMBRYOBLAST



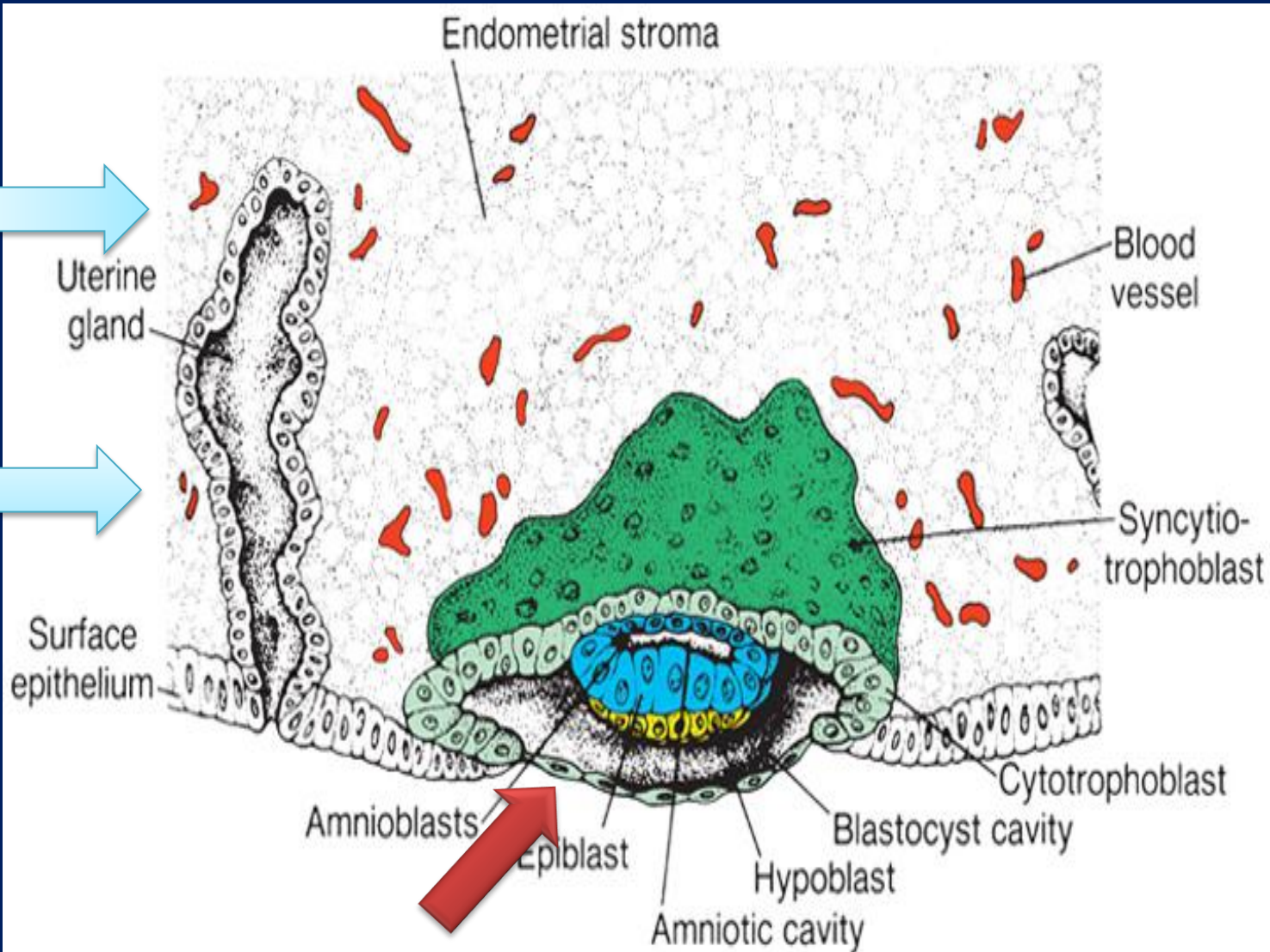
2-TROPHOBLAST



At the eighth day of development

- The blastocyst is partially embedded in the endometrial stroma.

Endometrial stroma



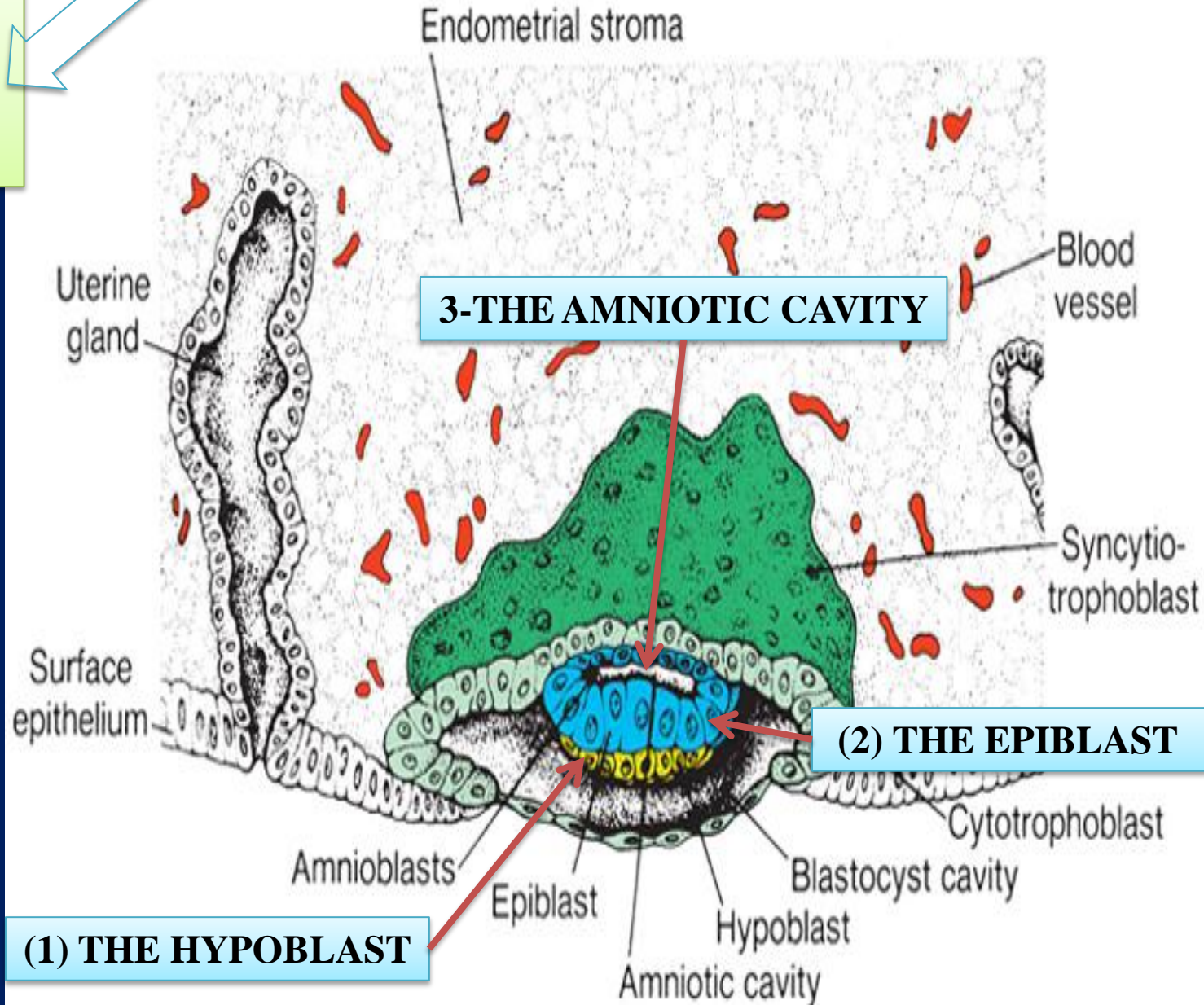
At the eighth day of development

The
EMBRYOBLAST
differentiates into
two layers:

(1) THE
HYPOBLAST

(2) THE
EPIBLAST

3-THE
AMNIOTIC
CAVITY



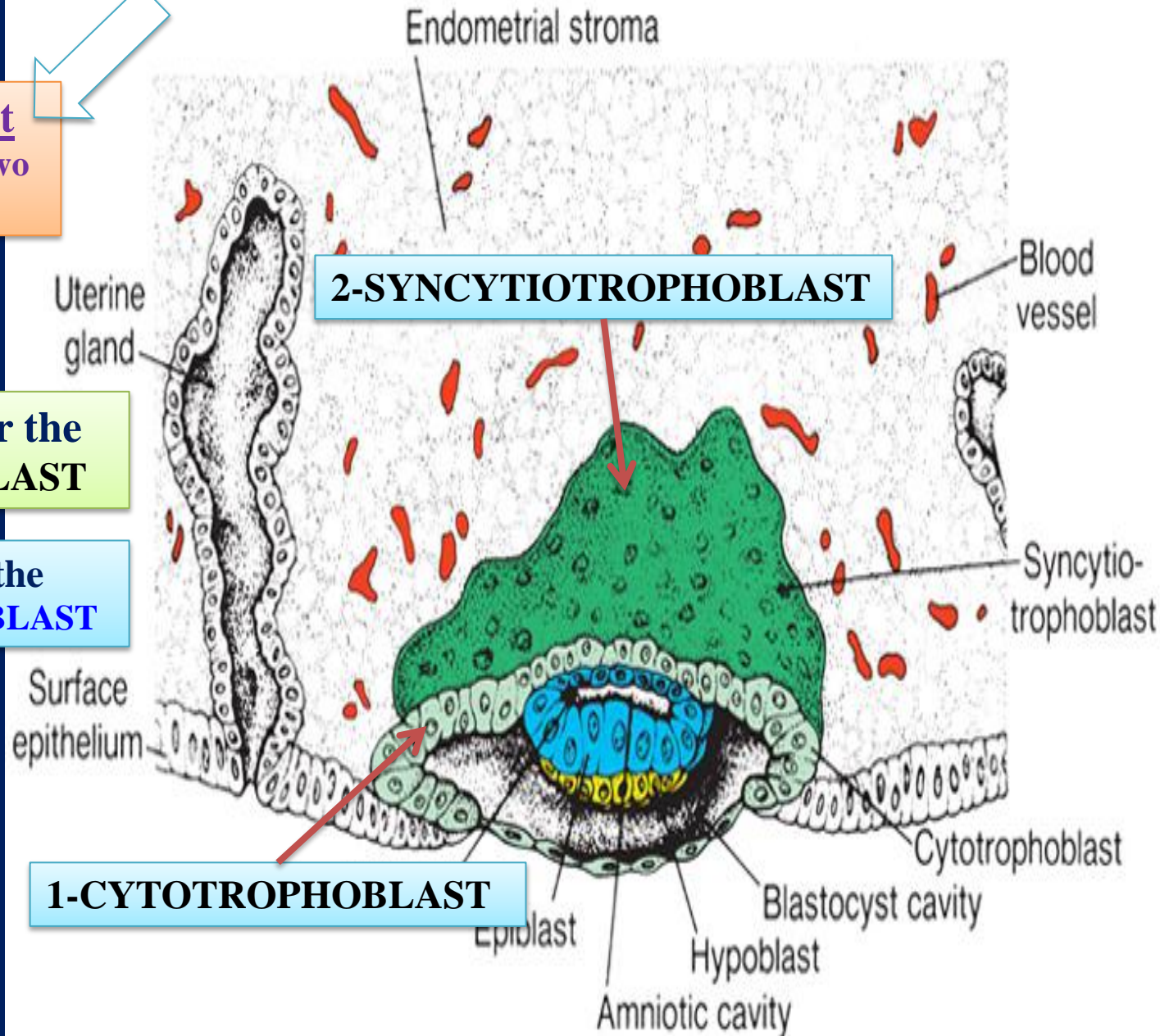
At the eighth day of development

The trophoblast
differentiates into two
layers:



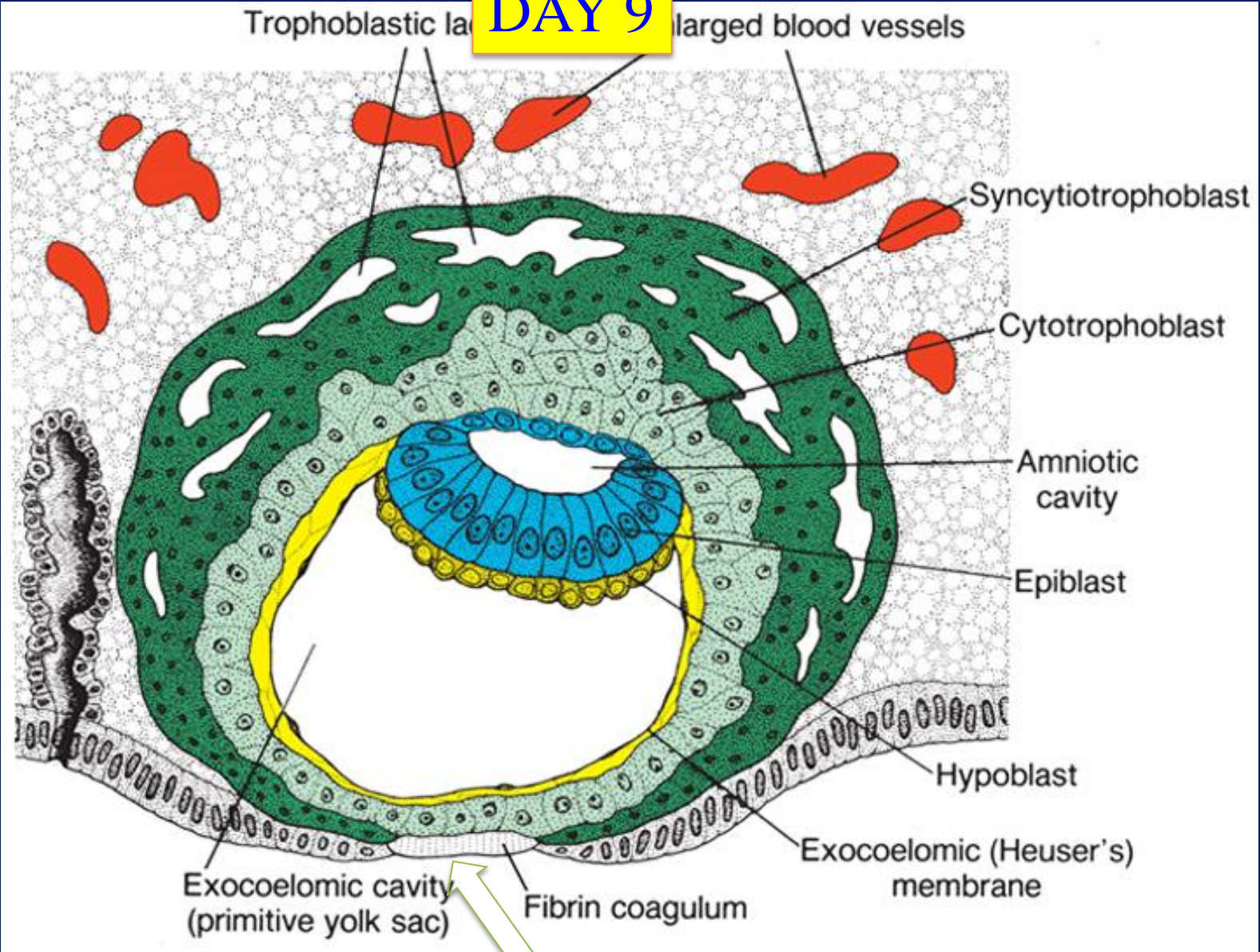
(1) an inner layer the
CYTOTROPHOBLAST

(2) an outer zone the
SYNCYTIOTROPHOBLAST



Endometrial stroma

DAY 9



The blastocyst is *more deeply embedded* in the endometrium, and the **penetration defect in the surface epithelium is closed**

DAY 9

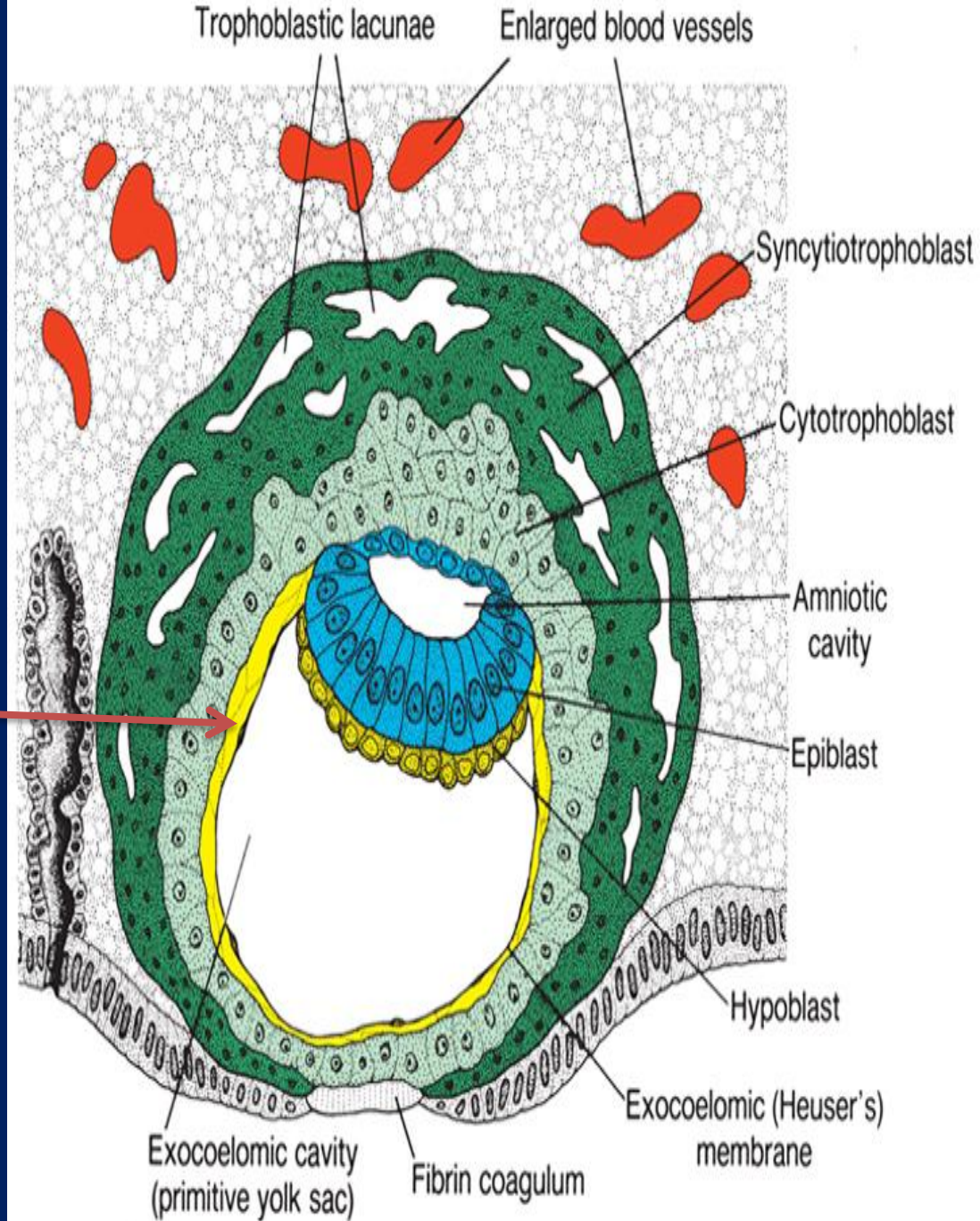
❖ *At the embryonic pole*

❖ the **hypoblast** give rise to a thin membrane

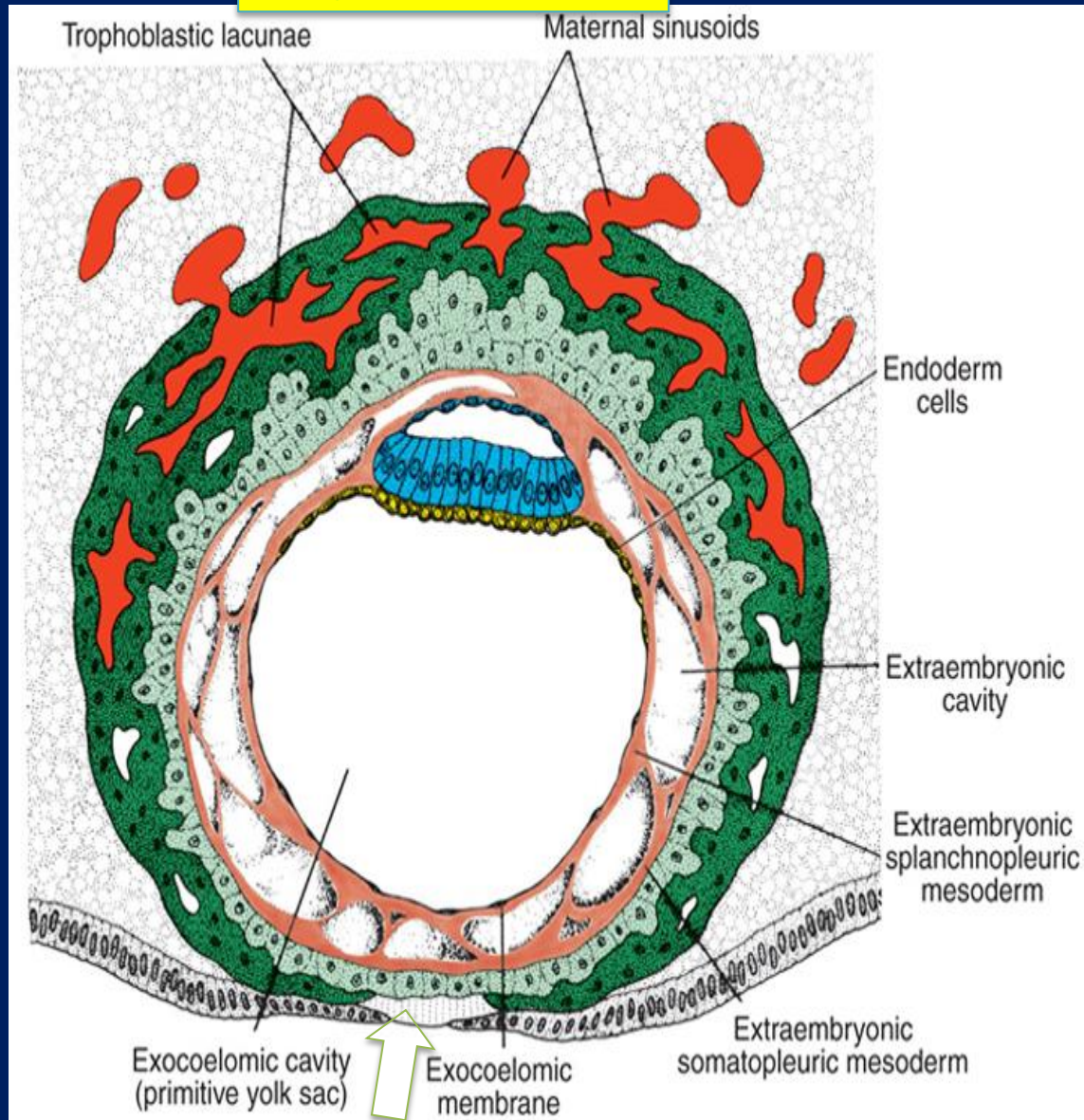
THE EXOCOELOMIC MEMBRANE

This membrane, together with the hypoblast, lines

THE PRIMITIVE YOLK SAC



Days 11 and 12

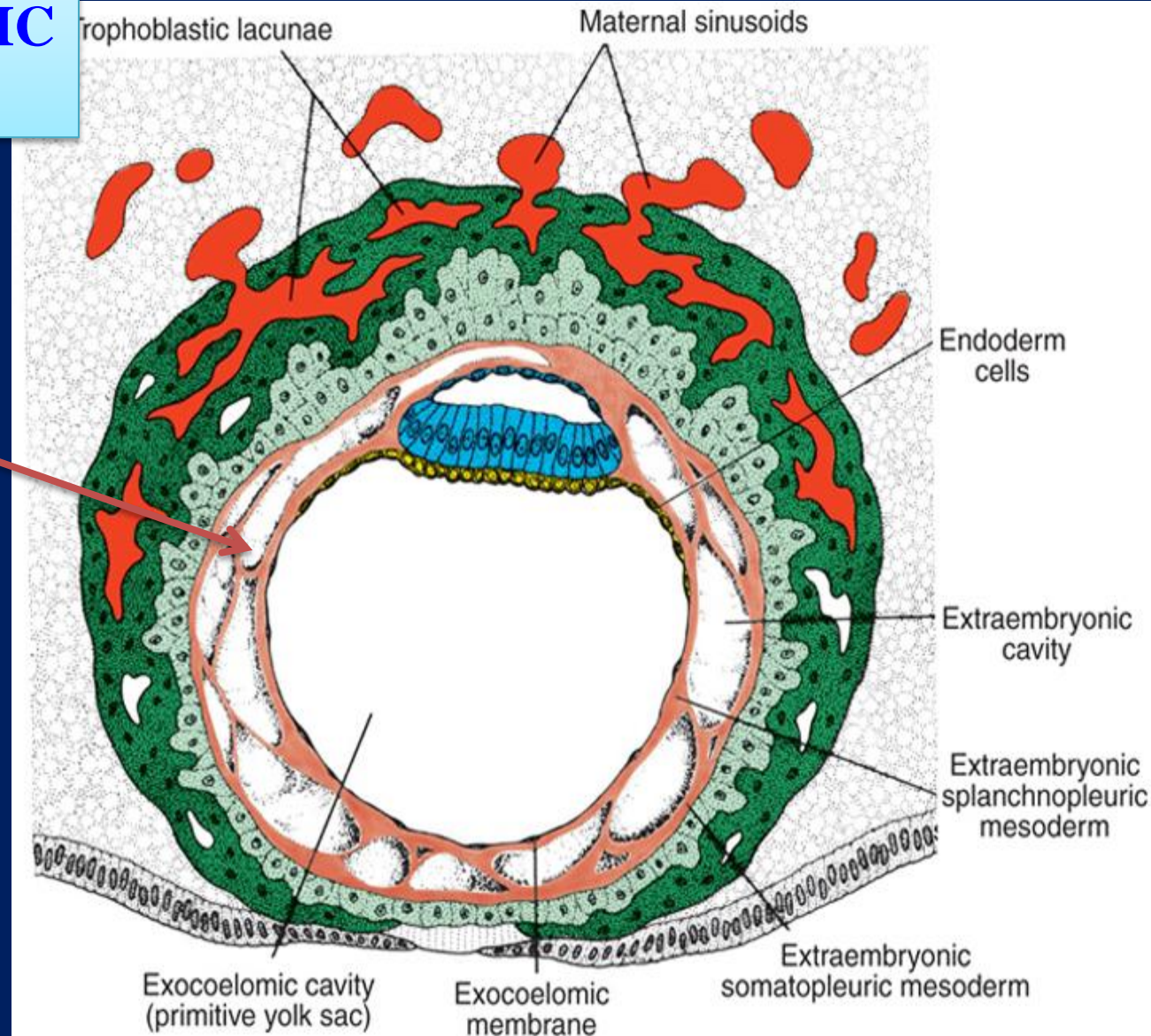


The blastocyst is completely embedded in the endometrial stroma

Days 11 and 12

The **yolk sac** cells, form a fine, loose connective tissue, the **EXTRAEMBRYONIC MESODERM**,

which fills all of the space between the **trophoblast externally** and the **amnion and exocoelomic membrane internally**



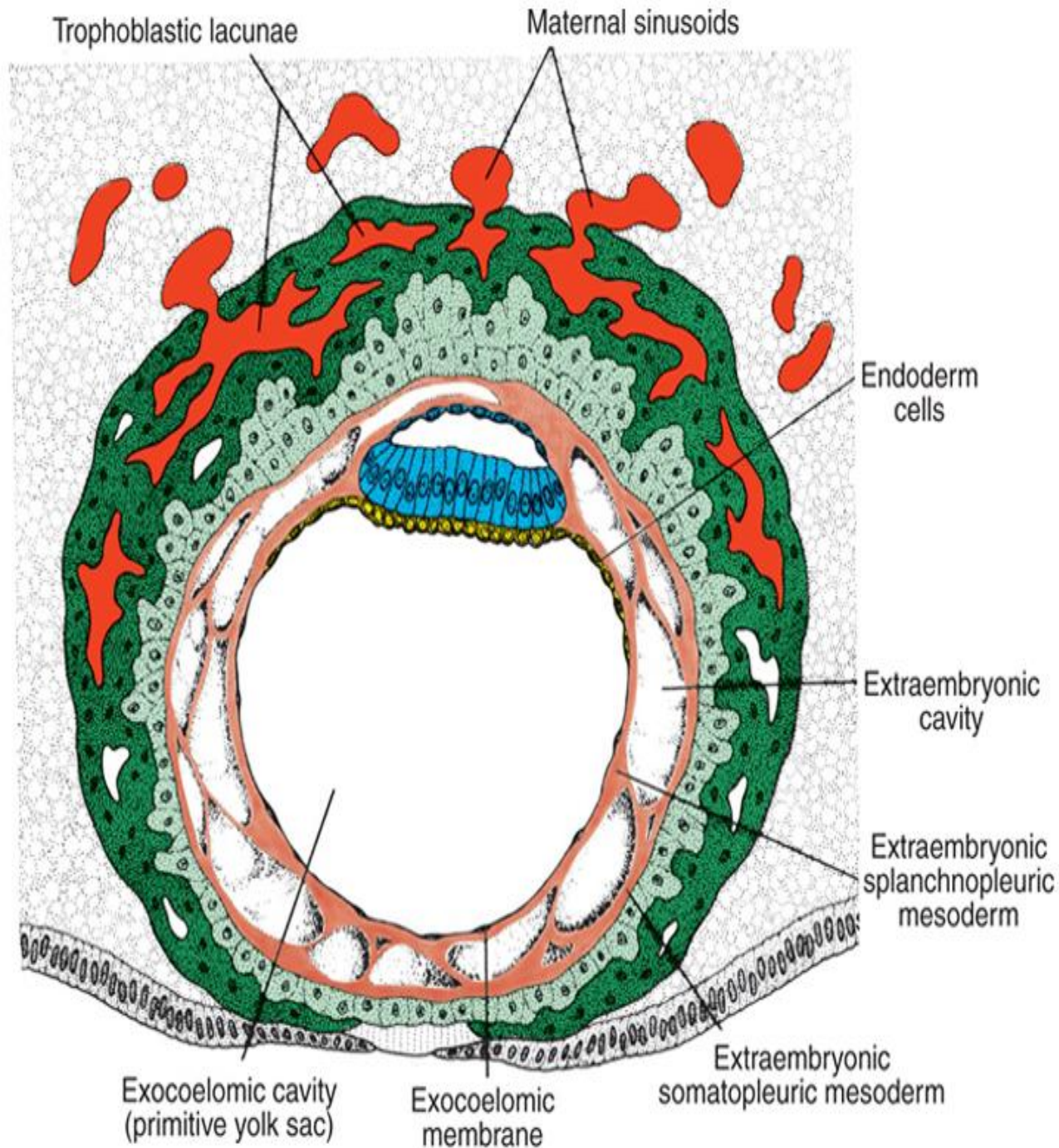
Days 11 and 12 continued

Soon, large cavities develop in the extraembryonic mesoderm, and when these become confluent, they form a new space known as

**THE
EXTRAEMBRYONIC
COELOM,**

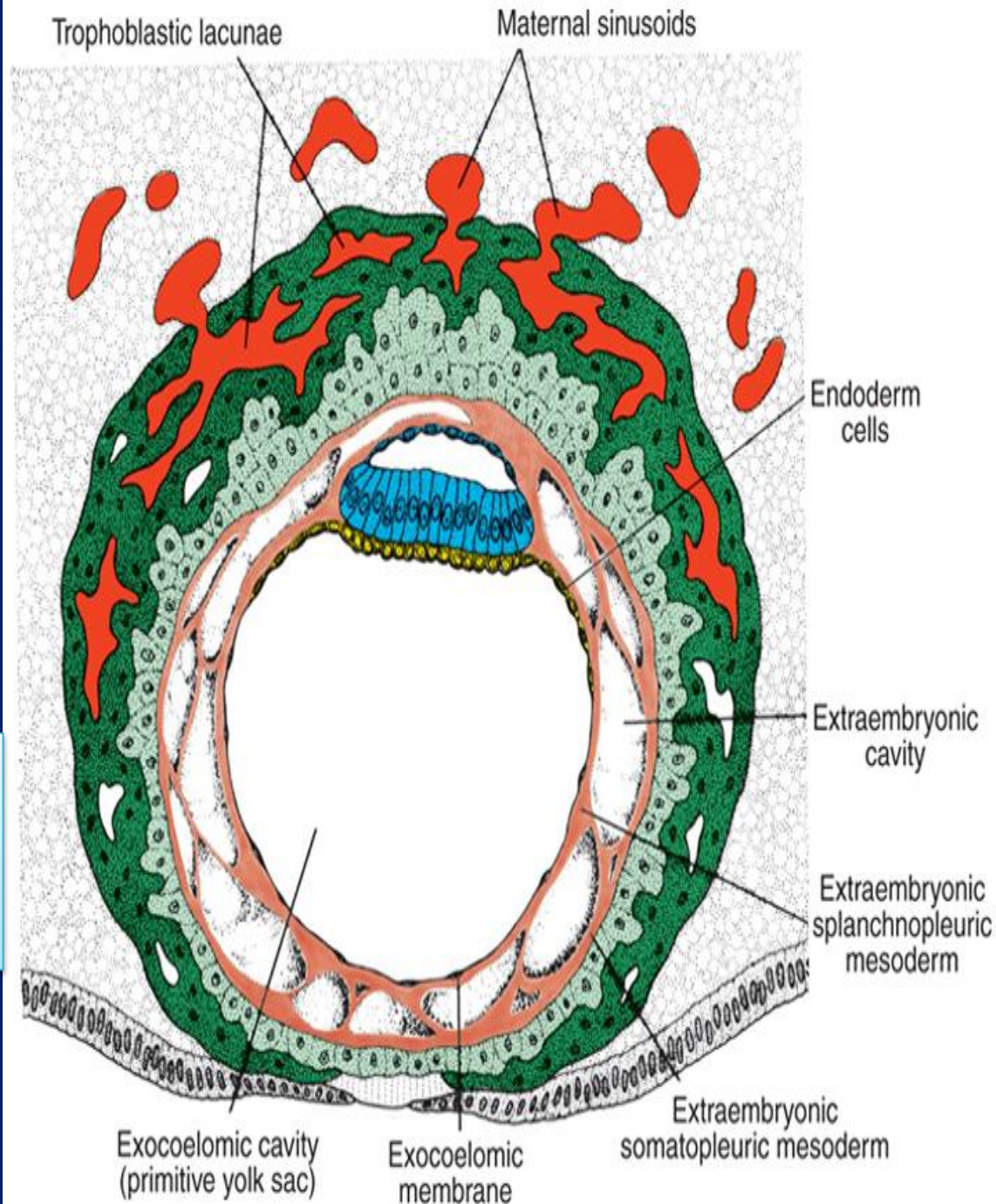
or

CHORIONIC CAVITY

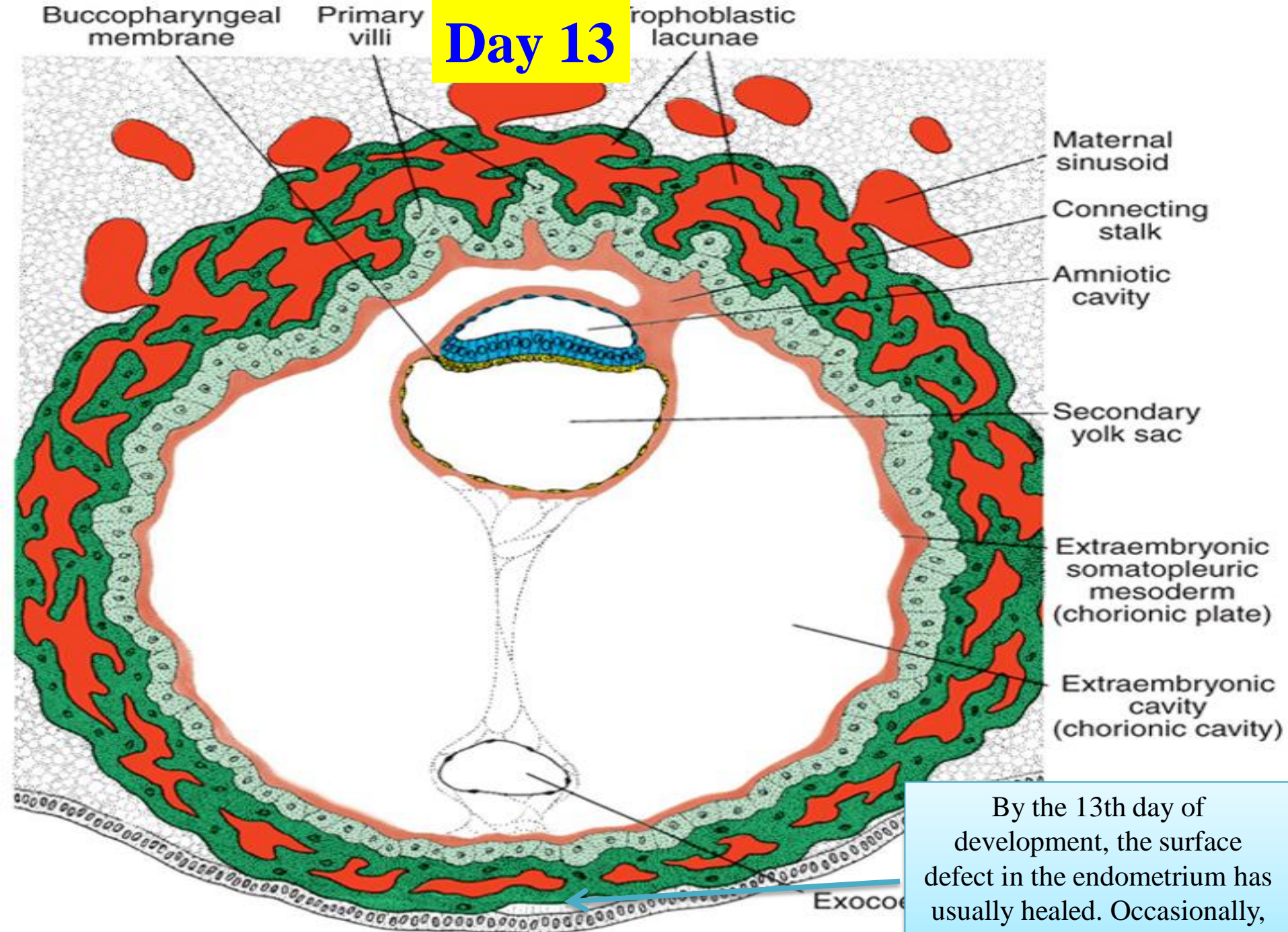


The extraembryonic mesoderm lining the **cytotrophoblast** and **amnion** is called the extraembryonic **SOMATOPLEURIC** mesoderm

the lining covering **the yolk sac** is known as the extraembryonic **SPLANCHNOLEURIC** mesoderm



Day 13

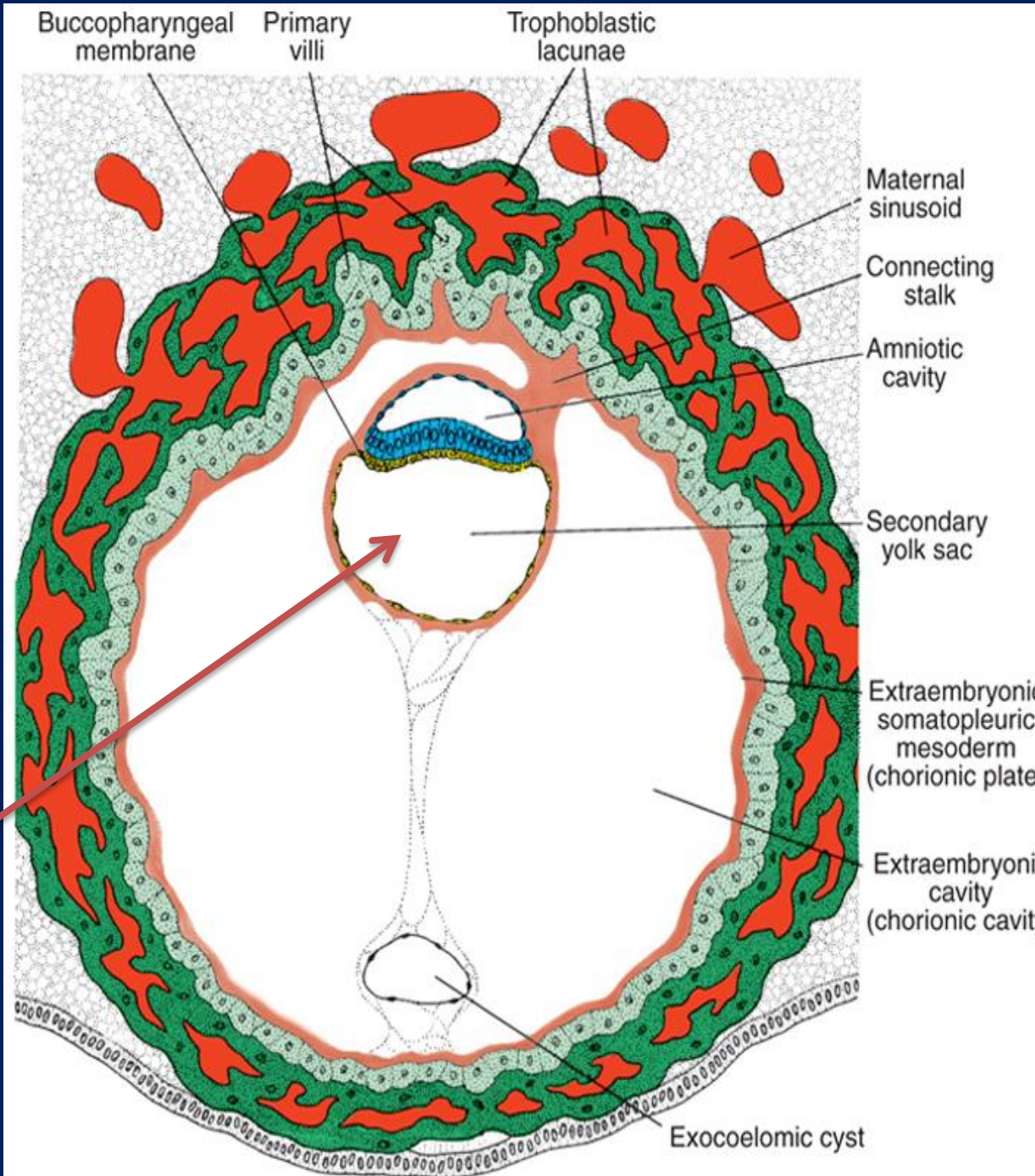


By the 13th day of development, the surface defect in the endometrium has usually healed. Occasionally, however, bleeding occurs

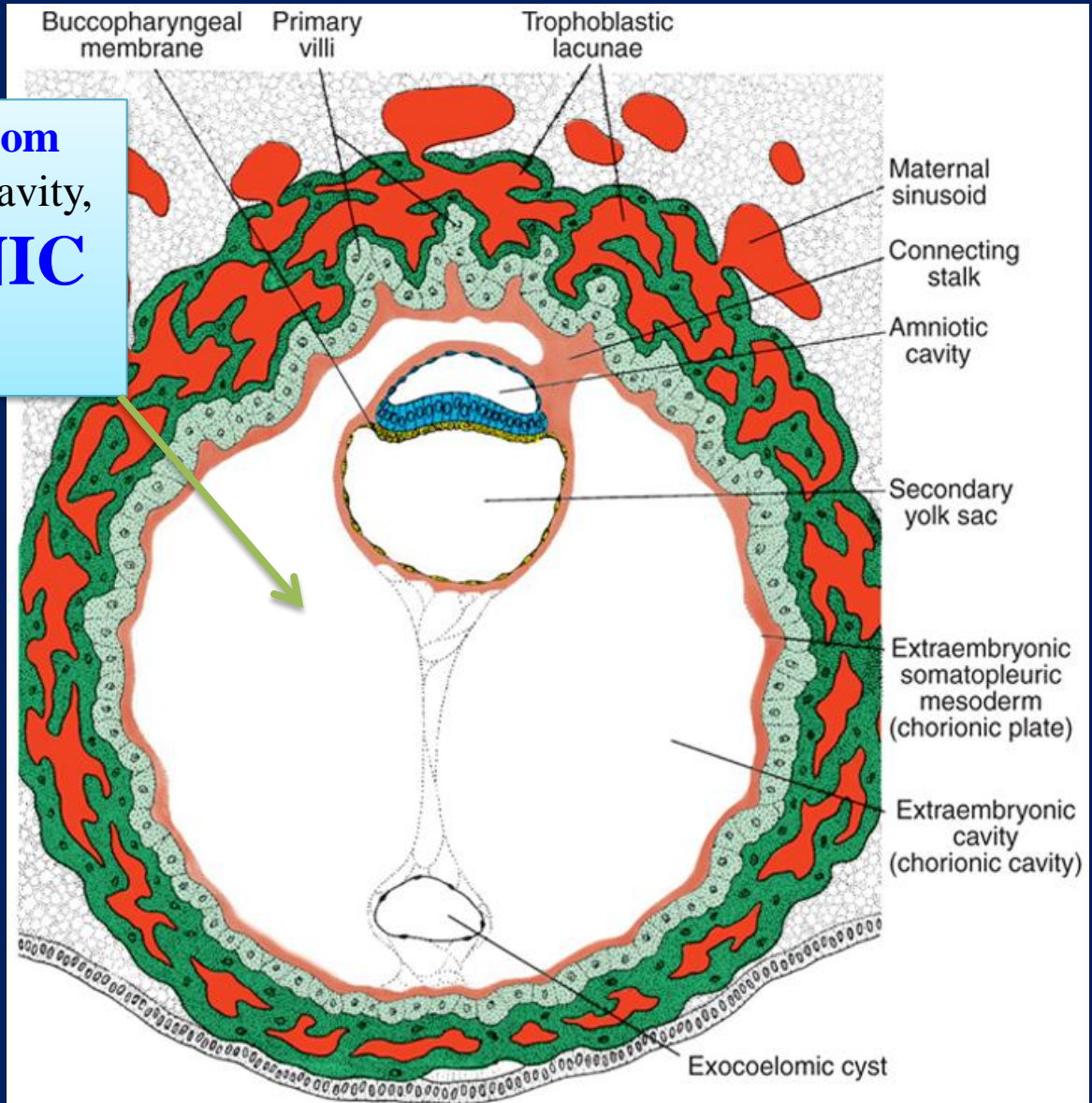
Day 13

The **hypoblast** produces cells that migrate along the inside of the **exocoelomic membrane**. These cells proliferate and gradually form a new cavity within the exocoelomic cavity. This new cavity is known as

THE SECONDARY YOLK SAC OR DEFINITIVE YOLK SAC



The **extraembryonic coelom**
expands and forms a large cavity,
THE CHORIONIC CAVITY



The extraembryonic mesoderm lining the inside of the cytotrophoblast is then known

as

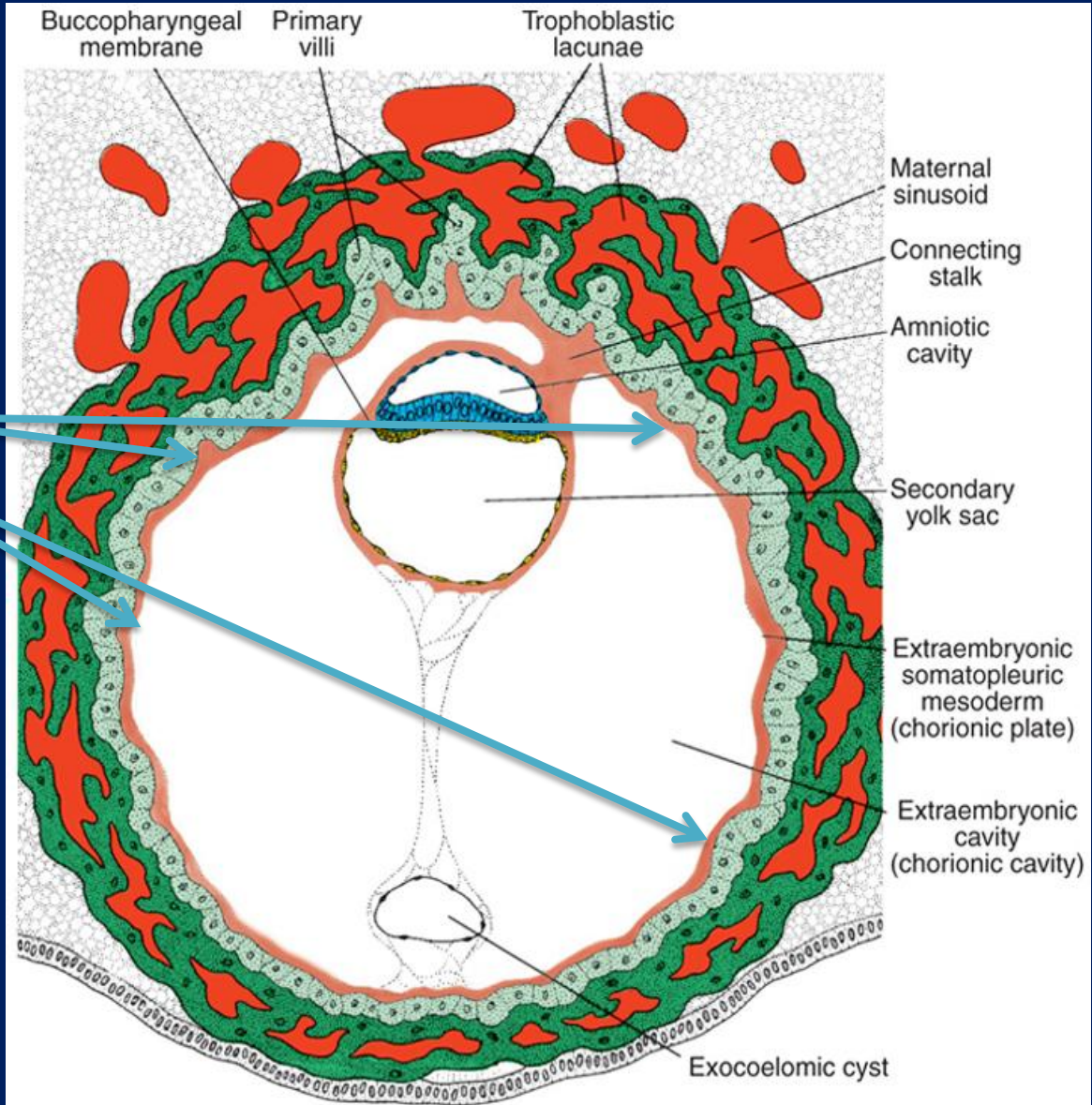
THE CHORIONIC PLATE

The only place where extraembryonic mesoderm traverses the chorionic cavity is in

THE CONNECTING STALK

With development of blood vessels, the stalk becomes

THE UMBILICAL CORD



The **second week** of development is known as the week of twos:

The *TROPHOBLAST* differentiates into two layers

The *cytotrophoblast*

The *syncytiotrophoblast*

The *EMBRYOBLAST* forms two layers

The *epiblast*

The *hypoblast*

The *EXTRAEMBRYONIC MESODERM* splits into
two layers

The *somatopleure*

The *splanchnopleure*

Two *CAVITIES*

The *amniotic*

The *yolk sac*

The embryo now is a bilaminar disc

