

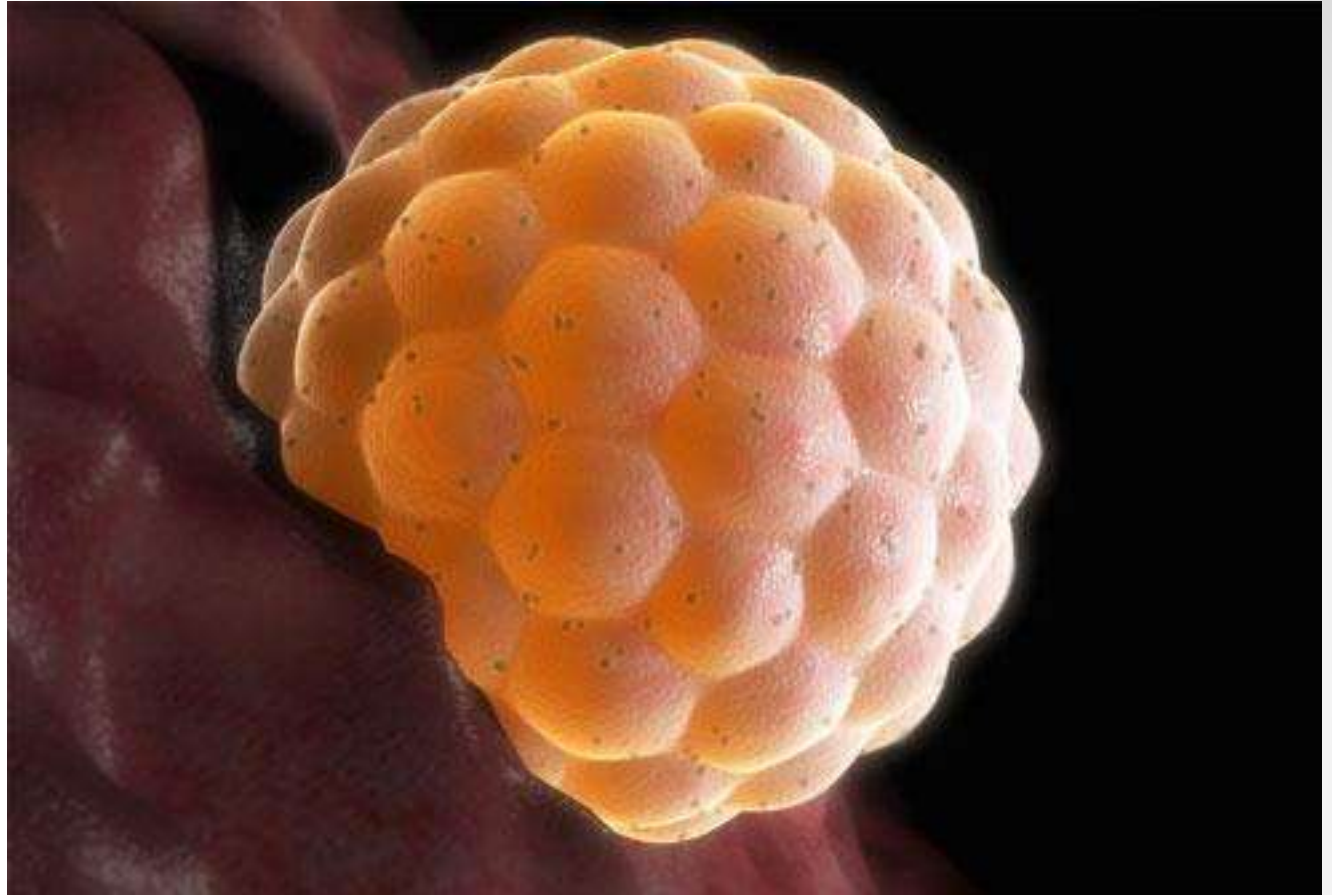
# Reproduction

Unlike other animals, humans can **CHOOSE** when they want to reproduce.



EQ: How can humans choose to not reproduce?

An egg is usually a few days old before it implants in the uterus. At this point, it has already divided several times and is called a blastula.



# FERTILIZATION & PREGNANCY

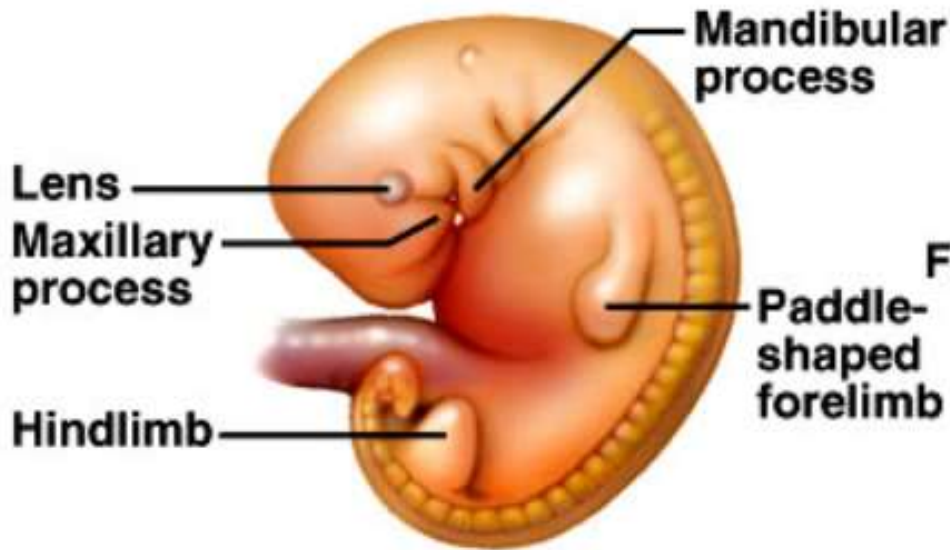
Sperm must travel to the egg and penetrate to combine the DNA from both parents -- this creates the first cell after fertilization: the **ZYGOTE**

23 chromosomes from each parent; zygote has a total of 46 chromosomes

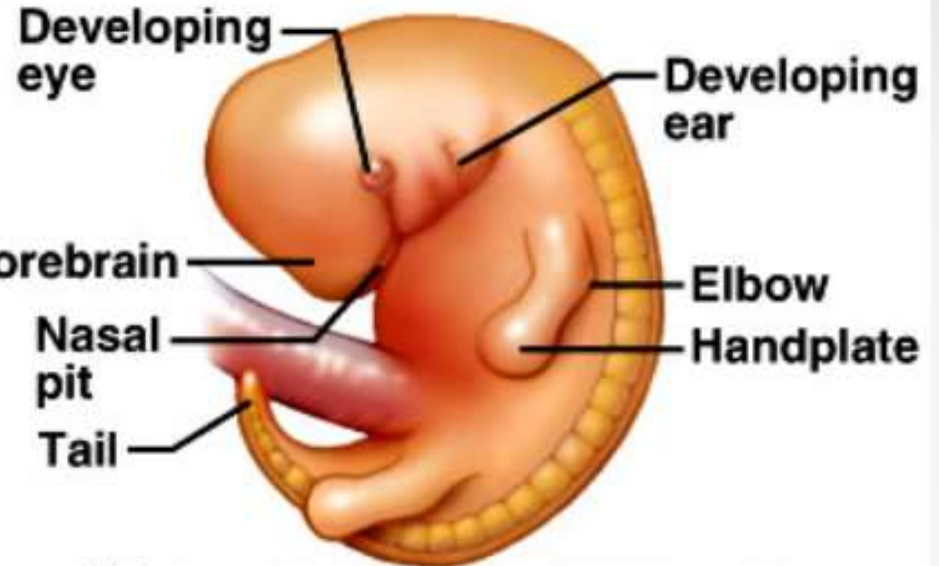


# Fetal Development

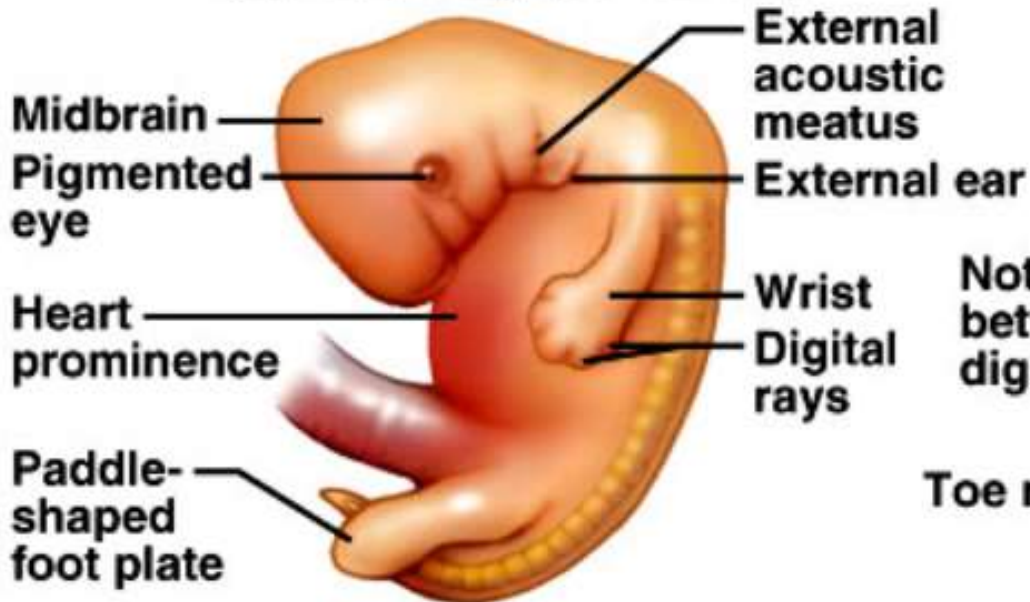
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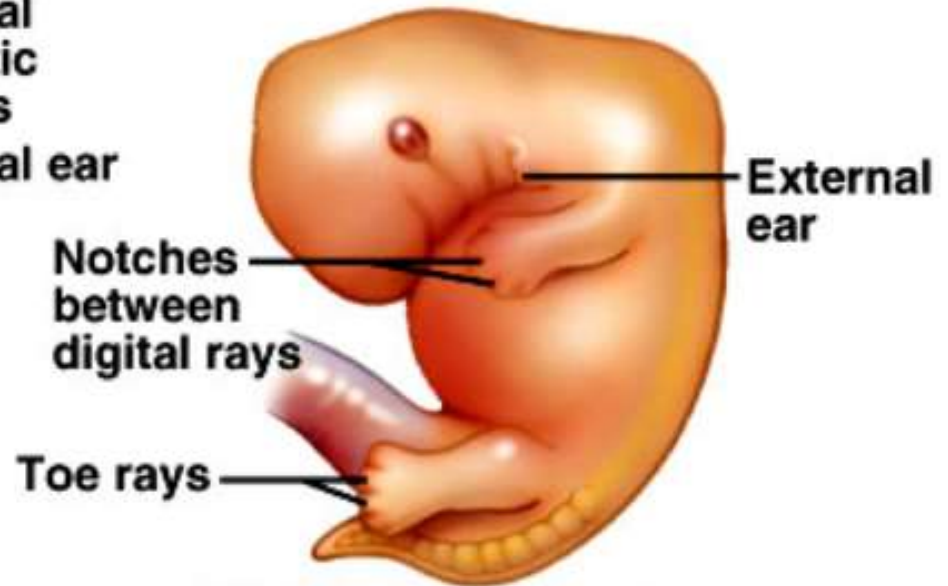
(a) 35 ± 1 day (10–12 mm)



(b) 37 ± 1 day (12.5–15.75 mm)



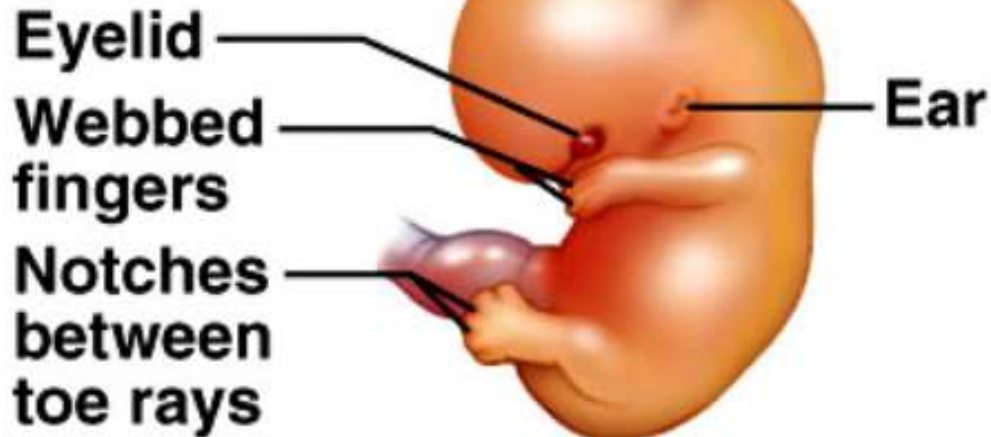
(c) 40 ± 1 day (16–21 mm)



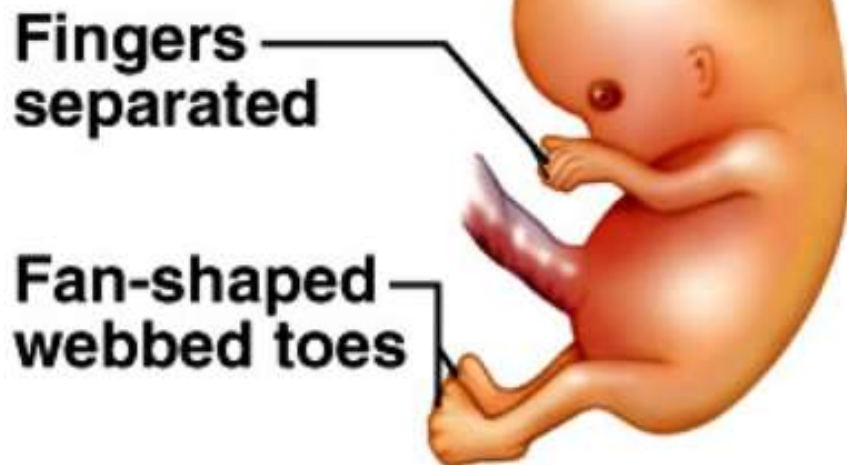
(d) 45 ± 1 day (22–24 mm)

# Fetal Development

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(e)  $49 \pm 1$  day (28–30 mm)



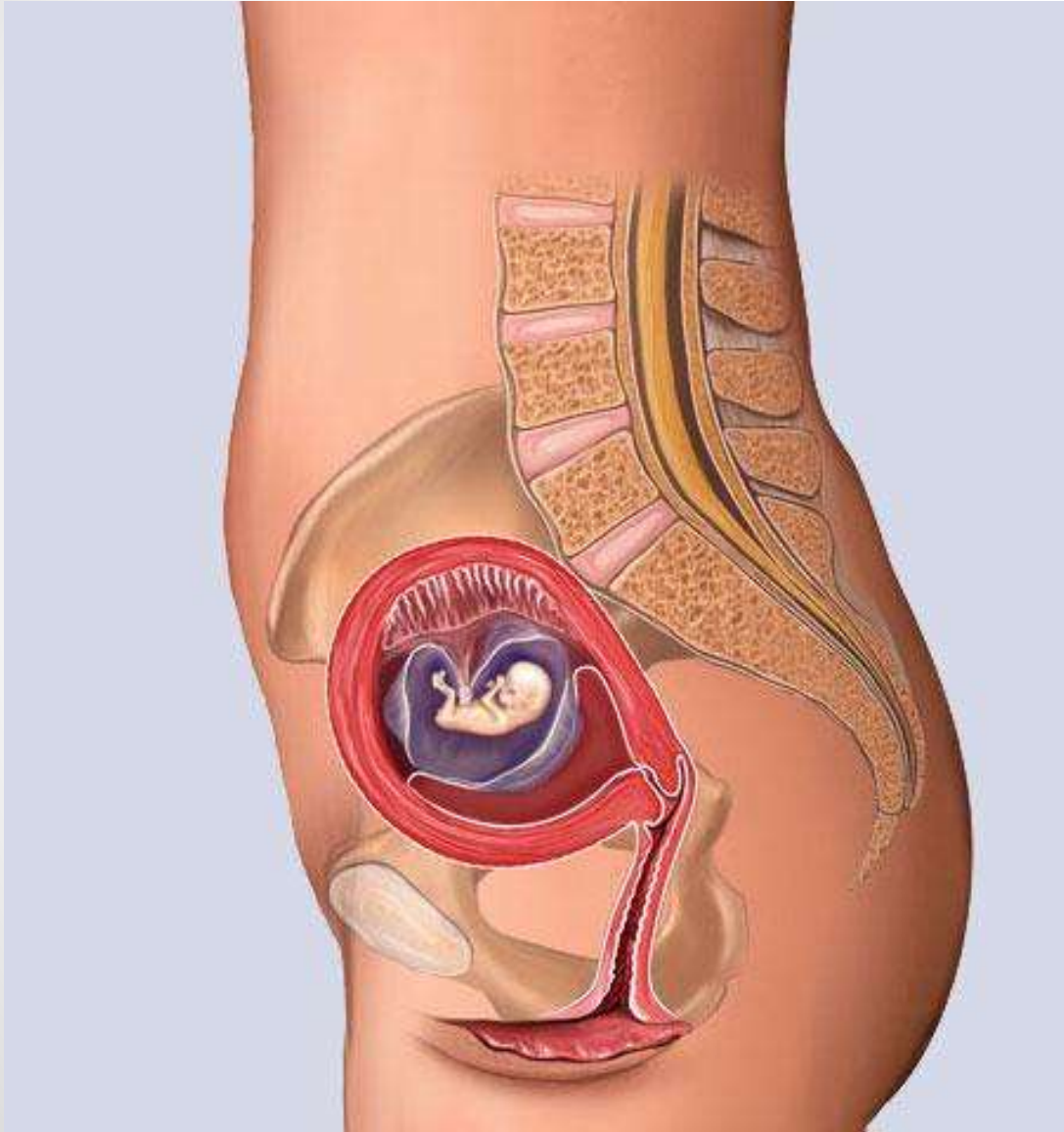
(f)  $52 \pm 1$  day (32–34 mm)



(g)  $56 \pm 1$  day (34–40 mm)

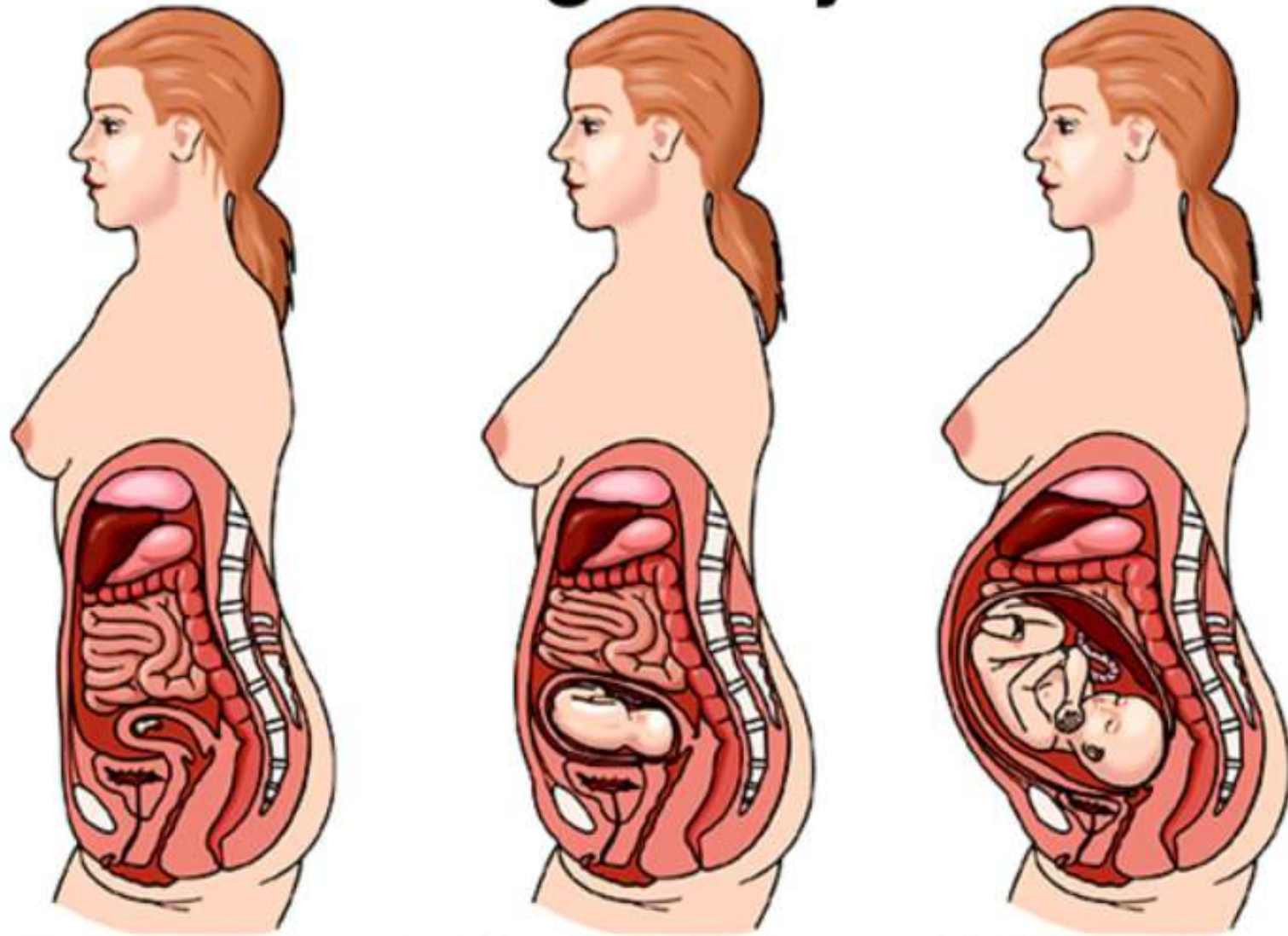
# At the 8th week, the embryo is called a FETUS

At 8 weeks



<http://www.flickr.com/photos/lunarcaustic/3385925240/>

# Changes in Woman's Body During Pregnancy

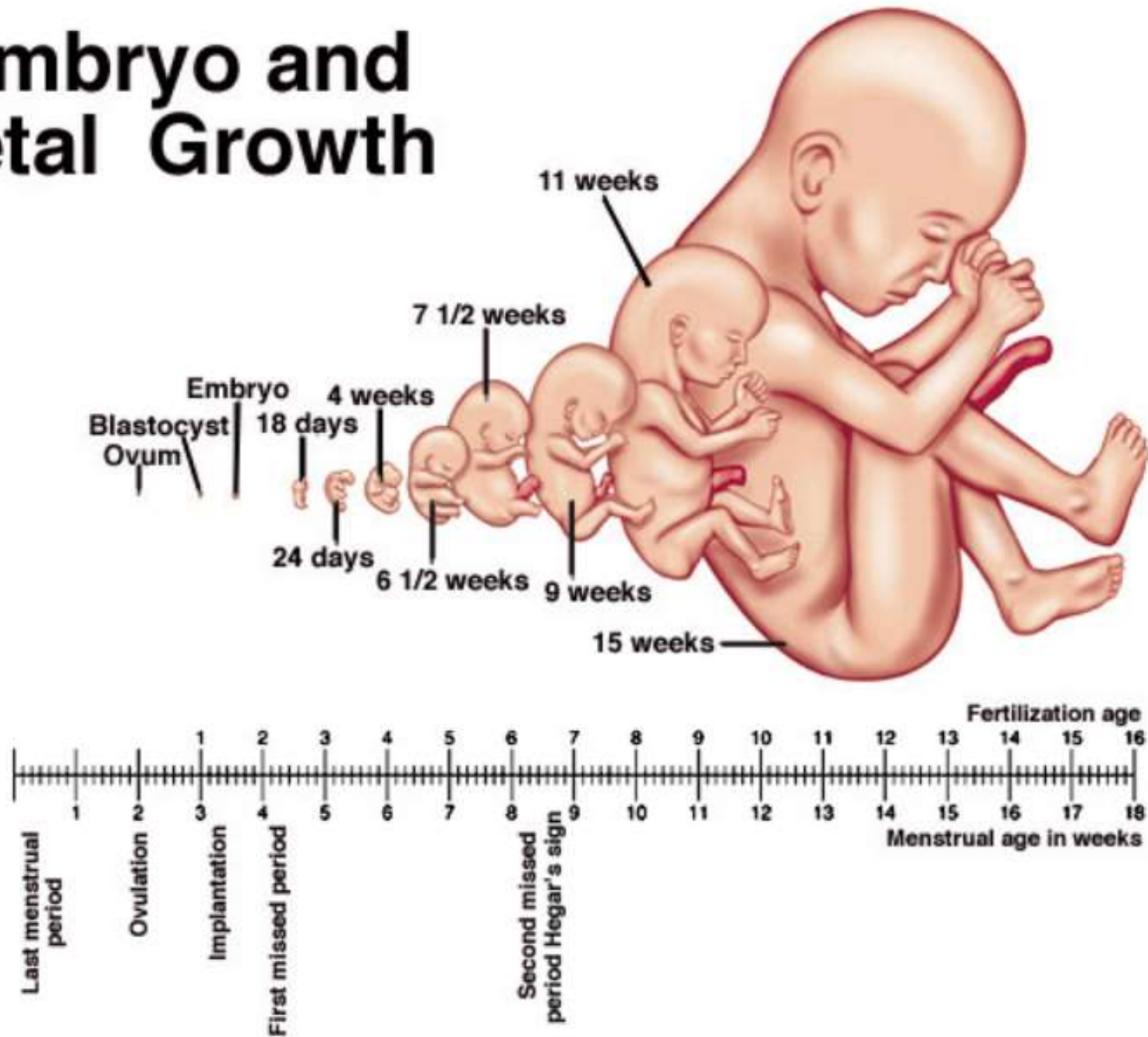


**(a) First trimester**

**(b) Second trimester**

**(c) Third trimester**

# Embryo and Fetal Growth





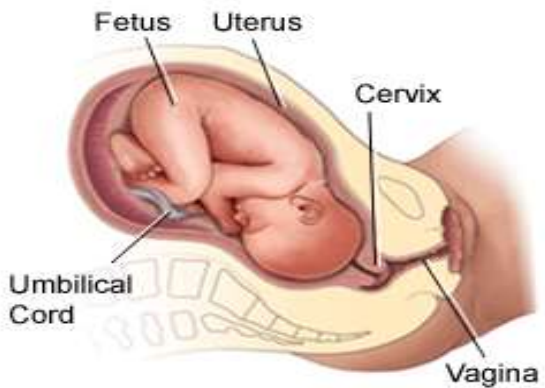
## What Causes Morning Sickness?

It is likely hormones that rise rapidly with most incidences occurring in the first trimester

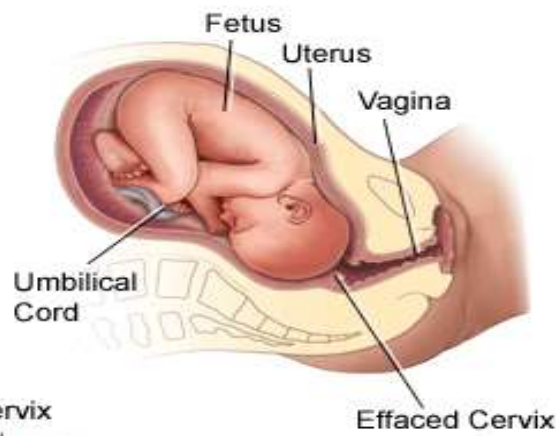
Human chorionic gonadotropin (hCG): This hormone rises rapidly during early pregnancy. No one knows how hCG contributes to nausea, but it's a prime suspect because the timing is right: Nausea tends to peak around the same time as levels of hCG. What's more, conditions in which women have higher levels of hCG, such as carrying multiples, are associated with higher rates of nausea and vomiting.



# Initial (Latent) Phase Stage 1



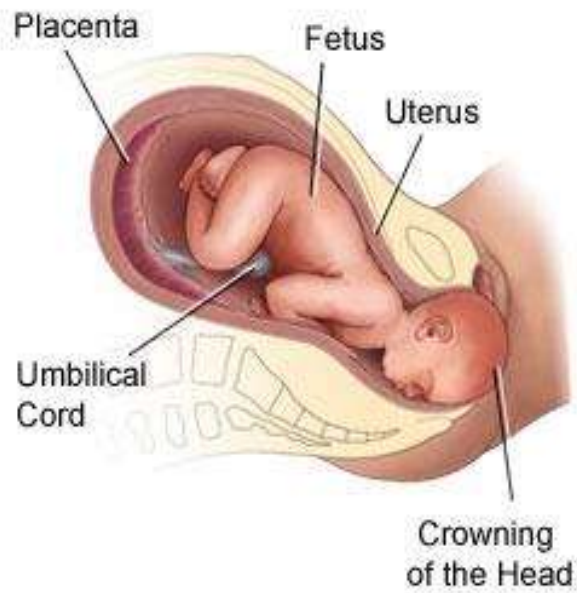
## Active Phase



## Transition Phase



# Stage 2



# Stage 3

