

Prenatal Care



Jan Shepherd, MD, FACOG



*Supporting communities to
give every child a Healthy Start.*

Healthy Start EPIC Center

Objectives

Discuss important lifestyle recommendations for the pregnant woman

Describe tests and procedures that are often performed during pregnancy

Identify warning signs that mother and/or baby may be at risk

The Purpose of Prenatal Care

- Education about healthy behaviors in pregnancy
- Identifying and monitoring risks
- Preparation for childbirth, breastfeeding, and parenting

Early and regular prenatal care is proven to lead to healthier mothers and infants

First Things First

- Is she enrolled in prenatal care?
- Does she have health insurance?
- Does she have a medical home?



If not, does she know where and how to obtain each of these?

First Things First

- When she got pregnant with this baby, did she want to be pregnant?
- How does she feel about this pregnancy?
- High risk of depression with unplanned pregnancies
 - May need counseling
 - Observe for depression
- How does her partner feel?
 - Encourage partner involvement in all aspects of care

First Things First

First day of Last Menstrual Period (LMP)

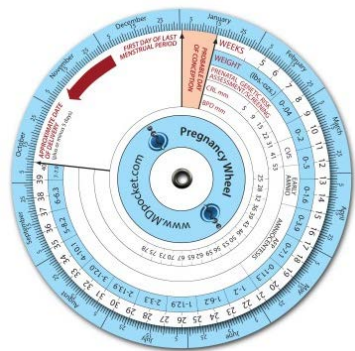
- Important to help woman plan due date *and* for future medical reasons (e.g. preterm labor)
- Help woman relate it to something that may have been going on in her life

Easy way to estimate delivery date



Count back 3 months and add 7

LMP 6/15 → approx Due Date 3/22



First Things First (If No Preconception Care)

- **Begin prenatal vitamins**
- **Discontinue teratogenic medications**
- **Smoking cessation**
- **Alcohol and drug intervention**
- **Emphasize importance of regular prenatal medical visits, especially if she has a serious medical condition**

High-Risk Medical Conditions

- Diabetes
- High Blood Pressure
- Epilepsy (Seizures)
- Thyroid conditions
- Asthma
- Sickle Cell Disease
- Mental Health conditions
- Lupus, Rheumatoid Arthritis
- Heart, Kidney, Blood or Clotting problems

Education on Lifestyle

Nutrition – Building blocks for baby

- Check food security, make WIC referrals
- ↑ vitamins and minerals
 - Calcium – milk, yogurt, cheese
 - Iron - liver, red meat, other meats, dark green vegetables, dried fruits (e.g. raisins)
 - Folic Acid – greens, citrus fruits, beans
 - Vitamin D - sunshine
 - Prenatal vitamins have it all!
 - But don't overdo it (e.g. too much Vitamin A)

Education on Lifestyle

What to Eat

- Protein – meat, fish, beans, eggs, nuts
- Calcium-rich foods, especially dairy
- Fruits and vegetables (≥ 5 servings/day, colorful, fill half the plate)
- Whole grains (whole wheat bread, brown rice, cereals)
- Lots of liquids, especially water



■ Minimize

- Sweets, sugar-sweetened beverages, salt, fried foods

■ Avoid

- Undercooked meats, fish, eggs, and leftovers

Recommended Weight Gain in Pregnancy

	Body Mass Index (BMI)	Recommended Weight Gain (Pounds)
Underweight	Less than 18.5	28-40
Normal Weight	18.5-24.9	25-35
Overweight	25-29.9	15-25
Obese	30 and greater	11-20

Education on Lifestyle

Discuss Risks of:

■ Smoking

- Preterm birth
- Low-birth-weight infants
- Perinatal death

■ Alcohol

- Fetal growth restriction
- Physical abnormalities
- Neurologic deficits, including mental retardation

■ Mood-altering substances (heroin, cocaine, painkillers)

- Birth defects
- Preterm birth
- Neonatal Abstinence Syndrome



Neonatal Abstinence Syndrome (NAS)

- A baby exposed to drugs in the womb goes through withdrawal after birth
- Symptoms – fussiness, excessive crying, body shakes, seizures, poor feeding and sleeping, diarrhea, vomiting, stuffy nose
- Treatment
 - Swaddling, skin-to-skin contact, quiet environment, breastfeeding
 - Sometimes morphine in gradually decreasing dose

Education on Lifestyle

■ Exercise

- 30 minutes of moderate activity most days
- Avoid activities with risk of falls, high heels

■ Always wear seat belts

■ Dental Care

- Annual check-up
- Brush and floss every day

Infectious Disease

- **Screen for HIV** - treatment during pregnancy decreases risk of transmission to baby from 25% to 2%
- Chlamydia, Gonorrhea, and Syphilis screen
- Hepatitis B screen and immunization if indicated
- Tuberculosis skin test if high-risk
- Toxoplasmosis – discuss risks from kitty litter and undercooked meats
- Cytomegalovirus (CMV) - advise precautions around young children

Immunizations

- **Inactivated (killed) vaccines that should be administered during pregnancy**
 - Tetanus-diphtheria-pertussis (Tdap) ~28 wks
 - Flu shot once during flu season
- **Live vaccines that need to be given preconception or postpartum**
 - MMR (measles-mumps-rubella)
 - Varicella (chicken pox)

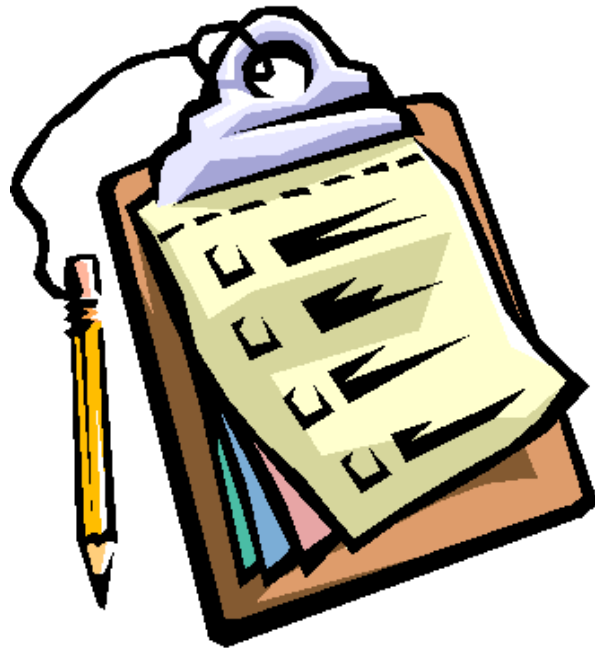
Genetic Risks

- **Mother's age ≥ 35 → risk of Down Syndrome**
- **Family history**
 - Birth defects
 - Inherited diseases (e.g. sickle cell)
- **Pregnancy history**
 - Previous stillbirth
 - More than two miscarriages

Social Risks

- Screen for **Perinatal** Depression at least once during pregnancy
- Assess and encourage father involvement
 - Invite to attend prenatal visits, home visitations, childbirth classes if possible
- Screen for **Intimate Partner Violence**
 - Begins, continues, or increases during pregnancy
 - One of most common causes of maternal death
 - Screen regularly throughout pregnancy
- Assess social support

Coming Soon: Prenatal Screening Tool!



Important Referrals

- Home visiting programs
- Depression treatment
- Intimate Partner Violence
- Smoking cessation
- Alcohol intervention
- Treatment for substance abuse

Monitoring at Prenatal Visits

- **Activity and heartbeat of baby**
- **Uterine growth**
- **Weight**
- **Blood pressure**
- **Urine test for glucose and protein**
- **Assess other problems/issues**
 - e.g. excessive swelling, vaginal bleeding, cramping, gush of water, decreased fetal movement

Ultrasound

- A woman usually has one ultrasound at 18-20 weeks to date the pregnancy and look for birth defects
- Additional scans may be done check for
 - Twins
 - Fetal growth
 - Placenta
 - Other problems



Special Tests and Procedures

- Glucose Tolerance Test (GTT) to check for diabetes at 24-28 weeks
- Rhogam for Rh- women at 28 weeks
- Group B Strep test at 35-37 weeks → antibiotic during labor if positive
- Genetic testing
 - Ultrasound
 - Blood tests
 - Amniocentesis (“Amnio”)



CASES

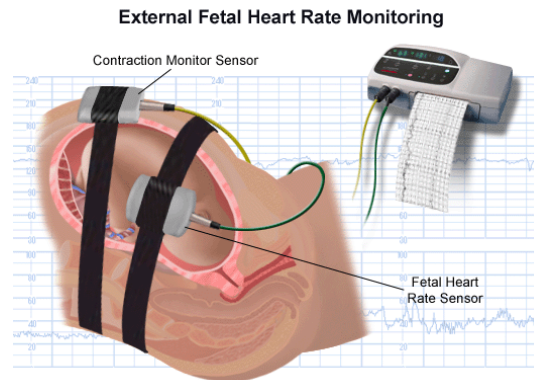
Maria



Maria is 36 weeks pregnant with her second baby. Both of her pregnancies have been complicated by gestational diabetes. Today she says that she thinks the baby is moving less than before.

Counseling Maria

- ↑ Risk of stillbirth in diabetic pregnancies
- Refer to clinic or hospital for fetal monitoring



- May need emergency delivery
- If baby seems to be doing well
 - Mom can check “Kick Counts”
 - Twice a day, count for ten kicks in 2 hours

Maria Follow Up

- Baby's heartbeat looked fine on monitor
- After Maria was given orange juice and cookies, her baby became more active again
- Maria advised to keep doing “kick counts”
- Because of her history, she will continue to receive fetal monitoring (also known as non-stress testing) at least once a week

Shonda



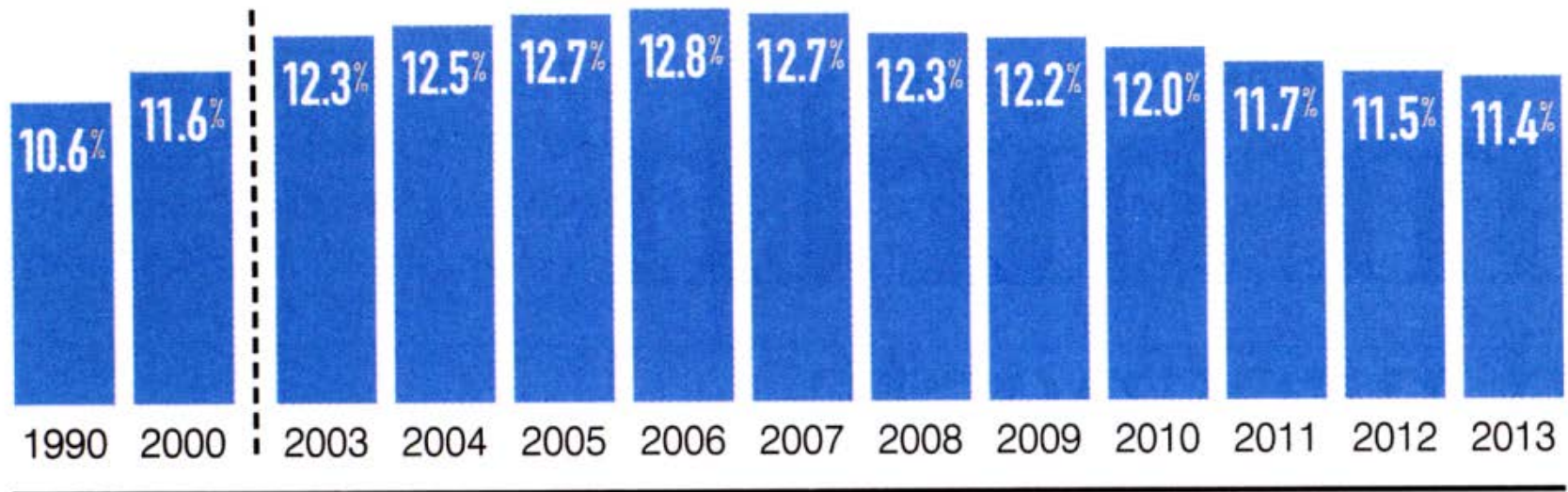
Shonda is 33 weeks pregnant with her first baby. She didn't really plan this pregnancy but her boyfriend has been supportive and both of them are now excited about the baby. Shonda has been generally healthy during the pregnancy, although neither she nor her boyfriend has been able to quit smoking. She calls today to tell you she feels like she is getting her period, with cramps and light brown vaginal spotting.

Signs of Preterm labor

- **Contractions – Painful regular tightening of the uterus**
- **Cramps that feel like a period**
- **Increased lower back pain or pressure**
- **Pink, brown, or bloody vaginal discharge**
- **A trickle or rush of fluid from the vagina**

US Preterm Birth Rates, 1990, 2000, 2003-2013

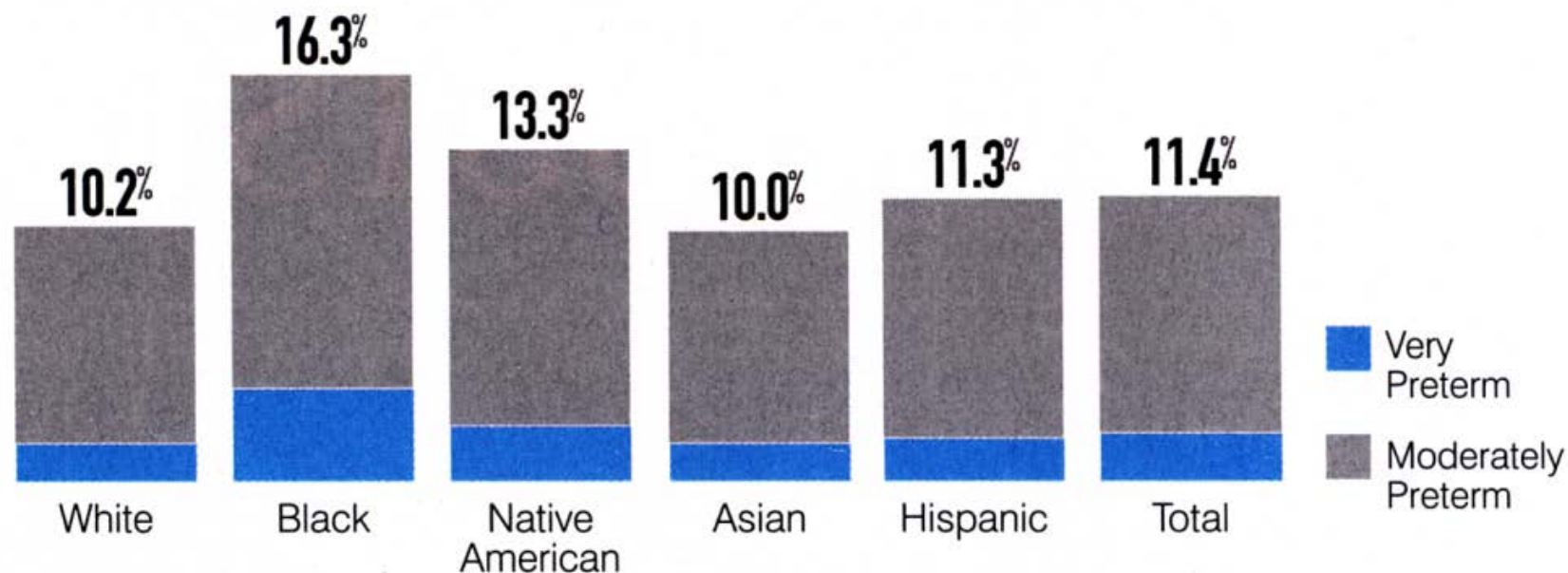
FIGURE 1 US preterm birth rates, 1990, 2000, 2003-2013



Source: National Center for Health Statistics, 1990-2013 final natality data.
Prepared by March of Dimes Perinatal Data Center, 2015.

Preterm Live Births by Maternal Race/Ethnicity, US, 2013

FIGURE 5 Preterm live births by maternal race/ethnicity, US, 2013



Notes: All race categories exclude Hispanics. Very preterm is less than 32 weeks' gestation, preterm is less than 37 completed weeks' gestation, moderately preterm is 32 to 36 completed weeks' gestation.

Source: National Center for Health Statistics 2013 natality data.

Rates prepared by March of Dimes Perinatal Data Center, 2015.

Some Causes of Preterm Labor

- Medical conditions (e.g. high blood pressure, diabetes)
- Infections
- Smoking
- Mood-altering substance use
- Problem with placenta or cervix
- Twins
- History of preterm babies

Counseling Shonda

- **Send her to the hospital right away!**
- **The doctors and nurses can:**
 - Monitor the baby and the uterus to see if she's in preterm labor
 - Check for infections that could be causing it
 - Give medications to help stop it (the earlier the better)



Shonda Follow –Up

- **Fetal monitoring and pelvic exam showed that**
 - Shonda was having early preterm labor
 - Her baby's heartbeat was fine
- **Laboratory testing showed that she had a bladder infection**
- **Shonda was started on an IV, antibiotics, and medication to stop her labor**
- **She went home in 3 days and had her baby 5 weeks later**

Michelle



Michelle is 36 weeks pregnant with her first baby, which she and her husband planned. She has been taking good care of herself and feeling well until the past few days. Now she says her feet, hands, and even face are really swollen. She also has a bad headache, and her vision is blurry.

Preeclampsia (Toxemia)

- Preeclampsia is high blood pressure, protein in the urine, and excessive swelling caused by pregnancy. If untreated, it can lead to seizures (eclampsia) and damage to mother's organs including the liver and kidney. It also has risks for the baby.
- The cause is unknown
- Symptoms include
 - Excessive swelling and weight gain
 - Headaches and visual changes
 - Abdominal pain, nausea and vomiting
- The only treatment is delivery of the baby

Counseling Michelle

- Arrange for her to see her prenatal care provider right away
- They will check her blood pressure and look for protein in her urine
- If her blood pressure is high, she may have preeclampsia

Michelle Follow Up

- Michelle's blood pressure at the clinic was extremely high
- She was sent to the hospital
- The fetal monitor showed that her baby was doing fine, but Michelle's blood pressure remained dangerously high
- A healthy baby was delivered by C section
- Michelle's symptoms and blood pressure returned to normal over the next several days

Cindy



Cindy is 37 weeks pregnant with her second baby. She has had a normal pregnancy so far but says she thinks this baby is bigger than her first. The size is getting really uncomfortable and causing trouble sleeping, eating, and even breathing. She asks you to speak with her provider about getting the baby out now. “It sure feels like it’s big enough!”

Counseling Cindy

- Refer Cindy to her prenatal care provider to make sure everything is OK
- Counsel her that, as long as everything is fine, it's important to wait until 39 weeks to have the baby
- Risk to babies born before 39 weeks
 - Breathing problems, including pneumonia
 - Admission to NICU
 - Complications that can lead to death

Preparation

- **Encourage breastfeeding**

- Best for baby
- Good for Mom
- Makes life easier



- **Dispel myths**

- **Seek support from baby's father, friends, and relatives**
- **Educate about pumping, lactation counselors, etc. (since ACA, usually covered by insurance)**
- **Recommend making plans with healthcare provider to start immediately after delivery, then "room in"**

Preparation

- **Getting ready for baby**
 - Car seat
 - Sleep arrangements
 - Baby clothes, stroller, etc.
- **Home visiting referral**
- **Support system**
- **Insurance, healthcare provider, and medical home for baby**

Preparation

- **Discuss reproductive life plan**
 - Importance of spacing pregnancies at least 18 months apart
 - Options for postpartum contraception
 - Can often be started in hospital, if desired
- **Childbirth classes**
 - With partner or support person if possible

Preparation

- **Know the signs of normal labor**

- Contractions

- Evenly spaced

- Getting closer and more painful

- Stronger when you move around

- Mucous discharge with blood

- Gush of water (sometimes)

- **Plan who to call, where to go, what to bring, and who will be present for labor and delivery**



Then

The Baby is Born



The Goal of Prenatal Care....

