

What's order of embryonic development?

ootid (before syngamy)-> zygote (after syngamy)-> 2 called embryo / blastomere -> (4-8 cell) -> morula -> early blastocyst -> hatching blastocyst -> hatched blastocyst

What has to happen for an embryo to continue growth?

hatching out of the ZP

What is the maternal recognition for cattle and sheep? Pigs?

IFN-T ; estrogen

What is gestation?

- a. The act of carrying or being carried
- b. Pregnancy
- c. Mothering ability
- d. A & B are correct

What are the general portions of placentation?

Endoderm, mesoderm, amnionic cavity, allantois, chorion + allantois fuse = allantochorion

Implantation can happen a few different ways. What species does the conceptus "bury" itself into the uterine endometrium?

Rodents and humans

What makes up a placentome?

Caruncle and cotyledon

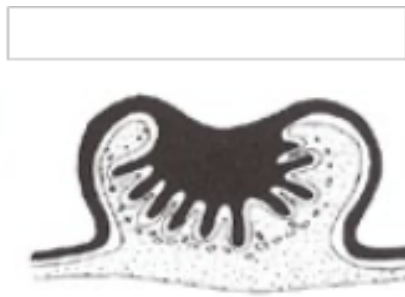
What part of the placenta is made up of fetal tissue? Maternal tissue?

Chorion ; uterine endometrium modifications

What species do these placentomes come from?



Cow



Ewe



Mare

Match the following terms to the correct species and description:

C Diffuse      A Zonary      D Discoid      B Cotyledonary

- a. Placentas have a band-like zone of chorionic villi ; cats and dogs
- b. Numerous, discrete button-like structures ; ruminants
- c. Uniform distribution of chorionic villi ; mare and sows
- d. Placenta form a regionalized disc ; rodent and primates

The placenta is the **organ\*** that transports nutrients, respiratory gases and waste between the maternal and fetal systems. It also serves as a transient **endocrine\*** organ that can produce a variety of hormones that are important for pregnancy and the onset of **parturition\***.

Name the different types of placenta in order of least intimate to most intimate.

**Epitheliochorial, Endotheliochorial, Hemochorial**

Why is the order the way that it is?

- the Epitheliochorial placenta has the most layers between the fetus and mother (complete layer of epithelium on both components of placenta) (mares, sows) (ruminants too but a little bit different)
- the Endotheliochorial placenta no longer has the endometrial epithelium (cats, dogs)
- the Hemochorial placenta only has 3 layers (rodents, primates)

What are some hormones produced by the placenta?

**Placental P4, Estrogen, Placental lactogen, placental relaxin, eCG, hCG**

What does placental P4 and estrogen do?

**P4 blocks myometrial contractions with complete late term control in some species**  
**Estrogen peaks close to term (needed for parturition cascade)**

What does placental lactogen do?

**Stimulates the mammary glands and fetal growth**

What does placental relaxin do?

**Relaxes the pelvic ligaments before parturition**

Fill in the following table:

Species	Gestation Length	Time of Placental Takeover
Cow	9 months	6-8 months
Ewe	5 months	50 days
Goat	5 months	None
Mare	11 months	None
Sow	3.8 months	None
Woman	9 months	60-70 days