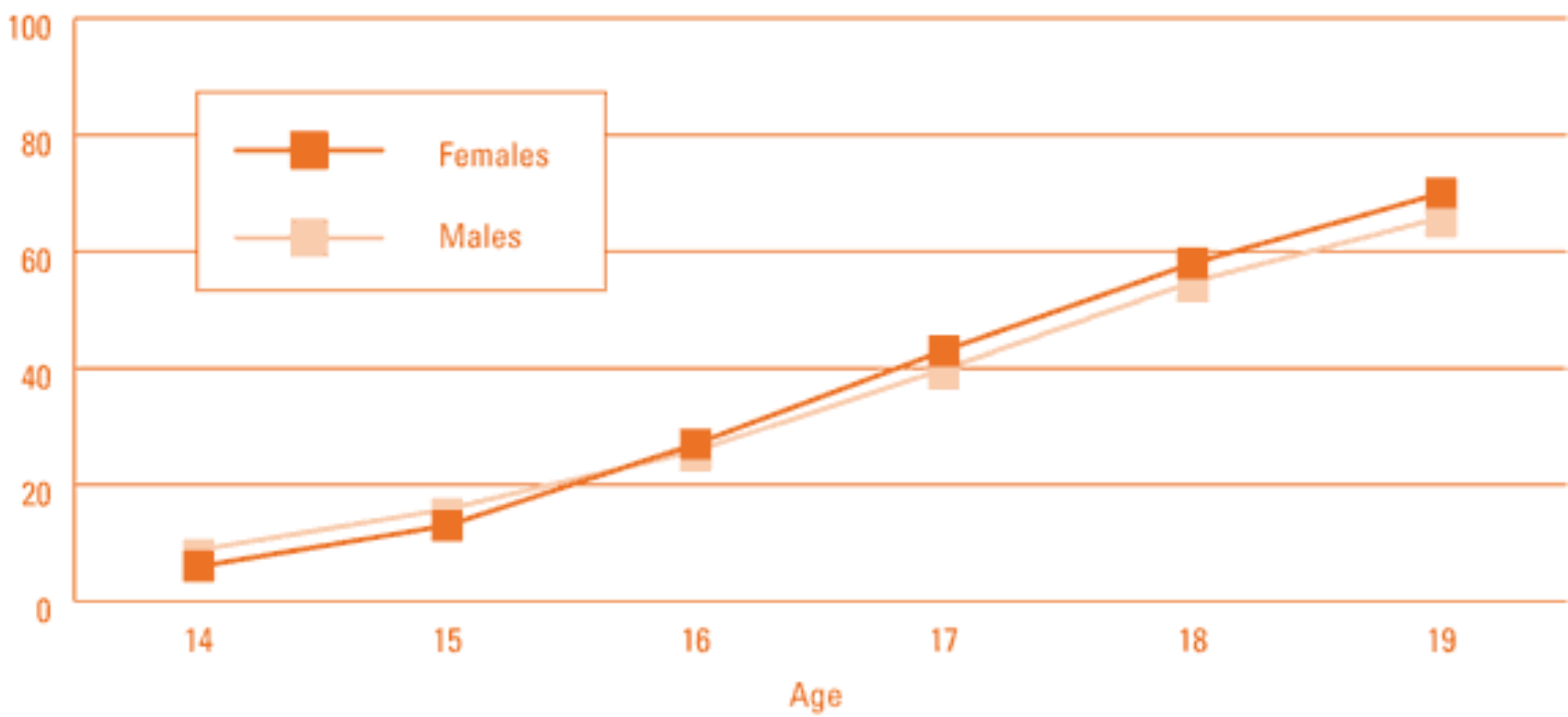


# Pregnancy, Birth, and Childhood

## CH. 19



% who have had intercourse, 2002



•Ten percent of young women aged 18–24 who have had sex before age 20 report that their first sex was involuntary. The younger they were at first intercourse, the higher the proportion.[1]

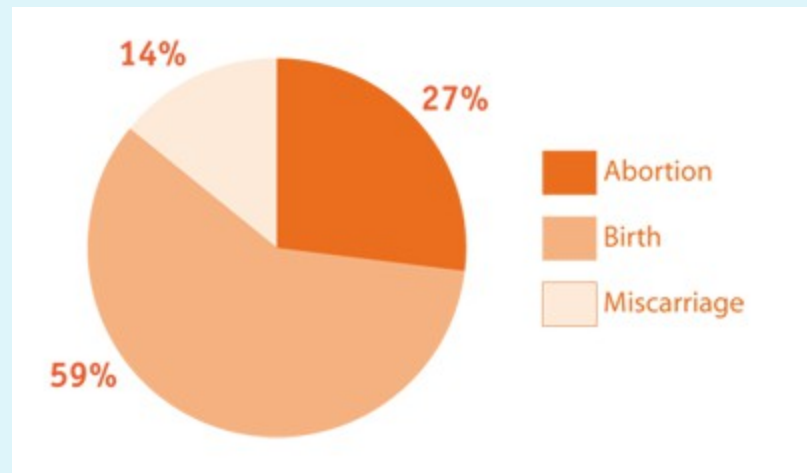
# QUICK FACTS

- A sexually active teen who does not use contraceptives has a 90% chance of becoming pregnant within a year.[4]

- Each year, almost 750,000 women aged 15–19 become pregnant. Overall, 71.5 pregnancies per 1,000 women aged 15–19 occurred in 2006; the rate declined 41% from its peak in 1990 to a low of 69.5 in 2005.[9]

## Teen Pregnancy Outcomes

**Nearly a third of all teen pregnancies end in abortion**



# Crystal ball... what would happen to me if I had a child right now?



## **The Importance of Prevention**

Teen pregnancy and childbearing bring substantial social and economic costs through immediate and long-term impacts on teen parents and their children.

Teen pregnancy accounts for more than \$9 billion per year in costs to U.S. taxpayers for increased health care and foster care, increased incarceration rates among children of teen parents, and lost tax revenue because of lower educational attainment and income among teen mothers.<sup>4</sup>

Pregnancy and birth are significant contributors to high school drop out rates among girls. **Only about 50% of teen mothers receive a high school diploma by age 22, versus nearly 90% of women who had not given birth during adolescence.**<sup>5</sup>

**The children of teenage mothers are more likely to have lower school achievement and drop out of high school, have more health problems, be incarcerated at some time during adolescence, give birth as a teenager, and face unemployment as a young adult.**<sup>6</sup>



# Quick Facts

Seven percent of teen mothers receive late or no prenatal care. Babies born to teens are more likely to be low-birth-weight than are those born to women in their 20s and 30s.[12]

- Teen mothers are now more likely than in the past to complete high school or obtain a GED, but they are still less likely than women who delay childbearing to go on to college.[13]

Table A. Births per 1,000 women 15-19 years of age: United States, 2007, and selected countries, most recent year available.

Country Number of births per thousand

United States 43

United Kingdom 27

Portugal 17

Australia 16

Canada 13

Spain 13

France 10

Germany 10

Norway 9

Italy 7

Sweden 6

Japan 5

Netherlands 5

**WHY DO YOU THINK THE U.S.  
IS AT THE TOP OF THIS LIST?**

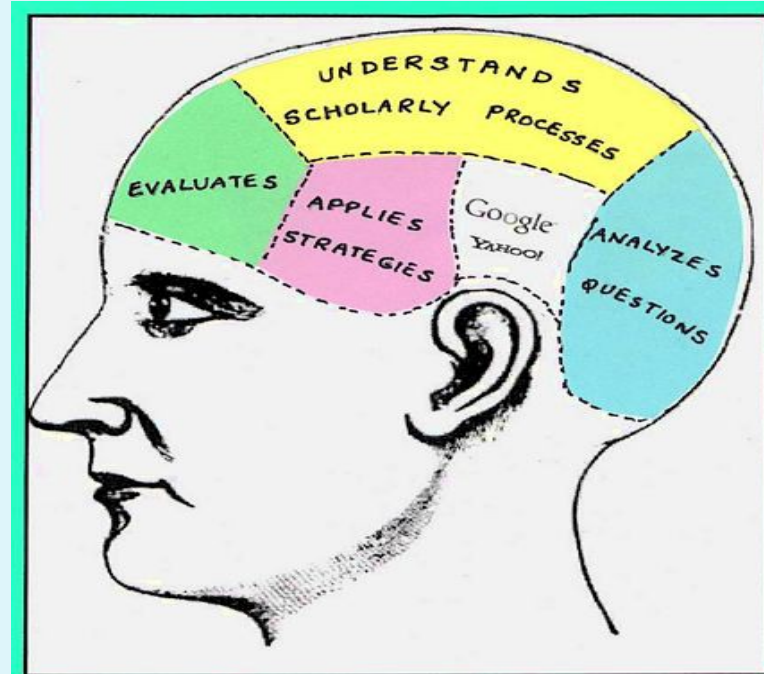
United States: Hamilton BE, Martin JA, Ventura SJ. Births: Preliminary data for 2008. National vital statistics reports web release; vol 58 no 16. Hyattsville, Maryland: National Center for Health Statistics. Released April 6, 2010.

Other countries: United Nations Statistics Division. Demographic Yearbook 2007.

New York: United Nations.

# Section 1 Objectives

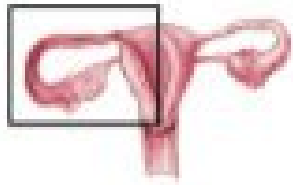
- “I can summarize the events that occur during the first week after fertilization”
- “I can describe the structures that protect and nourish the embryo and fetus”





# The Beginning of the Life Cycle

- 1. Fertilization – Only one sperm can enter the egg.
  - This usually will occur in the fallopian tube.
- 2. The Zygote – name given to the fertilized egg.
- 3. Cell Division
  - Original cell divides to make two cells.
  - Until about nine weeks after fertilization the growing structure is called an **embryo**.
- 4. The Blastocyst
  - About 5 days after fertilization the embryo makes it to the uterus
  - Sphere of 50-100 cells in the uterus
- 5. Implantation
  - Process of attachment to the uterus wall.



DAY 1

DAY 2

DAY 3-4

Uterus

First cleavage

2-cell stage

4-cell stage

8-cell uncompact morula

DAY 4

8-cell compacted morula

Fertilized egg (zygote)

DAY 0

Fertilization

Ovary

DAY 5 Trophectoderm

Early blastocyst

Blastocoel

Inner cell mass

DAY 6-7

Zona pellucida

Late-stage blastocyst (hatching)

DAY 8-9

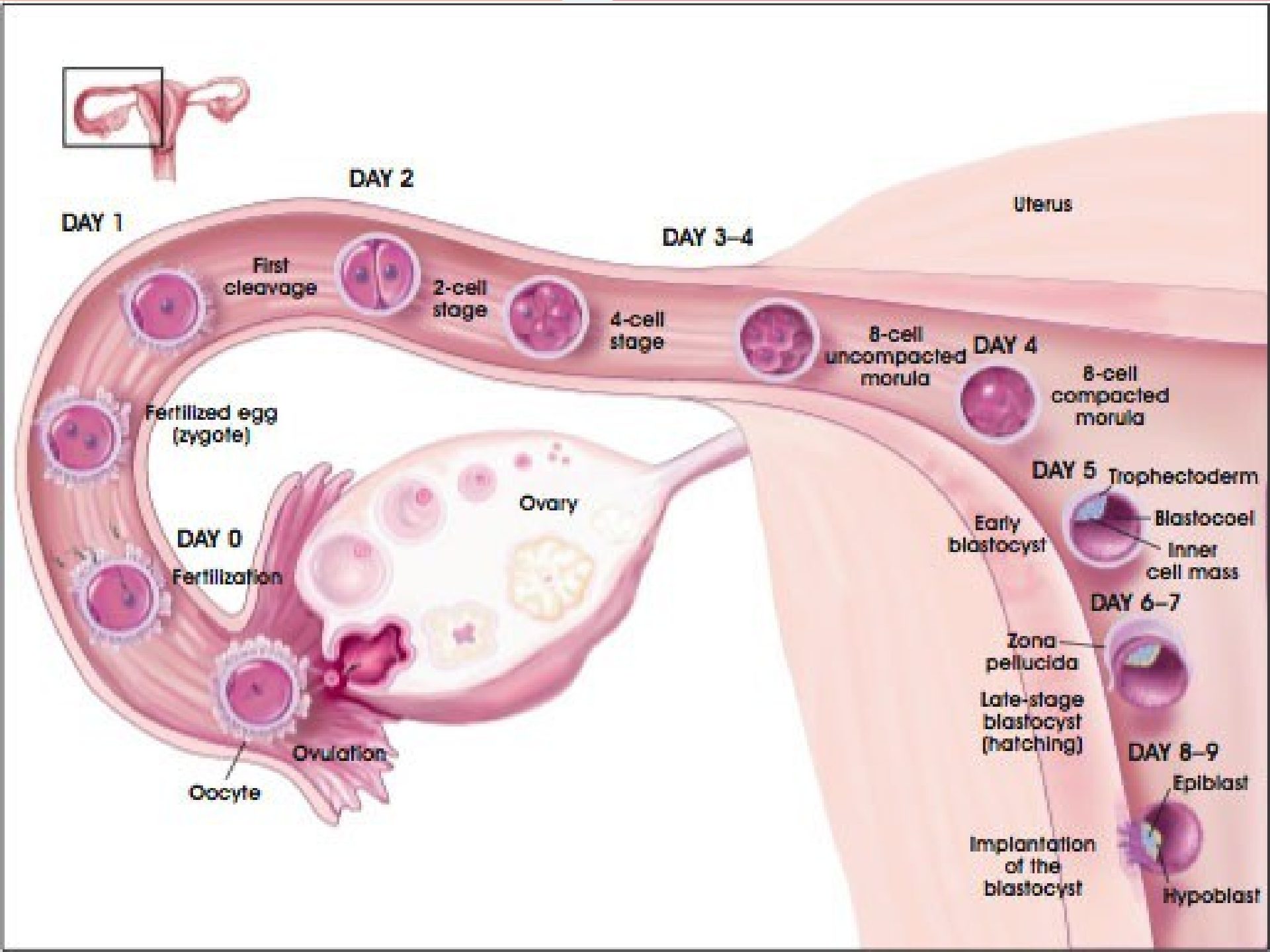
Epiblast

Oocyte

Ovulation

Implantation of the blastocyst

Hypoblast



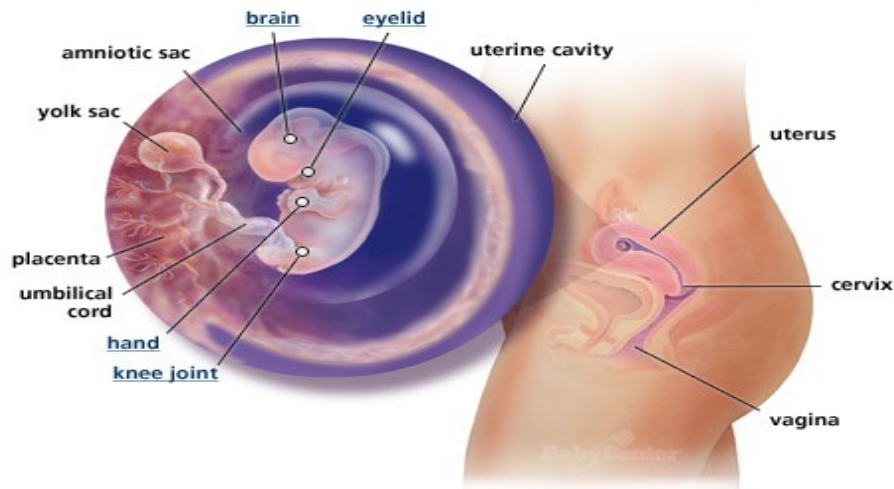
# Development in the Uterus

- Amniotic Sac – a fluid-filled bag of thin tissue that forms around the embryo.
  - Inside the sac the embryo floats in amniotic fluid
- Placenta – attachment that holds the embryo to the wall of the uterus.
- Umbilical Cord – ropelike structure that connects the embryo to the placenta.
  - Blood vessels within the cord carry nutrients and oxygen to the embryo from the placenta.

# Development in the Uterus (cont.)

## ○ The Growing Embryo

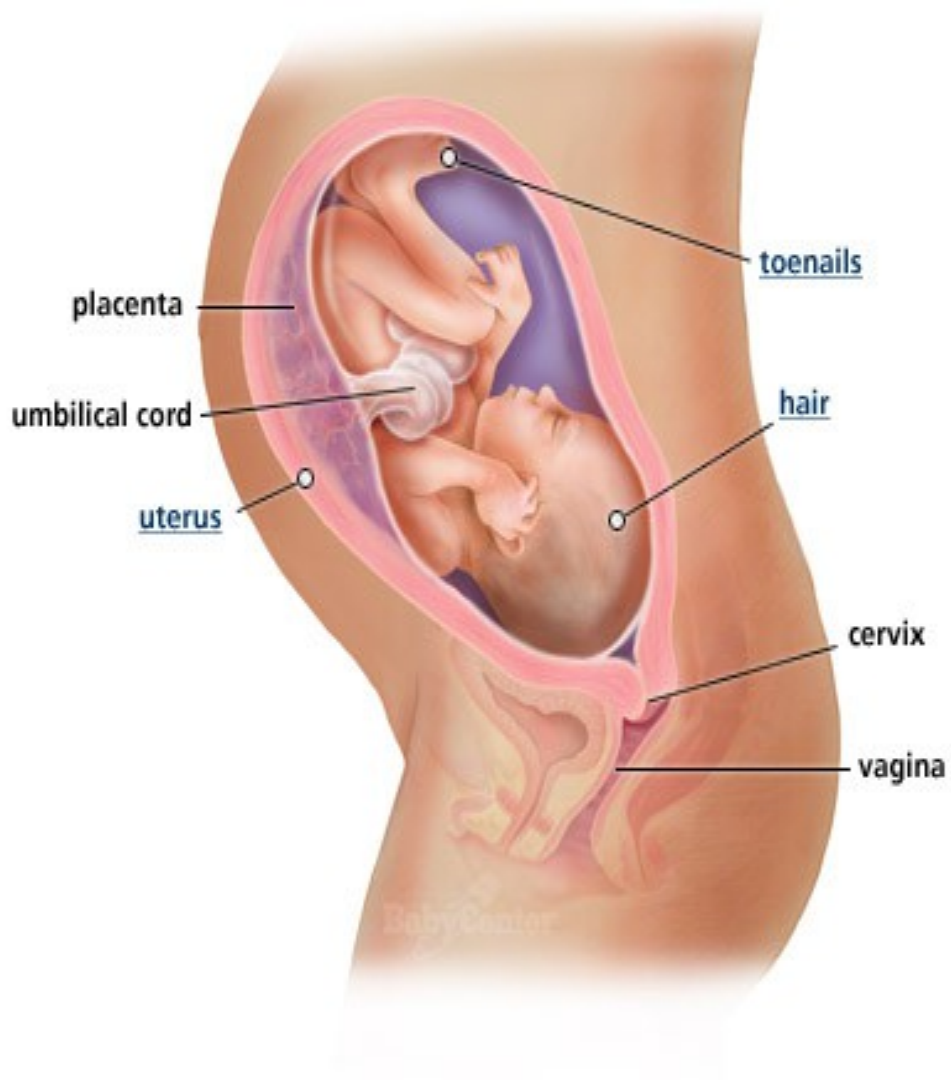
- First two months major body systems and organs start to form
- By the end of the first eight weeks the embryo is about 1 inch long
  - Will have recognizable features, such as eyes, arms, legs.
  - The head will make up 50 % of the embryo at this time.



Roll your cursor over each underlined label to learn more about that area.

# Development in the Uterus (cont.)

- The Fetus
  - From the third month until birth, the developing human is called a **fetus**.
  - Fetus will begin to move and kick
  - From the seventh to the ninth month
    - Head and body become more in proportion
    - Eyelids will open and close
    - By the end of the ninth month the fetus is ready to be born.



## Fetus at 32 weeks (8 months)

Roll your cursor over each underlined label to learn more about that area.

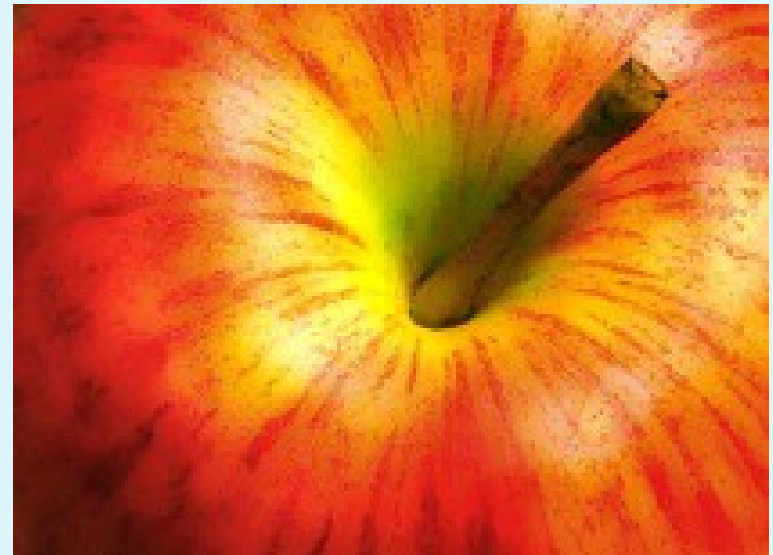
# Staying Healthy During Pregnancy

- Section 2 Objectives
  - “I can identify four behaviors that are essential for a healthy pregnancy”
  - “I can explain the importance of prenatal care throughout a pregnancy.”



# Staying Healthy During Pregnancy

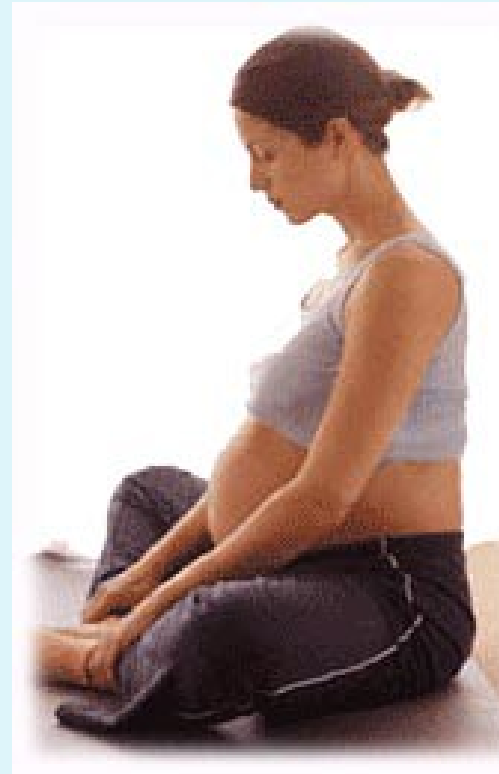
- Proper Nutrition
  - Women needs about 300 more calories a day during pregnancy.
  - Folic acid is very important vitamin for the embryo's central nervous system (brain and spinal cord)
    - Prenatal vitamins are available, but one should always consult a doctor first.





# Staying Healthy During Pregnancy (cont)

- Exercise
  - Important for a health pregnancy
  - Reduces risk of diabetes and other health problems during pregnancy
  - Always get a doctor's approval first.
    - Can tell which exercises are o.k. and which ones should be avoided.
  - High impact exercises should be avoided



# Staying Healthy During Pregnancy (cont)

- **Avoiding Alcohol and Other Drugs**
  - Alcohol, tobacco, and drugs can make becoming pregnant difficult.
  - Substance abuse during pregnancy can cause serious harm to the baby, including death.
    - Fetal Alcohol Syndrome (FAS) can cause serious birth defects, including physical and mental disabilities.
    - Even prescription medicines can cause serious harm to a fetus.
      - Always consult a doctor before taking any medicine or supplements during pregnancy.

# Staying Healthy During Pregnancy (cont)

- Avoid Environmental Hazards
  - X-rays can cause harm due to radiation
  - Lead
    - Lead-based paint can be present in older homes.
    - Health department can check for these environmental hazards.
  - Mercury
    - Pregnant women should eat commercially bought fish only once a week
    - Never eat swordfish or shark
  - Cat litter
    - Cat feces contain a parasite that is dangerous to a developing fetus.

# Prenatal Care

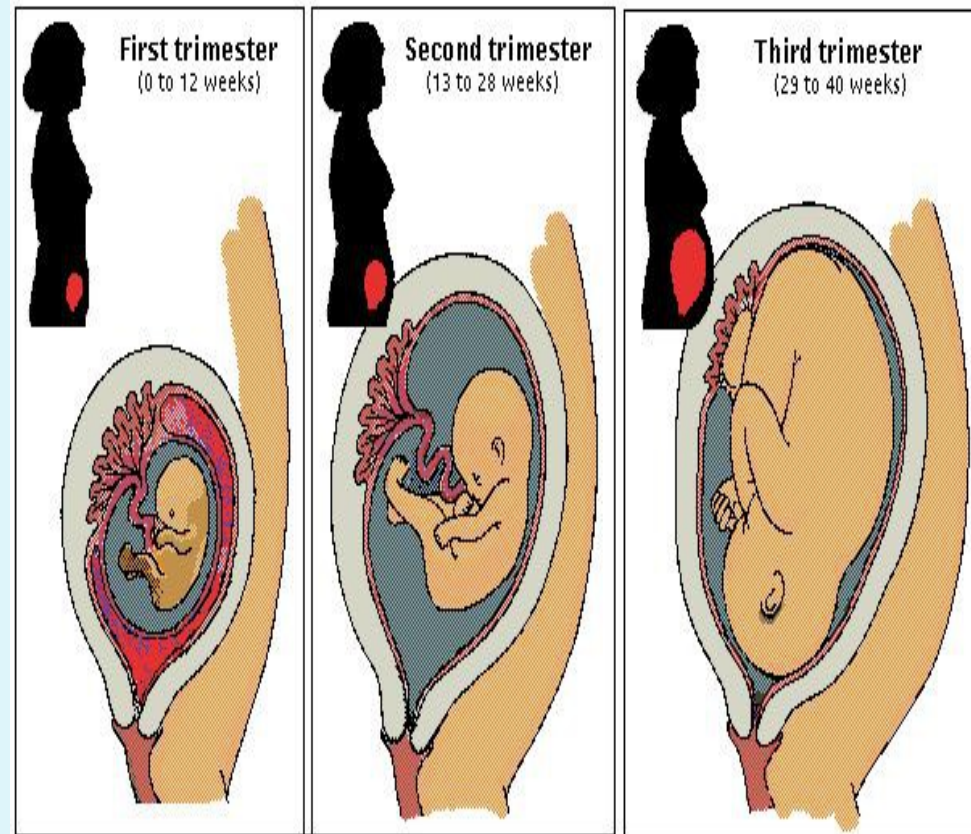
- Prenatal care
  - Medical care during pregnancy
  - Obstetrician
    - A doctor who specializes in pregnancy and childbirth.
  - Greatly increases the chance of having a healthy baby.



# Prenatal Care

- The Three Trimesters

- Pregnancy is divided into 3 stages, each one lasting 3 months long
- What can you expect during checkups during each trimester?
  - First Trimester
    - Medical history and weight
    - Prescribe vitamins as needed
  - Second Trimester
    - Heartbeat monitor
    - Measure growth of fetus
    - Monitor for complications using ultrasound and other medical devices
  - Third Trimester
    - Check position and fetus size
    - Monitor any possible complications
    - Discuss birth process.

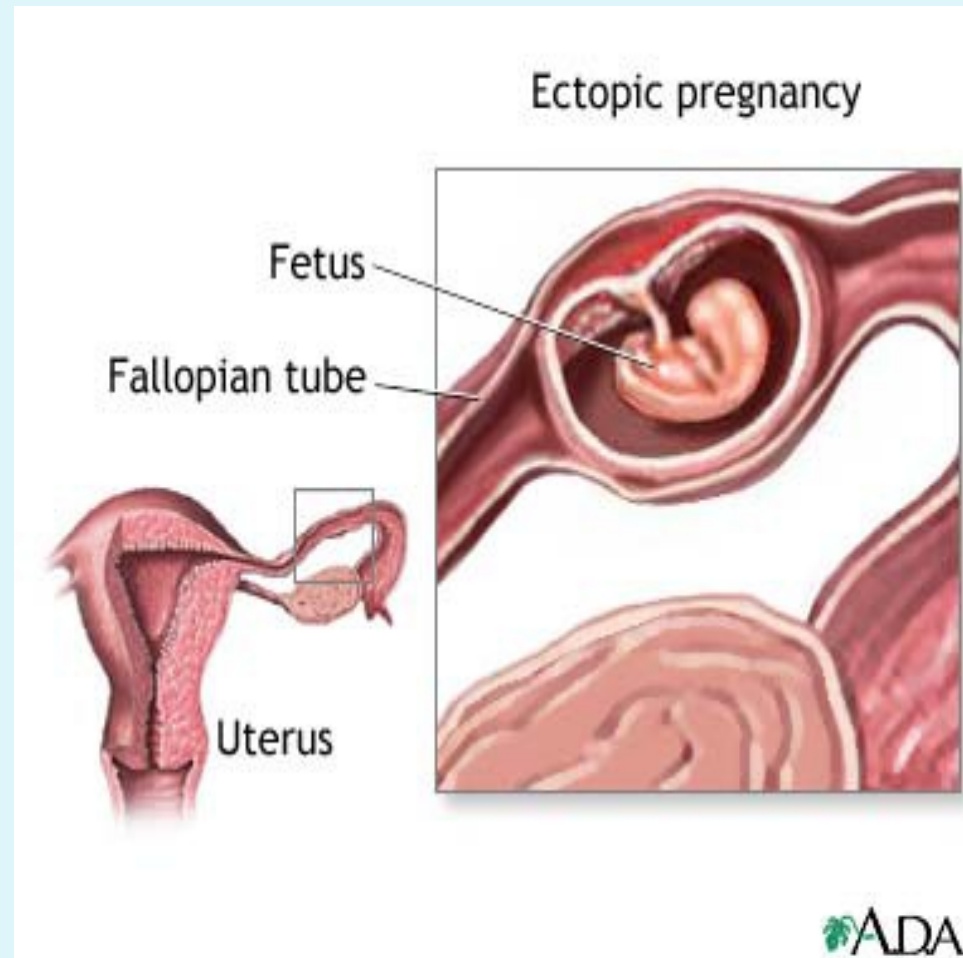


# Prenatal Care (cont.)

- Monitoring Tools (medical tools)
  - Ultrasound
    - High-frequency sound waves creates an image of the fetus
  - Chronic Villus Sampling
    - Around the eighth week a doctor can remove a small sample of the placenta
      - Can detect inherited disorders, such as hemophilia or down syndrome.
  - Amniocentesis
    - Test done to check for certain disorders
    - Needle is stuck into the abdomen and uterus
      - Small amount of amniotic fluid is removed for testing

# Prenatal Care (cont.)

- Complications that may occur
  - **Ectopic Pregnancy**
    - Blastocyst implants in the fallopian tube
    - Embryo must be removed surgically



# Prenatal Care (cont.)

- Complications that may occur (cont.)
  - **Miscarriage**
    - Death of the embryo or fetus in the first 20 weeks
    - About 15% of recognized pregnancies end in miscarriage
  - **Preeclampsia** (toxemia) – Prevents the fetus from getting enough oxygen
    - Symptoms:
      - High blood pressure
      - Swelling of ankles and wrists
      - High levels of protein in urine
  - **Gestational Diabetes** – diabetes that develops in the pregnant mother
    - High level of sugar can be passed to the fetus
    - Fetus may grow too large, or have breathing problems.



# The Birth Process

- **Section 3 Objectives**

- “I can identify the three stages of the birth process”
- “I can describe four complicating factors that may arise at birth”

Fill your  
brain with  
knowledge!



# The Birth Process

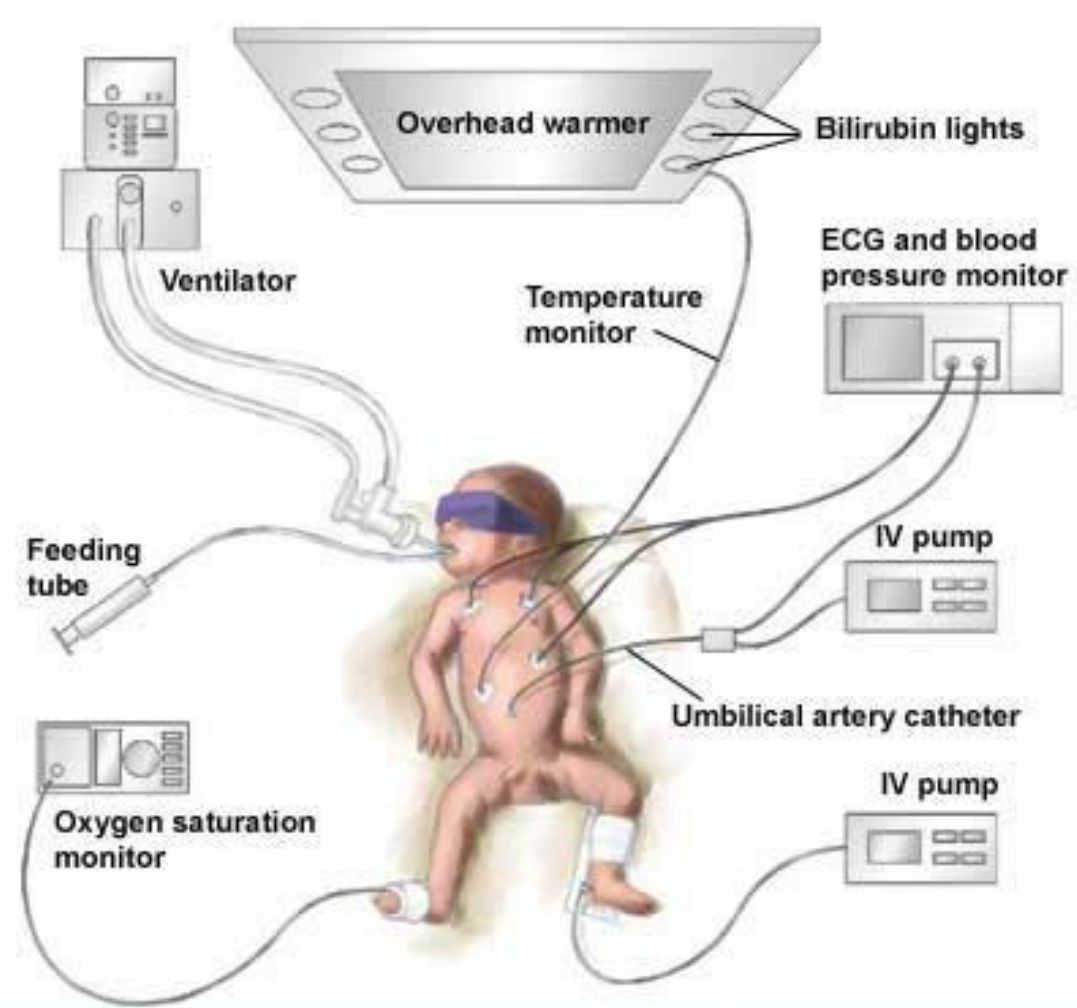
- **1. Labor** – the work performed by the mother’s body to push the fetus out.
  - Strong contractions of the uterus will cause the cervix to dilate.
  - During the first part of the birth process the amniotic sac will break.
- **2. Delivery of Baby**
- **3. Delivery of Afterbirth**
  - Contractions of the uterus pushes out the placenta

# Complications at Birth

- Still Birth
  - Occurs when a fetus dies and leaves the body after the twentieth week.
- Cesarean Section
  - Surgical method of birth
  - Doctor make an incision in the lower abdomen into the uterus.
  - 30% of all U.S. deliveries
- Premature Birth
  - Delivery of baby before the 37<sup>th</sup> week of pregnancy
  - Lungs are usually not fully developed
  - Baby will be placed in an incubator until further development takes place.



Incubator for a premature baby



# Complications at Birth (cont.)

- Low Birth weight
  - Baby that weighs less than 5.5 pounds
  - Premature babies and low birth weight babies can have life long problems.
  - Not smoking during pregnancy can lower chances of having a baby with low birth weight by 40%

# Multiple Births

- See page 502 and 503

