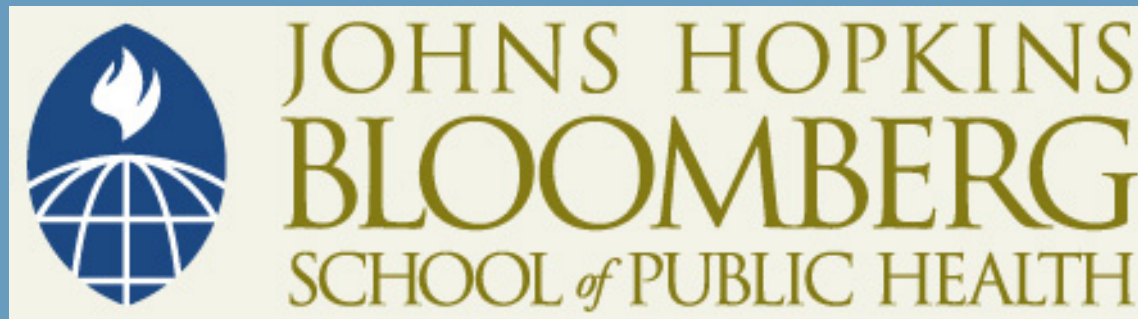


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JOHNS HOPKINS  
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## Section B

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### Factors That Impact Fertility

# What Affects Female Fertility and Implantation?

- Recurrent pelvic inflammatory disease (PID) with scarring
- Endometriosis
- Quality of cervical mucus
- Regularity of cycles
- Chronic conditions
- Hormonal abnormalities
- Anatomical abnormalities

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# What Affects Male Fertility?

- Sperm production
- Sperm mobility

# What Affects Fetal Health and Development?

- Maternal preconceptual and gestational nutritional status is critical. A fetus is a saprophyte—the homeostasis will protect the mother over the fetus.
- Approximately 5 percent of infants born in the United States experience Intrauterine growth retardation or IUGR

# What Affects Fetal Health and Development?

- Maternal malnutrition or under-nutrition impacts placental growth in the peri-implantation period
- Factors that impact maternal under-nutrition
  - Severe nausea and vomiting
  - Young maternal age
  - Poor pre-conceptual nutrition status
  - Narrow birth spacing
  - Famine
  - Anemia
  - Malaria

# What Affects Fetal Health and Development?

- Maternal over-nutrition impacts fetal growth
- The mechanism may be through imprint genes



# Preterm Birth (<37 weeks)

- Spontaneous preterm labor
- Premature rupture of membranes
- Medical intervention
  - Maternal complications
  - Fetal distress
  - Infection
  - Bleeding

# Factors That Impact IUGR

- Maternal under and over nutrition
- Infection
  - TORCH (T<sub>oxo</sub>, O<sub>ther</sub> [hepatitis, syphilis, zoster, HIV], R<sub>ubella</sub>, C<sub>ytomegalovirus</sub>, H<sub>erpes</sub>)
  - Malaria
- Micronutrient deficiency: folate, vitamin A
- Behavioral factors: maternal smoking, alcohol use
- Maternal chronic conditions: hypertension, diabetes mellitus, renal disease