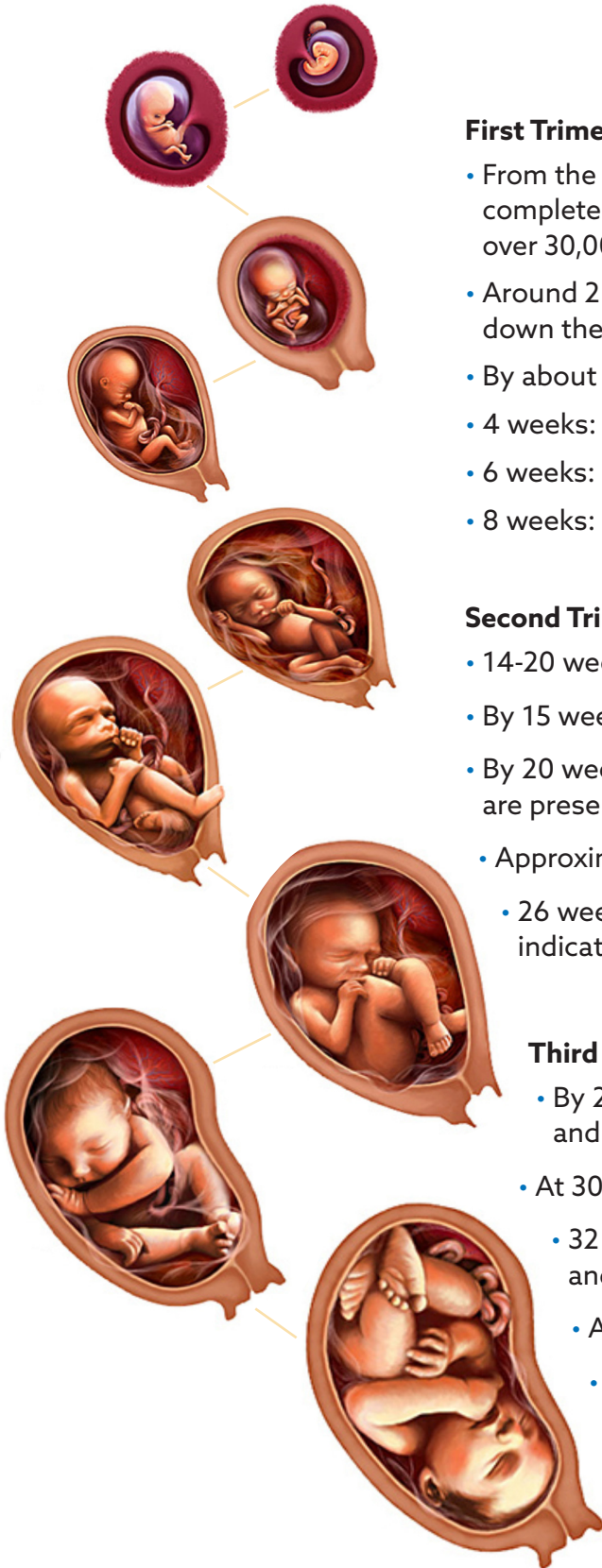


# Fetal Development



## First Trimester

- From the moment a father's sperm meets a mother's ovum, a genetically complete human being, a zygote, exists. At this point the individual has over 30,000 genes (all that he or she will have for his or her entire life).
- Around 2 weeks: the human is considered an embryo and has travelled down the fallopian tubes to implant in the mother's uterus.
- By about 3 weeks: a heartbeat is detectable.
- 4 weeks: the human is about 10,000 times larger than day one.
- 6 weeks: brain waves are detectable.
- 8 weeks: reactions to stimuli are apparent.

## Second Trimester

- 14-20 weeks: a mother often feels her baby's movements.
- By 15 weeks: sexual differentiation is apparent.
- By 20 weeks: all pain receptors a human will have in its entire lifetime are present.
- Approximately 24 weeks: baby is considered viable.
- 26 weeks: sleep patterns are present, REM sleep is detectable indicating capacity for dreaming.

## Third Trimester

- By 28 weeks: the baby can use senses of sight, touch, sound, and taste.
- At 30 weeks: breathing movements start to occur.
- 32 weeks: skin thickens and a layer of fat develops for insulation and nourishment; antibodies build up.
- Around 36 weeks: head starts repositioning for birth.
- By 40 weeks: heart pumps 250 gallons of blood per day.