

Major Events in Fetal Development

Oldenbourg

1st Trimester - (Embryonic Stage)

Teratogens - exposure to German Measles

Cigarettes - health problems related to premature births + low birth weight

alcohol - can cause mental retardation

Fetal Alcohol Syndrome

Cocaine

low birth weight
premature births
possible permanent brain damage + behavioral disorders

small head size
heart defects

hyperactivity, irritability
mental retardation, slowed motor development

Week 5 - heart (basic cells) begin to beat

?? week 12 - heart beat can be heard w/ stethoscope
seen with ultrasound

Foundation of all organs, organ systems, arms, legs

Week 10 - sex determined

* head is large in proportion to body

- Chance of miscarriage drops drastically after 3rd month

- end of Trimester - \approx 6.1 cm + 14 g

2nd Trimester (Fetal Stage - Period of Growth)

- week 16 - sex can be determined ^(seen) using ultrasound

- vernix caseosa - "cheesy mixture" covers skin to protect from watery environment

- quackening ^(week 20) - spontaneous movement can be felt

- week 27 - lungs not fully developed - but "practicing" breathing amniotic fluid

Month 6 - if born - (week 23) may survive but in PICU
- lungs not fully developed yet

- week 26 - lungs produce surfactant

- baby can respond to your voice

3rd Trimester (month 7-9)

- rapid growth month 7 \approx 40 cm long

- brain cells rapidly forming networks

- digestive + respiratory system last to develop

- fat accumulates under skin to provide insulation

- week 37 - head starts to "turn down" for delivery

Most dangerous in first semester due to cell differentiation

month 4
 \approx 20 cm
170 g

23 cm
820 g

36 cm
3400 g