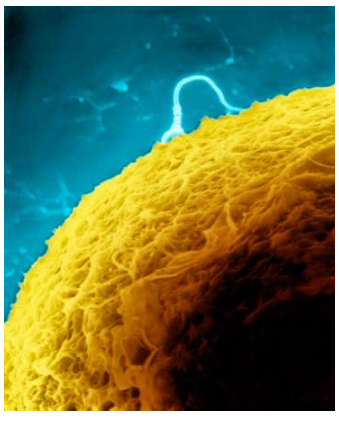
Lifespan Psychology

Chapter 4
Pregnancy and Birth

Overview

- Prenatal development
- Teratogens - Principles
- Maternal nutritional needs



The Prenatal World

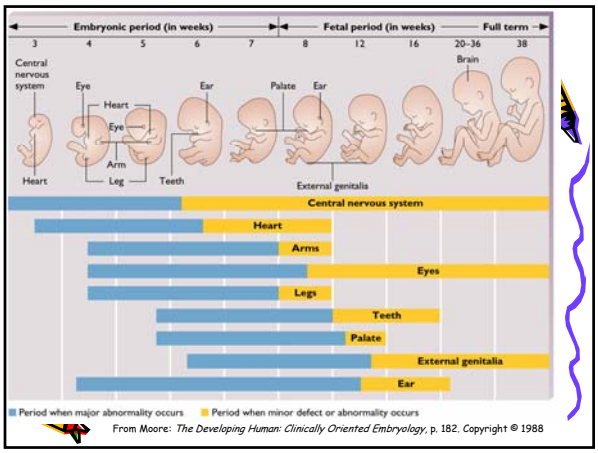
- The Germinal Period
  - First two weeks after fertilization
  - Blastocyst adheres to uterine wall
  - Placenta, umbilical cord, and amniotic sac begin to form
- The Embryonic Period
  - Lasts from third to eighth week
  - Cellular Differentiation occurs→3 layers of cells→skin, nervous system, and organs

The Prenatal World

- The Fetal Period
  - Third month to birth
    - 3rd month—sex organs appear; nervous system continues to develop
    - 4th-6th months—peak growing time; fetus moves around; sucking, pushing, etc.
    - 7th month—growth slows; viability reached;
    - 8th-9th months—internal organs and senses finish developing

Influences on Prenatal Development

- Teratogens: any agents causing abnormalities
  - Chemicals - Drugs, chemicals, certain medications, i.e. thalidomide, DES, and common substances, i.e. alcohol, cigarettes
  - Infectious Diseases - (STORCH)--Syphilis, Toxoplasmosis, Rubella, CMV, Herpes, and AIDS



From Moore: *The Developing Human: Clinically Oriented Embryology*, p. 182. Copyright © 1988

Principles of Teratology

- Susceptibility
- Critical/Sensitive periods
- Access
- Dose-Response Relationships
- Teratogenic Response
- Interference with Specific Mechanisms
- Developmental Delay/ "Sleeper Effects."

Thalidomide - effects


Nutritional Need Differences Between Nonpregnant and Pregnant Women (24 years old)

Nutrient	Nonpregnant	Pregnant	Percent Increase	Dietary Sources
Folic acid	180 mcg	400 mcg	+122	Leafy vegetables, liver
Vitamin D	5 μg	10μg	+100	Fortified dairy products
Iron	15 mg	30 mg	+100	Meats, eggs, grains
Calcium	800 mg	1200 mg	+50	Dairy products
Phosphorus	800 mg	1200 mg	+50	Meats
Pyridoxine	1.6 mg	2.2 mg	+38	Meats, liver, enriched grains
Thiamin	1.1 mg	1.5 mg	+36	Enriched grains, pork
Zinc	12 mg	15 mg	+25	Meats, seafood, eggs
Riboflavin	1.3 mg	1.6 mg	+23	Meats, liver, enriched grains
Protein	50 g	60 g	+20	Meats, fish, poultry, dairy
Iodine	150 mcg	175 mcg	+17	Iodized salt, seafood
Vitamin C	60 mg	70 mg	+17	Citrus fruits, tomatoes
Energy	2200 kcal	2500 kcal	+14	Proteins, fats, carbohydrates
Magnesium	280 mg	320 mg	+14	Seafood, legumes, grains
Niacin	15 mg	17 mg	+13	Meats, nuts, legumes
Vitamin B-12	2.0mcg	2.2 mcg	+10	Animal proteins
Vitamin A	800μg	800 μg	0	Dark green, yellow, or orange fruits and vegetables, liver

Source: Data from Reece et al., 1995.