

TOPIC: PLACENTATION

The Placenta

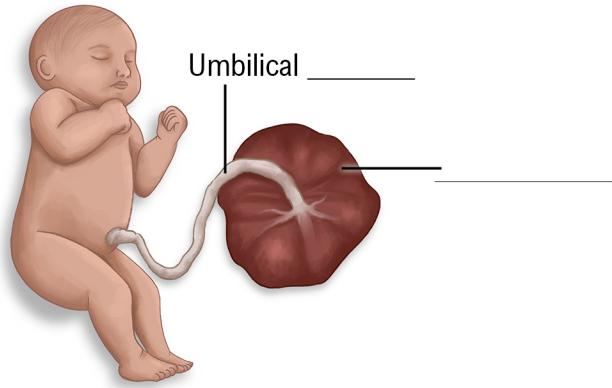
◆ **Placenta:** Site of _____ exchange, and nutrient/waste transfer between mother and conceptus.

► Temporary _____ that is delivered after birth.

► Produces hormones to support pregnancy:

1. _____]	Production begins immediately
2. Estrogens and Progesterone]	
3. Human placental lactogen]	Production emerges more slowly
4. _____]	

◆ **Placentation:** The process of forming the placenta. Begins during implantation, continues through fetal period.



EXAMPLE

Which of the following statements best describes the role of the placenta during pregnancy?

- a) The placenta encapsulates the developing fetus, holding it in place within the uterine cavity.
- b) The placenta facilitates the exchange of nutrients and gases between the mother and conceptus.
- c) The placenta is a permanent organ that facilitates the exchange of nutrients and gases between the mother and conceptus.
- d) The placenta facilitates the exchange of nutrients and gases between the mother and conceptus during the first and second trimesters, and then slowly dissolves within the uterine cavity.

PRACTICE

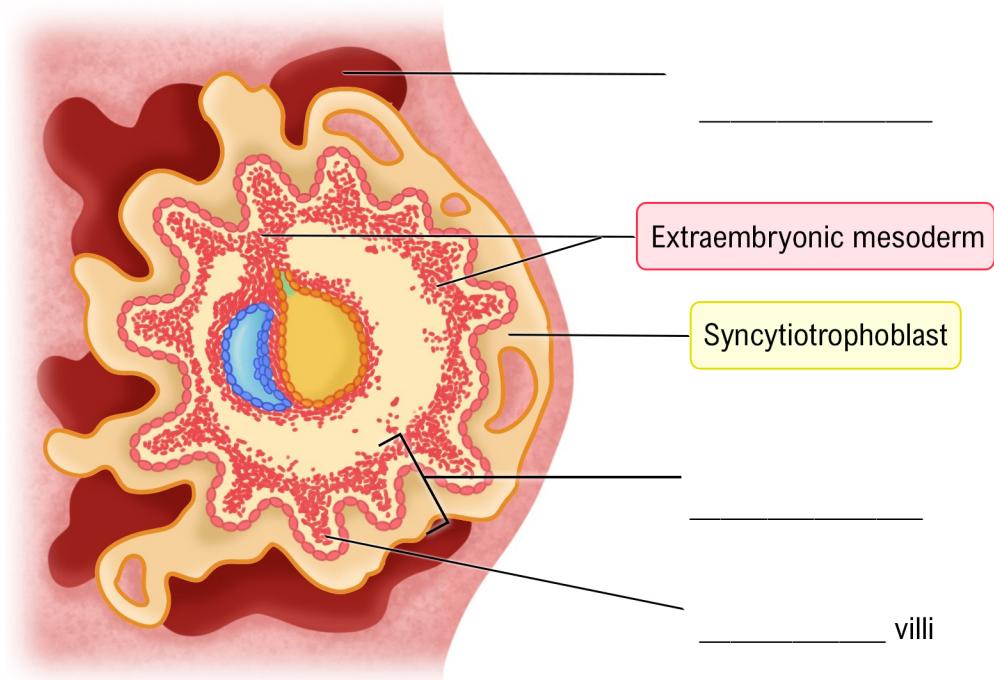
Which of the following hormones is **NOT** produced by the placenta at any point during pregnancy?

- a) Human chorionic gonadotropin.
- b) Relaxin.
- c) Melatonin.
- d) Estrogen.

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Placentation – Weeks 2-3

- ◆ Implantation creates pools of maternal _____ in the endometrium called lacunae or intervillous spaces.
- ◆ Cells from embryonic disc proliferate and create a layer of **extraembryonic mesoderm** .
- ◆ The extraembryonic mesoderm and **syncytiotrophoblast** become the _____:
 - ▶ **Chorion:** Pre-placental structure that surrounds conceptus; becomes _____ layer of embryonic sac.
 - Develops projections called chorionic _____; these enter the lacunae.



EXAMPLE

Which structure is primarily responsible for nutrient and gas exchange between the mother and fetus?

- a) The chorion.
- b) The chorionic villi.
- c) The amniotic sac.
- d) The yolk sac.

PRACTICE

The chorion is made up of the:

- a) Syncytiotrophoblast and lacunae.
- b) Ectoderm and syncytiotrophoblast.
- c) Extraembryonic mesoderm and syncytiotrophoblast.
- d) Extraembryonic endoderm and syncytiotrophoblast.

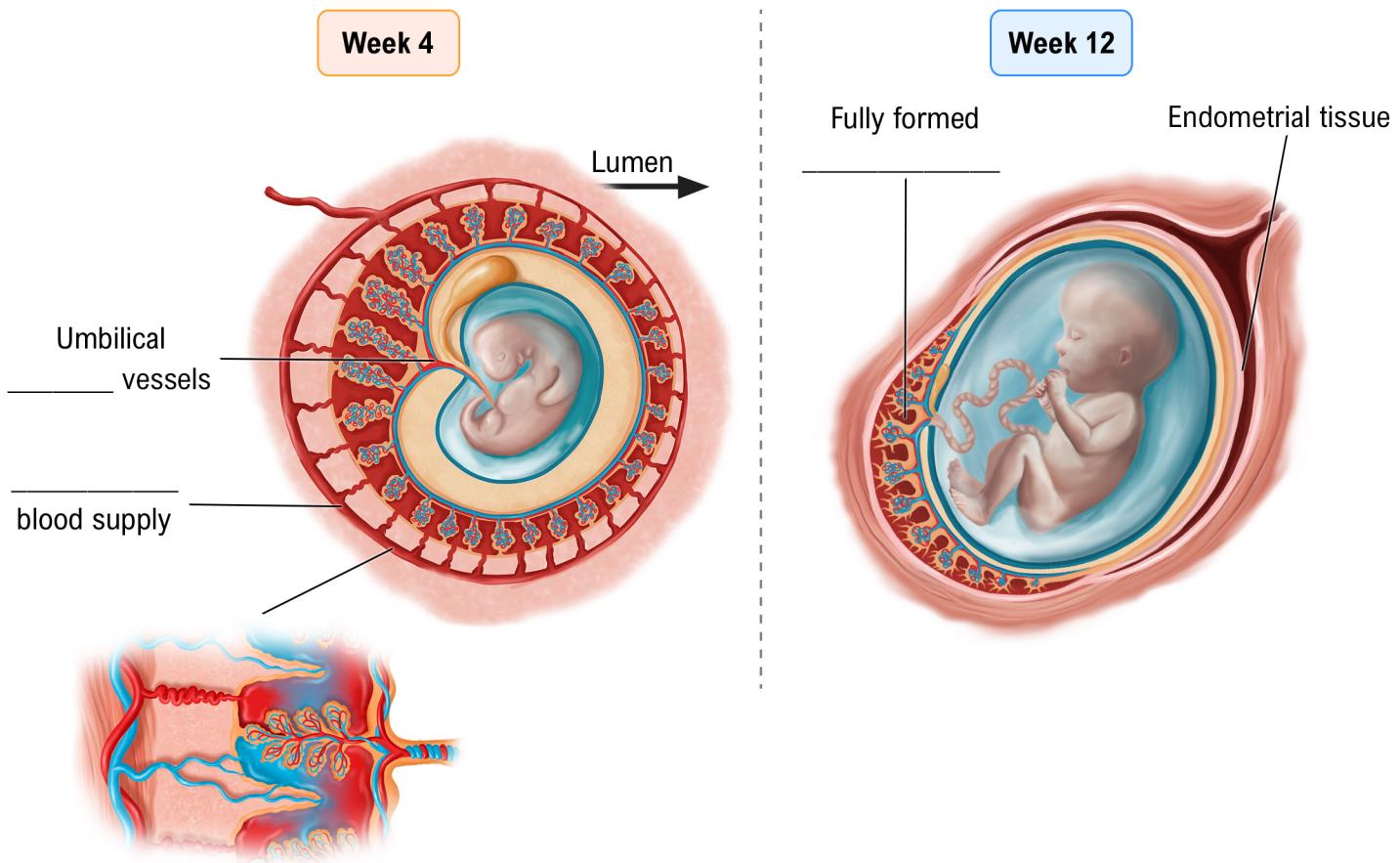
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Placentation – Weeks 4-12

◆ **Week 4:** Chorionic villi develop and extend blood vessels that connect to the _____ arteries and vein.

◆ **Weeks 5-12:**

- The endometrium _____ the embryo (away from lumen) contributes to the placenta.
- The endometrium towards the _____ goes on to surround the embryo and amniotic sac.



EXAMPLE

The placenta should be **fully** functional as the fetus's sole source of nutrient, gas, and waste exchange by:

- a) 6 weeks.
- b) 7 weeks.
- c) 8 weeks.
- d) 12 weeks.